Epi-Olmec Hieroglyphic Writing and Texts

Terrence Kaufman and John Justeson

© 2001 by Terrence Kaufman and John Justeson

Kaufman & Justeson: Epi-Olmec writing and texts
Epi-Olmec hieroglyphic writing
The most well-known epi-Olmec object, the famous stela of La Mojarra, bears one of probably nine known epi-Olmec texts whose discovery spanned the twentieth century. The first to be found was the Tuxtla Statuette (figure 1), discovered at the beginning of the 20th century near Catemaco, Veracruz. It bears a reasonably long text that is almost perfectly preserved; its recorded date of 8.6.2.4.18 is generally placed in 162 CE. Several other monuments that became known by the mid-20th century also bear epi-Olmec texts, but none is both legible and well-documented enough to provide much textual data (figure 2a-e). The earliest of these is Tres Zapotes Stela C, with a recorded date of 7.16.6.16.18 (32 BCE); we examined the stone using artificial lighting in 1997, and find that it contains diagnostically epi-Olmec signs. At least two Early Classic monuments from Cerro de las Mesas, Stela 6 and Stela 8, also bear diagnostically epi-Olmec glyphs; two others at the site had texts that are probably but not demonstrably epi-Olmec. The Alvarado stela has one sign found in the epi-Olmec inventory but that sign was not necessarily limited to the epi-Olmec script.

Four other epi-Olmec texts came to light in the second half of the 20th century. From Chiapa de Corzo, two earlier fragmentary texts (figure 2g) were discovered in archaeological work by the New World Archaeological Foundation. One is a panel known as “Stela” 2; it bears the oldest clear date in the long count system, but there are no non-calendrical glyphs on what survives of the text. The other is a potsherd. Based on its archaeological context and type, this sherd is thought to date to about 300 B.C.E., and is the earliest known epi-Olmec text. Because it is fragmentary, and because early drawings of the text were inaccurate in a number of features, it did not usefully enter into decipherment work until 1994. It shows that the script was quite stable in its appearance for 400-500 years.

The O’Boyle “mask” (figure 2h) surfaced in the art world in the 1970s; it had the longest epi-Olmec text known since the Tuxtla Statuette. The famous stela of La Mojarra was recovered in 1986 (figure 3).

**Figure 1. The Tuxtla Statuette.**

**Figure 2. Some epi-Olmec texts.**  (a) Tres Zapotes Stela; (b) Cerro de las Mesas (MES) Stela 5; (c) MES 6; (d) MES 8; (e) MES 15; (f) Chiapa de Corzo (CHP) Stela 2; (g) CHP sherd; (h) O’Boyle mask. b-e from Stirling 1943; a,f from Coe (1976).

Kaufman & Justeson: Epi-Olmec writing and texts
Figure 1. The stela of La Mojarra. Drawing by George E. Stuart.

The long text on the La Mojarra stela, dated 8.5.17.15.2 (157 CE), provides most of the epigraphic evidence toward the decipherment of the epi-Olmec script, but both it and the Tuxtla Statuette were crucial to the process of

Kaufman & Justeson: Epi-Olmec writing and texts
decipherment as we actually pursued it together beginning at these meetings in 1991. The Chiapa de Corzo sherd and the O’Boyle mask were not used until 1994, when we were able to make reliable drawings from a photo of the sherd and from the mask itself. They provided useful evidence on points of detail, but mainly showed that the signs that were already read yielded grammatically and semantically coherent results in these new contexts. It is the detailed agreement of all of these texts with Mije-Sokean grammatical structure as well as with Sokean vocabulary that is the most crucial validation of the decipherment.

One text that we will not deal with directly is that on the El Sitio celt (see p. ). This object came to light in the vicinity of Izapa, again through NWAf researches but not from archaeological context. Many of the signs in its text resemble epi-Olmec signs closely enough that its script is very likely allied to epi-Olmec. However, the differences between it and the other texts mentioned above are so great that it cannot be demonstrated to be a form of the epi-Olmec script itself.

This workbook does not present an account of our work deciphering the epi-Olmec script, which has been presented at these meetings in some detail on previous occasions. Instead, we follow the practice of these meetings in presenting what we know about the nature of the script and the way epi-Olmec scribes wrote their language, then working through the texts to illustrate this knowledge and bring it to life in the context of its actual use.

1. Signs and sign values
Few epi-Olmec signs closely resemble Mayan signs. Among those that are similar, there are varied reasons for the resemblance. One is that, with similar representational conventions in their visual art, depictions of similar entities are rather similar; the use of those depictions as signs in the two scripts may or may not be to represent similar meanings. As a result, some similar signs have related values, but many do not. The values of epi-Olmec signs had to be worked out from evidence internal to the epi-Olmec texts; only then could they be usefully compared with the values of Mayan signs. The relationship between epi-Olmec and Mayan writing is touched on briefly in §4. Epi-Olmec hieroglyphic writing, like Mayan and Zapotec writing, made use of two basic types of signs: phonetic signs, which represent sounds, and logograms, which represent lexical items and other meaningful units of the language.

1.1. Logograms
As in Mayan writing, many epi-Olmec signs represent lexical items, or their stems. In some cases, we are confident in identifying the lexical item represented, partly because the texts provide phonetic evidence for it (Table 1A); in others, we can characterize the meaning of the logogram pretty specifically, and exactly one plausibly early Sokean word has this meaning (Table 1B); and in others we can characterize the meaning of a logogram but not precisely enough to identify the specific lexical item that it represents (Table 1C).

1.2.1. The epi-Olmec syllabary
Figure 4 gives the epi-Olmec syllabary, to the extent that we have been able to recover it. Most of the readings are supported by substantial evidence. Even a few that are based on the spelling or spellings of just one word are nailed down by highly restrictive grammatical and/or semantic constraints.

Although all of the readings are the most plausible that we have been able to put forward on present evidence, those most likely to be mistaken are accompanied by question marks.

The language has 11 consonants and 6 vowels, which are given in the chart, so there are just 66 different CV syllables in the language. Although it is possible in principle to have several signs representing the same CV syllable, this seems to be rare in the epi-Olmec script, so the total number of CV syllabograms is probably not much more than 66.
Figure 4. The epi-Olmec syllabary, as of August 1996.

Kaufman & Justeson: Epi-Olmec writing and texts
No sign at all is associated with some of the syllables in the chart. At least one sign presumably existed for each of these syllables, but it would take much more text for all of the 66 open syllables of the language to actually appear in texts, and probably still more to find all of them spelled by syllabograms. Syllabograms for a few of the missing syllables might well be present in the texts, among signs that we have yet to interpret or to which we have assigned the wrong value.

1.2. Syllabograms (syllabic signs)
As in Mayan writing, phonetic signs in the epi-Olmeč script represent syllables. Also like Mayan, most known epi-Olmeč syllabograms represent simple open syllables – syllables consisting of a consonant followed by a vowel. (Closed syllables end with one or more consonants.) These signs are sometimes referred to as CV signs.

For example, the sign _represents the syllable /ma/. It spells this sequence in several words, among them:

- ma
- sa
- jama

Earlier
holy
day, animal
 guise

Although most syllabograms represent CV syllables, a few have been recognized that represent CVC syllables:

- kak
- pak
- pak
- yaj

1.2.1. Language and script: matching and mismatching of CV signs with pronunciations of words
CV syllabograms provide a straightforward way to spell some words, or parts of words. Whenever an epi-Olmeč word consists of, or contains, a consonant that is immediately followed by a vowel, that sequence exactly matches the value of a CV syllabic sign, so there is a one-to-one correspondence between the sounds in the spoken word and the pronunciation of the signs in the spelling.

Several words are spelled out completely and straightforwardly by CV signs alone, showing a one-to-one correspondence between the sounds in the signs’ values and all of the sounds in the words being spelled out; see figure 5. The reason that these spellings correspond perfectly to the pronunciations of the words that they represent is that the words themselves consist exclusively of simply open (CV) syllables.

What happens when a word does not consist exclusively of such syllables – when a word contains a consonant that does not precede a vowel? In such words, there is a mismatch between the structure of that word and what CV signs can spell out straightforwardly.
Figure 5. Fully phonetic spellings of words containing CV syllables only.

Kaufman & Justeson: Epi-Olmec writing and texts
In some of these words, no such consonants are spelled out:

\[
\text{tu} \quad \text{ku} \quad \text{po} \quad \text{7a} \quad \text{tza} \quad \text{ji} \quad \text{ki} \quad \text{wu} \quad \text{7i} \quad \text{nu} \quad \text{si} \quad \text{pa} \quad \text{ki}
\]

\text{tuk}Z \quad \text{something}
\text{7a} \quad \text{poy}7a \quad \text{"month"}
\text{tza}Z\text{ji} \quad \text{late in}
\text{the day}
\text{ki} \quad \text{wu} \quad \text{it shone}
\text{7i} \quad \text{nu} \quad \text{si} \quad \text{paki}Z
\text{when it flows} \quad \text{strong, hard}

In others, they are spelled out:

\[
\text{7i} \quad \text{si}
\quad \text{ki}
\quad \text{pi}
\quad \text{wu}
\quad \text{na}
\quad \text{sa}
\quad \text{wu}
\]

\text{7is} \quad \text{behold!}
\text{7i} \quad \text{kip-wu}
\text{they fought}
\text{against them}
\text{nas-wu}
\text{they passed}

In yet others, some such consonants are spelled out while others are not:

\[
\text{ta} \quad \text{ma}
\quad \text{ma}
\quad \text{ku}
\quad \text{ne}
\quad \text{na}
\quad \text{wu}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\quad \text{ku}
\]

\text{+taZm}
\text{animate}
\text{plural}
\text{+muZ+k}
\text{from, at}
\text{reZn-nayZ-wu}
\text{he stood on tiptoe}

\text{Kaufman \& Justeson: Epi-Olmec writing and texts}

\text{2.8}
It turns out that a few simple rules determine just which consonants are spelled out and which are not. We discuss them below in a section on spelling rules.

All of the textually most common grammatical suffixes in the epi-Olmec language—and in proto-Sokan—consist of a single open syllable, so they are also spelled by a single syllabic sign:

\[
\begin{array}{cccc}
\text{wu} & \text{pa} & \text{ji} & \text{7i} \\
\text{-wu} & \text{-pa} & \text{-ji} & \text{-7i} \\
\text{completive} & \text{incompletive} & \text{completive} & \text{optative} \\
\text{independent} & \text{independent} & \text{dependent} & \\
\end{array}
\]

The vast majority of verbs in epi-Olmec texts end with one of these four suffixes; since most sentences have verbs, the signs that spell these suffixes occur very frequently in the texts. Examples are discussed in §3.

Similarly, most of the most common preposed grammatical elements in the epi-Olmec language were open syllables, and so were spelled by a single syllabic sign:

\[
\begin{array}{cccc}
\text{7i} & \text{na} & \text{7u} & \text{ko} \\
\text{7i} & \text{na} & \text{7u} & \text{ko} \\
\text{third person} & \text{exclusive} & \text{exclusive} & \text{elsewhere,} \\
\text{ergative} & \text{ergative} & \text{absolutive} & \text{someone else’s} \\
\end{array}
\]

The functions of all these grammatical elements are introduced later. Almost all grammatical units are almost always explicitly spelled out, and always by syllabograms; exceptions—which are systematic, in that they follow their own rules—are discussed below.

CVC syllabograms always spell CVC syllables:

\[
\begin{array}{cccc}
\text{tu} & \text{na} & \text{yaj} & \text{pak} \\
\text{kak} & \text{pe} & \text{7i} & \text{ku} \\
\text{kak-wu} & \text{kakpe7} & \text{yaj-7i} & \text{tun+tup-jay7-yaj wu} \\
\text{it got} & \text{Scorpius} & \text{let it get} & \text{we shot them with} \\
\text{replaced} & \text{SCORPIUS} & \text{finished} & \text{arrows for him} \\
\end{array}
\]

Kaufman & Justeson: Epi-Olmec writing and texts
1.3. Mixed spellings
Logograms and syllabograms are often combined, as they are in Mayan and in almost all other logosyllabic scripts. In these combinations, the phonetic signs spell out the part or all of the same word as the logogram, or add grammatical information.

As in other scripts, postposed phonetic signs spell the final sounds of the same word as the logogram:

\[
\begin{align*}
\text{tuki} & \quad \text{TURTLE} \\
\text{turtle} & \\
\text{piit.i} & \quad \text{BUNDLE} \\
\text{bundle,} & \quad \text{bound thing} \\
\text{wik.i} & \quad \text{SPRINKLE} \\
\text{sprinkled} & \\
\text{7aw} & \quad \text{GO.UP} \\
\text{ma} & \\
\text{7aw}=\text{ki7m.u7} & \quad \text{rulership}
\end{align*}
\]

while preposed phonetic signs spell the beginning sounds of the same word as the logogram:

\[
\begin{align*}
\text{ma} & \quad \text{TEN} \\
\text{mak} & \quad \text{na+ tzetz-j} \\
\text{ten} & \quad \text{CHOP} \\
\text{when I} & \quad \text{tuku7} \\
\text{chopped it} & \quad \text{cloth,} \\
\text{clothing} & \quad \text{wrinkled one} \\
\text{ji} & \quad \text{LONGLIP} \\
\text{ji} & \\
\text{kuk} & \quad \text{MIDDLE} \\
\text{middle,} & \\
\text{chest} &
\end{align*}
\]

1.4. Semantic determiners
A few signs seem to serve as semantic determiners.

The sign occurs only in combinations, attached at the left of some other sign:

\[
\begin{align*}
\text{ }
\end{align*}
\]

It occurs twice in association with the SKY logogram, and once in a designation we interpret as ‘rainy-season god’. which is said textually to be an attribute of the Venus god 10 Sky (Mak Tzap). Thus, all three instances are sky-related. On other grounds, we are fairly sure that its occurrence in the "sky quetzal" sequence is a name of Harvester Mountain Lord or of an allied person, but since the other two instances are associated with a name of or reference to a god, we hypothesize that this "sky quetzal" instance is one in which a person is named or referred to after the name of a god. We cannot interpret the sign lexically as saying either 'god' or 'sky', since 'sky' would be redundant and a different logogram represents 'god'. Therefore, we take this to be a semantic determiner and we gloss it as 'sky god'.

Kaufman & Justeson: Epi-Olmec writing and texts 2.10
Several signs for titles or offices consist of the face of a human being, with a sign for a bunch of reeds atop the back of his head, and varying signs or sign groups atop the front of his head. The invariant portion in effect is a semantic determiner for a title, while the varying element at the front is diagnostic of a particular title.

2. Rules for phonetic spelling
As in Mayan and in many Old World scripts with syllabograms, CVC signs are much fewer than the CV signs, and represent a fraction of the full set of CVC syllables of the language. Yet many Sokean syllables are shaped CVC or even CVCC or CVCCC. How are such syllables spelled, when signs for these syllables are rarely available?

For most of this audience, the answer to this question is no mystery, because you are used to the spellings used for Mayan words, like

<table>
<thead>
<tr>
<th>b’a-la-ma</th>
<th>7u-b’a-ki</th>
<th>po-po</th>
<th>b’u-lu-ku</th>
<th>YAX-te-7e</th>
</tr>
</thead>
<tbody>
<tr>
<td>bahlam</td>
<td>u-b’ak</td>
<td>polp</td>
<td>b’uluk</td>
<td>yax=te7</td>
</tr>
<tr>
<td>jaguar</td>
<td>his bone</td>
<td>mat</td>
<td>eleven</td>
<td>ceiba</td>
</tr>
</tbody>
</table>

The general problem is a mismatch between the structure of the language and the structure of the script. In the language, consonants may be followed by vowels or consonants, or, at the end of words, by nothing at all. In the script, sounds are spelled by syllabograms, most of which have CV pronunciations: in these signs, a consonant is always followed by a vowel, so spelling a consonant entails spelling a following vowel – whether it existed in the language or not.

Whenever a consonant in the language does not precede a vowel, the spelling must depart from the actual pronunciation that it represents: either (a) the consonant will be spelled by a CV sign, in which case a vowel is being represented that is not present in the corresponding part of the word, or (b) the consonant will not be spelled at all.

In most CV syllabaries, both options are used; usually they are favored by different circumstances. In Mayan, for example, the h of b’ahlam is never spelled explicitly in any way. The h of na:h ‘house’ is explicitly spelled when the word is spelled by the CVC sign nah, but that word is also, rarely, spelled simply na (with no representation of h) or na:hi.

When using a CV sign to spell a simple consonant, it might seem that several signs are available for the purpose. In Mayan, for example, the sign ki regularly spells the final k of b’a:k, while ka spells the final k of sak; both chi and cha spell the final ch of pa:ch. Although there are proposals that are correct more often not, no firm rules have been worked out that reliably predict just what CV signs will be used in a given instance.

The Mayan case is unusual in global perspective; usually, the pronunciation of a word is enough to determine whether a CV sign will be used to spell a simple consonant, and which vowel that CV sign must contain. The epi-Olmec case is more typical in this respect: there is a well-defined set of rules that apply with no recognized exception in the existing data.

Kaufman & Justeson: Epi-Olmec writing and texts
2.1. Unrepresented consonants
We begin with the most common consonant in the epi-Olme texts, the glottal stop (represented in our practical orthography by a 7). This consonant is spelled out explicitly when it precedes a vowel; examples illustrated above are the words 7i 'who?' and 7owa 'macaw', the optative suffix -7i and the third person ergative marker 7i+. A large number of spellings show that it is never spelled in any other context. There are two ways this can happen: when it ends a word, and when it precedes a consonant.

2.1.1. Glottal stops
We begin with words ending in 7 whose spellings consist exclusively of syllabic signs. In every case, the spelling is just as it would be if the word-final glottal stop were not present.

\[
\begin{align*}
\text{ku} & \quad \text{te} & \quad \text{je} & \quad \text{yu} \\
\text{kw}\bar{z} & \quad \text{te}\bar{z} & \quad \text{je}\bar{z} & \quad \text{yw}\bar{z} \\
\text{hand} & \quad \text{aforementioned} & \quad \text{that} & \quad \text{this} \\
\text{wu} & \quad \text{si} & \quad \text{pi} & \quad \text{pa} \\
\text{+ww}\bar{z} & \quad \text{si7i}\bar{z} & \quad \text{pini}\bar{z} & \quad \text{paki}\bar{z} \\
\text{relativizer on} & \quad \text{arse} & \quad \text{brother-in-law} & \quad \text{hard, strong} \\
\text{we} & \quad \text{tu} & \quad \text{ma} & \quad \text{wu} \\
\text{ne} & \quad \text{ku} & \quad \text{maw}\bar{z} & \quad \text{something} \\
\text{broken; a piece} & \quad \text{tuk}\bar{z}\bar{u}\bar{z} & \quad \text{something} & \quad \text{ruined} \\
\text{wen}\bar{e}\bar{z} & \quad \text{spelled} & \quad \text{pion}\bar{z} & \quad \text{paki}\bar{z} \\
\text{something} & \quad \text{cut} & \quad \text{overthrower} & \quad \text{hard, strong} \\
\text{tuk}\bar{z}\bar{u}\bar{z} & \quad \text{paki}\bar{z} & \quad \text{paki}\bar{z} & \quad \text{paki}\bar{z} \\
\end{align*}
\]

Fully phonetic spellings of words never show any reflection of word-final glottal stops. Similarly, phonetic complements that spell the final portions of 7-final words never spell the final glottal stop:

\[
\begin{align*}
\text{YEAR} & \quad \text{SCORPIUS} & \quad \text{LOSE} \\
\text{me} & \quad \text{pe} & \quad \text{ya} \\
\text{7ame}\bar{z} & \quad \text{kak}\bar{z}\bar{e}\bar{z} & \quad \text{yak=tokov-a}\bar{z} \\
\text{year} & \quad \text{scorpion,} & \quad \text{overthrower} & \quad \text{Scorpius}
\end{align*}
\]

Kaufman & Justeson: Epi-Olme writing and texts
The same convention applies to glottal stops that precede consonants:

- **kw**
- **je**
- **ne**
- **ji**

Thus, like that:

- **jeZ-tzu**
- **7i+neZw-ji**

When they were set in order:

- **ju**
- **ji₂**
- **ji**

Wrinkled, pleated:

- **juZps.i**
- **jiZtz.ʌ**
- **jiZtz.ʌ**

- **7i**
- **ko**

Lose:

- **pu**
- **wɔ**

He spilled it out completely on behalf of others:

- **7i+ko.tokoy.pwZ-ww**

2.1.2. Other weak consonants (*j, w, y*)

Three other consonants, far less common than 7, are subject to exactly the same conventions: in phonetic spellings, they are always represented when they precede vowels, and never otherwise. Like all consonants other than 7, they are rare in word-final position in epi-Olmec texts:

- **nuZpu**
- **suZk=su7**

Kaufman & Justeson: Epi-Olmec writing and texts 2.13
All three consonants frequently occur before other consonants; in these cases, they are never spelled. Fully syllabic spellings of words or morphemes having weak y, w, or j before a consonant appear in figure 6.

As these examples make clear, the most common circumstance under which these weak consonants occur before other consonants is when they end a verb stem that precedes a grammatical suffix, and more generally at morpheme boundaries. But the crucial fact is that they occur in the codas of syllables (consonants occurring after the vowel of their syllable).

2.2. Other consonants (p t z k s m n)
The other seven consonants in the epi-Olmc language are also relatively rare at the end of words, but they occur frequently before consonants – as in the case of weak consonants, mostly before consonant-initial suffixes. In phonetic spellings, every one of these consonants is always spelled out in phonetic spellings of the sequences in which they occur (with one rule-governed exception, discussed below). And, in every instance, the spellings of these consonants are synharmonic: the vowel of the CV sign that spells the consonant is the last vowel preceding that consonant.
Figure 6. Weak consonants – y, w, and j – that do not immediately precede vowels do not appear in phonetic spellings.

Kaufman & Justeson: Epi-Olmec writing and texts
Synharmony is also the exceptionless rule in those phonetic complements that spell consonants that do not precede vowels:

\[
\begin{array}{llllll}
\text{TWENTY} & \text{SKY} & \text{LOINCLOTH?} & \text{CHOP} \\
si & pa & pu & ji \\
7i7ps & tzap & ni7_jup.7 & na+tsetji \\
twenty & sky & body-wrap & when I chopped it
\end{array}
\]

\[
\begin{array}{llllll}
puk & PLANT & DEAL.WITH & SPRINKLE \\
kw & pi & pa & ki \\
7i & wu & wu & pa \\
puk-7i & nip7-wu & tun+jup-jay7-wu & ko.wik-pa \\
it should be taken & it got planted & we shot him with arrows for him & it got sprinkled elsewhere
\end{array}
\]

2.3.2. \textit{p and k before s}

There is one highly restricted context in which "strong" consonants are not represented: \textit{k} is never spelled when it immediately precedes \textit{s}, and \textit{p} is probably not spelled before \textit{s}:

\[
\begin{array}{llllll}
7i & mi & 7i & mi \\
u & si & na & si \\
7i+nuk3-i & mi7ks-nay7-wu & 7i+nuk7pin=mi7ks.i & su7ksu7 \\
when it flows & it had been quivering & when it quivered bloodily & hummingbird
\end{array}
\]

\[
\begin{array}{llll}
7o & wa & ju \\
0 & si \\
7owa=ju7ps.i & macaw-lashing
\end{array}
\]
We discuss the reasons for this peculiar pattern in §4.

In summary, epi-Olmec phonetic spellings represent weak consonants – 7, j, w, y – whenever they precede a vowel; otherwise, they do not represent them. All other consonants are represented in all contexts, except that k and p were not spelled before s.

3. A little grammar
Now that we have shown how words are spelled out, we can illustrate a number of patterns in the shapes of words that help us work out the meanings of text passages.

3.1. Nouns

3.1.1. Possessed nouns
Consider the pattern of the following nouns:

- 7i+ ??? his offering
- 7i+ ??? his Macaw.power
- 7i+ ??? his “eccentric.flint”
- 7i+saj his wing/shoulder

- 7i+nu7pin+ww7 his bloody thing
- 7i+kuk=tsa7=jam.e his pectoral stone memento
- 7i+kuw.na7=ki7ps.i his set.aside-symbol
- 7i+ne7w.e his set.in.order.stones

- 7i+yak=toxoy.a7 its/their overthrower
- 7i+pini7 his brother-in-law
- 7i+ki7m.w=si7i7-yaj his/their ascent.buttocks

The sign 7i in all of these words spells a ‘his’, ‘hers’, ‘its’, or ‘their’ – a third person possessive prefix, irrespective of gender or number. In this respect its function is analogous to that of Lowland Mayan 3rd-person singular possessive prefix u-. The third person possessive marker was pronounced 7i in epi-Olmec (and in proto-Sokean and proto-Mije-Sokean). It is the frequent use of this sign as a prefixed morpheme that enabled us to recognize that it spells the syllable 7i.

Kaufman & Justeson: Epi-Olmec writing and texts
An analogous but rarer pattern is found in the use of the sign na for the first person possessive prefix, ‘my’ in the attested examples:

\[
\begin{align*}
na+kw7 & \quad \text{my arm} \\
na+nu7pin & \quad \text{my blood} \\
na+nu7pin +wu7 & \quad \text{my bloody (thing)}
\end{align*}
\]

\[
\begin{align*}
na+kan=puk.w7 & \quad \text{my penis-receiver} \\
\quad & \quad \text{(the cloth that the pierced penis is wrapped in to staunch the flow of blood)} \\
nu+yak=tokoy.e & \quad \text{my overturned one} \\
nu+tzet.e & \quad \text{my chopped thing} \\
\quad & \quad \text{(the head of his sacrificial victim)}
\end{align*}
\]

This marker can also mean ‘our’ in the “exclusive” sense, i.e., the addressee(s) is/are not referred to, but this does not seem to occur in our texts.

A second person possessor occurs on the Tuxtla Statuette, addressing a god:

\[
\begin{align*}
7in+ko.tsap=kom-yaj & \quad \text{your otherworldly sky-pillars} \\
7in+ko.tzat7.w & \quad \text{your otherworldly handspan-measurer}
\end{align*}
\]
3.1.2. Nominal predicates

Nouns in epi-Olmec texts and in Mije-Sokean languages take another prefix, 7udder, which is spelled by . This prefix has a different function:

\[
\begin{align*}
7udder &+ sunw  \\
&I am the sun \\
7udder &+ izuk.i=puh  \\
&I am a “deedsman”
\end{align*}
\]

This prefix marks the first person exclusive subject of a predicate noun, a predicate adjective, or an equational clause. This prefix, and other prefixes that agree with the subjects of predicate nouns or adjectives and of equational clauses, is known as an absolutive marker. The third person absolutive marker is nothing (zero); in other words, an adjective, a noun, or a noun phrase by itself can also be interpreted as a predication with a third person subject:

\[
\begin{align*}
pit.i  \\
&he was a prisoner \\
ko.yumi  \\
&he was a lord \\
paki7  \\
&he was powerful
\end{align*}
\]

3.1.3. Locational expressions

In epi-Olmec, as in Mije-Sokean languages generally, when a noun is used to designate a location, it forms a compound with a following relational noun — a noun that specifies the part of the entity that is the location (top, bottom, middle, inside, surface). The relational noun is followed by a locative suffix, +mu7 ‘in, at’; by adding +k after +mu7, the sense becomes ‘from’ the specified part. There is an example of this construction in the stela from La Mojarra:

\[
kan=joj+mu7+k  \\
from inside the penis
\]
3.1.4. Relativizers

The sign *wu* occurs after a number of nouns or noun phrases:

- **sa7sa7(=pun) +wu7**
  - who is a noble one

- **WAR.LEADER +wu7**
  - who are noble warleaders

- **BEARD.MASK +wu7**
  - who was a beard mask

- **PRINCE +wu7**
  - who was a prince

- **TITLE2 +wu7**
  - who was a TITLE2

- **STAR.WARRIOR +wu7**
  - he was a star warrior one

- **?? +wu7**
  - who was a "royal" one

- **na+nu7pin +wu7**
  - it is my bloody one

- **jama +wu7**
  - which was about an animal-guise

- **tok.e +wu7**
  - it is a stained one

- **tuki +wu7**
  - it is a turtle (shell) one

- **tuku7 +wu7**
  - it is a cloth one

- **tzay7ji +wu7**
  - it was as a late-in the-day one (i.e., Venus was evening star)

- **tufu7po7a +wu7**
  - which was for six months

- **tizusi +wu7**
  - who was a child

- **pak-kuy7 +wu7**
  - which was a bludgeon

What these cases have in common is that a noun phrase (NP) is made into a relative clause, meaning 'one who/that is (an) NP' or '(an) NP-type one'; many of these clauses are also nominal predications. The sign *wu* in these cases spells a grammatical element +wu7 that marks relative clauses in many Mije-Sokean languages.
3.2. Verbs
The spellings of verbs turn out to be especially revealing. One key help is that transitive verbs (verbs that have both subjects and objects) look different from intransitive verbs (verbs that have subjects but no objects). This is important for analyzing texts, because most sentences have verbs.

3.2. Transitive verbs
The markers of possession described in §3.1.1 also appear before certain verbs to indicate their subject:

- \(7i+k\) with -\(wu\)
  - they fought against them

- \(7i+k\) with -\(p\)u7-\(wu\)
  - he spilled it out completely on behalf of others

- \(7i+k\) with -\(pa\)
  - he sprinkles it elsewhere

- \(7i+7\) with -\(wu\)
  - he saw it

- \(7i+t\) with -\(wu\)
  - we shot them for him

- \(7i+t\) with -\(wu\)
  - we shot him for him

- \(7i+saj\) with -\(pa\)
  - he shares them out

Notice that all of these verbs end with one of two suffixes, -\(wu\) or -\(pa\).

Each word, then, conforms to a pattern of beginning with the spelling of one of a limited set of prefixes, which is followed by a small number of signs spelling a verb stem, which is followed by a limited set of suffixes. What verbs exhibiting this pattern have in common is that they are all transitive verbs – verbs with both a subject and object, in which someone did or does something to someone or something else.

The third person subject is indicated by the sign 7i, spelling the preposed element 7i+. The preposed element 7i+ is ‘we’, a first person plural inclusive marker – i.e., the addressee(s) is/are included. The erectors of the La Mojarra stela are talking about what they and their intended audience did together on behalf of their ruler.

Notice that all of these verbs have third person objects, ‘him’ or ‘them’. Nothing appears in any of these words to indicate the object. This is characteristic of Mije-Sokean languages (also of Mayan): nothing appears on a Mije-Sokean verb to indicate that the object is third person; however, if the object is any other person, a grammatical prefix appears which is a marker of that fact. Those prefixes are in fact the same as the absolute markers that serve as subjects of nominal predications, discussed above in §3.1.2.

Kaufman & Justeson: Epi-Olmc writing and texts 2.21
3.3. Intransitive verbs

These same two suffixes, -wu and -pa, end many other verbs that do not have any of the prefixes discussed above:

**APPEAR-wu**
- it appeared

**kj-wu**
- it shone

**kj-wu**
- it shone

**ku.jak-wu**
- he crossed over

**mi7ks-nay7-wu**
- it had been quivering/flapping

**nas-wu**
- they passed

**tuk-pa**
- it happens

**wej-pa**
- he shouts

**ka7j-pa**
- he faints/dies

**7ouw-pa**
- he speaks

**wan.e=7uk-pa**
- he sings

What verbs exhibiting this pattern have in common is that they are intransitive – they have a grammatical subject but no object, specifying what someone did, or what was done to or undergone by someone or something. Knowing the structure of intransitive verbs is important, because most verbs in Mesoamerican texts – in ancient times and today – are in fact intransitive.

These intransitive verbs also have in common that their subject is third person. This is because nothing appears on a Mije-Sokean intransitive verb to mark a third person subject. If the subject is any other person, a prefix marking that subject appears, but these do not appear in epi-Olmec texts.

Even actions, like folding, that are encoded in transitive verbs are often described intransitively, using passive or (in epi-Olmec texts) mediopassive forms of the transitive verb – e.g., "it gets folded" rather than "he folds it":

---

Kaufman & Justeson: Epi-Olmec writing and texts 2.22
The contrasts between the transitive and intransitive pattern is generally similar to Mayan in that the subjects of transitive verbs are marked by one kind of grammatical element — an ergative pronounal prefix — that does not mark the subject of an intransitive verb, but does mark the possessor of a noun. A different kind of grammatical element — an absolutive pronounal prefix — marks the subject of an intransitive verb and the object of a transitive verb. In the case of third person subjects, which predominate, intransitives have no overt marker of the subject while transitives have the subject agreement marker 7i+.
3.3. Dependent verbs

The ergative markers, spelled by the signs 7i and na, also begin another group of verbs, verbs that have one of two other suffixes: -ile or -ji.

7i+ne7w-ji
when he set them in order

7i+nu7pin=tu7p-ji
when he set down/perched bloodily

na+tzetz-ji
when I chopped it

na+sij-ji
when I cast lots with them

7i+nu7pin=mi7ks.i
when he quivers bloodily

7i+kot.e
when he puts it in/away

7i+nuk5.i
when it flows

7i+wu7tz.i
when it/they get(s) pierced

Again, these verbs conform to a pattern of beginning with an ergative prefix and ending with one of two suffixes (-i and -e are really the same suffix: -i occurs when the last preceding vowel was i, u, or u, and -e occurs when the last preceding vowel was e, a, or o).

Unlike the preceding group of verbs, this group includes not only transitive but also intransitive verbs. What these verbs have in common is that they are all in dependent (subordinate) clauses, and so are called "dependent verbs". In contrast, all of the verbs displayed previously occur in independent (main) clauses, and so are called "independent" verbs.

The subject of these dependent verbs is indicated by the ergative marker. For those dependent verbs with objects, that object is third person and so again no marker of the object appears. In the dependent verbs, then, we see the phenomenon of ergative shift: the ergative prefixes act like nominatives, marking the subjects of both transitive and intransitive, and the absolutive prefixes act like accusatives, marking objects only.

Kaufman & Justeson: Epi-Olmec writing and texts 2.24
3.4. Independent verbs

Most of the independent verbs above, transitive and intransitive, end in the syllabogram \textit{wu}:

\begin{itemize}
\item \textit{7i+kip-wu} \qquad 7i+ko.tokey-pk7-wu \qquad tun+tup-jey7-ya7-wu \qquad tun+tup-jey7-wu
\item \textit{7i+7is-wu} \qquad APPEAR-wu \qquad ki7-wu \qquad ku7ak-wu \qquad mi7ks-nay7-wu \qquad nas-wu
\item \textit{ko.nu7ks-wu} \qquad kn7w-wu \qquad naks-wu \qquad pey-wu \qquad puw-wu \qquad saj-wu
\item \textit{wu=tu7k-wu} \qquad ne7w-wu \qquad pik-wu \qquad ko.wu7iz=kwy7-wu \qquad te7n.na7=kak-wu
\item \textit{pk-wu} \qquad ko.wu7iz=kwy7-wu \qquad te7n.na7=kak-wu \qquad nip7-wu
\end{itemize}

These all refer to actions as having been completed. Their suffix \textit{-wu} is in fact the epi-Olmec (and proto-Sokean and proto-Mije-Sokean) suffix that marks verbs as referring to completed actions (i.e., they mark \textit{completive aspect}).

The other independent verbs end in the syllabogram \textit{pa}:

\begin{itemize}
\item \textit{7i+saj-pa} \qquad 7i+ko.wik-pa \qquad ko.wik-pa \qquad tuk-pa \qquad ka7j-pa \qquad paks-pa
\item \textit{wej-pa} \qquad 7otuw-pa \qquad wan.e=tu7k-pa
\end{itemize}

They refer to actions as either being in progress or as being habitually performed. The suffix \textit{-pa}, in epi-Olmec, in proto-Sokean, and in proto-Mije-Sokean, is in fact what marks verbs as referring to actions that have not been completed, and as being either habitual actions or ongoing actions (i.e., they mark \textit{incompletive aspect}).

In Mije-Sokean languages, these suffixes occur on both transitive and intransitive verbs. Note that this is \textit{not} true of Mayan languages; it is one of the features that agrees with Mije-Sokean and disagrees with Mayan language structure.

3.5. Spelling grammatical elements

Almost all inflectional affixes in epi-Olmec words are always explicitly spelled out in epi-Olmec texts, and these spellings accord with the spelling rules discussed above. There are two situations that have the appearance of exceptions to this, but probably neither is properly so construed. The two cases are very different and we resolve them with different kinds of observations, and so we discuss them separately.

Kaufman & Justeson: Epi-Olmec writing and texts
3.5.1. i7i

i7i is not spelled out in four out of seven epi-Olmec words that follow a word ending in i, nor in one word in which the morpheme after i7i begins with i7; that is, the sequence i7i can be spelled as though it were simply i. There is no other instance of a V7V sequence in epi-Olmec texts, so we do not know if a similar rule applied to any other vowels. Some Sokean languages have similar reductions of V7V sequences in fast speech, but these reductions are not the same from one language to another and so we cannot project them back to an ancestral (or even early) stage, and fast-speech rules are not expected in a royal inscription in any case. We therefore treat this as a variable option within the spelling system.

Being phonologically definable in terms of pronunciation, we do not suppose that this practice relates to grammar, because the epi-Olmec script is otherwise so relentless in spelling inflectional affixes out in full. This conclusion cannot yet be confirmed, since we have recognized only one epi-Olmec word (si7i7) that contains the i7i sequence without containing all or part of the 3rd person singular ergative prefix i7i+

3.5.2. Dependent suffix -i/e

The only other seeming exception is that the dependent incomplete verb suffix (pronounced -i or -e, depending on the last preceding vowel) is not always spelled out in those instances when the verb stem is spelled by a logogram. This suggests that the dependent suffix is implicit in the logogram when no other suffix is explicitly spelled out. However, the ergative prefix that is obligatorily present in all dependent verb forms is not implicit in the logogram, so this hypothetical basic value as a dependent form could not exist as a word in the language, and we suppose that the basic value or citation form of a logogram is always a real word. In addition, a dependent form would be a syntactically and semantically peculiar choice for the underlying value of a verb logogram.

We believe that the explanation for this pattern is based on the epi-Olmec names for verb logograms. Names in Mije-Sokean languages are always nouns. One set of nouns is pronounced exactly like a verb stem + the dependent completive suffix: these are nominalizations produced from that verb by suffixing -i or -e. For example, the verb wu7iz 'to pierce' takes the dependent suffix -i, yielding such words as na+wu7iz+i 'when I pierced it' and 7i+wu7iz-i 'when he pierced it'; the word wu7iz-i 'something pierced' is a noun derived from wu7iz. The logogram for piercing in fact depicts something pierced, a rectangular field with a shaft entering at the upper right and leaving at the lower left. So the name of the logogram PIERCE is wu7iz.i, and this value may be read out in the case of an incomplete completive form of the verb wu7iz. (Another set of verbal nouns is pronounced almost the same, differing only in that the suffix is -i7, as in ji7iz,i7, 'pleased, wrinkled' or -e7, as in wen,e7 'broken, piece'. This difference has no consequences for spelling since final 7 is never spelled in epi-Olmec writing.)

As a result, the pronunciation of the logogram has implicit in it the verb stem plus a nominalizing suffix, not the verb plus a dependent suffix; it is usable to spell the verb plus dependent suffix when the nominalizing suffix that is part of the value of the logogram is homophonous with the incomplete dependent suffix. A logogram that represents a verb is applied phonetically for the verb stem, without the implicit nominalizing suffix, whenever that logogram is followed by any explicitly spelled-out suffixes. Thus SPRINKLE by itself can spell wik.i 'result of sprinkling', but together with a following pa sign it spells wik pa.

Kaufman & Justeson: Epi-Olmec writing and texts

2.26
4. Sign origins
Most syllabograms and many logograms in epi-Olmec writing have so abstract an appearance that it is unclear to us what they iconic source was. As in the case of Mayan and Zapotec writing, however, several epi-Olmec syllabograms are relatively straightforward depictions of things or ideas. In all cases, the phonetic readings of these epi-Olmec signs were worked out on the basis of their contexts, not on the basis of their forms. However, for the signs whose depictive referents are clear, these values appear to have been based on the acrophonic principle: the word for what the CV syllabogram depicts begins with the CV sequence that is the sign’s pronunciation.

The following we take to be depictively transparent:

**nu**: This sign is a rectangular field with wavy lines running across it, reflecting Sokean *nuʔ ‘water, liquid’.

**ne**: This sign represents an upside-down hand holding an element with the markings of stone, evidently an action of placing or removing a stone. It reflects Sokean *neʔw ‘(stone) thing set in order’, based on the verb stem *neʔw ‘to set (stones) in order’.

**pu**: This sign, based on Sokean *puw ‘to scatter, to sprinkle’, represents a hand in the position of the Mayan signs SCATTER and ye (< *yeʔ ‘to show’).

**ki**: This sign is Iconically derived from the logogram we read as *kiʔm.i ‘ascended one/thing’ by placing an abstract iconic element over the lips and chin of the logogram, and so evidently derives from *kiʔm.i.

**sa**: This sign depicts a human being wearing various kinds of face-gear and head-gear, suggesting that the person is of high status. We suppose that it is based on Sokean *saʔsaʔ(pun) ‘noble’, which is our reading of a similar logogram; it is similar to the sign sj, used for both *saj ‘to give, to distribute’ and *saj ‘shoulder, wing’.

**ko**: The iconic origin of this sign is particularly interesting. Justeson (1986) observed that the sign was Iconically equivalent to the ‘feet’ of the figure on the El Sitio celt. Mora-Marín (personal communication 1997) observed that figure was in fact a fish, so that the sign represents fish fins. This led us to recognize that the acrophonic origin of the sign was in Sokean *kokʔjej ‘fish’. This acrophonic process parallels the Mayan case of the usual sign for the syllable ka, which is based Iconically on fish fins; its value is derived from a descendant of the Mayan word *kar for ‘fish’.

**na**: Although the sign is not Iconically transparent, it is identified as an icon for ‘earth’ (Sokean *nas) by two lines of evidence: it appears in the base panels of epi-Olmec and southern Guatemalan sculptures (Kent Reilly, personal communication 1991), and it appears in the position of the EARTH logogram in an Iconically-motivated sign grouping that has been widely compared to the ‘sun at horizon’ group in Mayan writing (David Kelley, personal communication 1988; Stross 1990; Macri and Stark 1993). This association is confirmed by the auxiliary hypothesis that the sign is an icon for ‘sky’ (Sokean *tzaʔ), itself confirmed by the appearance of the phonetic complement pa after it. Finally, we find evidence that the sign serves as a logogram for ‘earth’ in one context in the La Mojarra text.

This sign was evidently the source of the most common Mayan sign for the syllable na. This was first hypothesized by Stross (1990); Mora-Marín supports this hypothesis by pointing to early Mayan examples that show a greater formal similarity to the epi-Olmec form than do the usual later Mayan examples.
Unbeknownst to us, Stross (1990) had arrived at the proposal that this sign represented the syllable *na before we did. His line of argumentation we did not consider valid: it was based on the Mayan comparison, the identification with ‘earth’ on the basis of the Mayan “sun at horizon” glyph grouping, and on the rebus hypothesis for sign origins. We arrived at the hypothesis from grammatical evidence, and only then recognized its acrophonic basis: Mora-Marín’s examples strengthen the case that the epi-Olmec sign was the basis for the similar Mayan sign of the same value.

The following are more abstract; it is the combination of their phonetic value and their form that points to their rebus origin:

\( \text{xg} \)  This sign represents a stack of spherical objects. We identify them with Sokean *pomu for ‘incense’, which is so depicted in the Dresden Codex (cf. Lounsbury 1973:xxx).

\( \text{jo} \)  The instance of this sign on the La Mojarra stela spells Sokean *joj ‘inside’; its form, dots inside a series of concentric circles, suggests the concept.

\( \text{w} \)  This sign consists of two half-circles beneath a bracket; abstract pattern suggested to us that the sign’s acrophonic origin was in Sokean *wustuk ‘two’. This is supported by the fact that the numeral ‘two’ itself is used in place of \( \text{w} \) in one instance in the La Mojarra text, and by the fact that the Tuxtla Statuette’s version of the sign uses two dots within the bracket of the same type that are used in the numeral 2 in its long count date. (The NWAIF drawing of the earliest instances of this sign shows two circles rather than two half-circles within the bracket; that drawing is inaccurate in some respects, however, and these circles were not apparent in the photograph that was the basis for our own drawing of the text.)

\( \text{tza} \)  All instances of this sign adjoin a preceding STAR logogram. Its interpretation is therefore not clear, but we see no straightforward alternative than to take it as a phonetic complement to the STAR sign (Sokean *matza7). The markings are generally consistent with early forms of the Mayan logogram/icon *stone’. Sokean *tza7.

\( \text{tu} \)  The arguably “dripping” elements along the bottom edge of this sign suggest that this phonetic value may be based on Sokean *tuj7 ‘rain’.

Several of these signs occur textually spelling the word that is the rebus origin of its syllabic value: \( \text{ne} \) spells the stem *ne7w in 7i+ne7w-jj; \( \text{pu} \) spells the stem *puw in puw-ww; \( \text{jo} \) spells *joj ‘inside’. Some serve as logograms for the word that serves as the acrophonic origin of the sign in its phonetic use: \( \text{na} \) appears for *nas ‘earth’, \( \text{ne} \) appears for *ne7we ‘set-in-order (stone) thing’, and \( \text{w} \) normally serves as the sign for *wustuk ‘two’.

With only 12 sign values to base our conclusions on, we cannot draw any definitive conclusions about restrictions on the kinds of words that provide the acrophonic basis for epi-Olmec signs. However, certain regularities seem to show up. The first column gives one-syllable origins; the second gives two-syllable origins, with a dot separating the syllables. Sounds neglected in the syllable that provides the acrophonic origin are underlined:

| \( \text{na7} \) | \( \text{po.\text{mu}} \) |
| \( \text{sa7} \) | \( \text{pu.\text{wV(7)}} \) |
| \( \text{(tza7)} \) | \( \text{ki7.\text{mi}} \) |
| \( \text{joj} \) | \( \text{ne7.\text{we}} \) |
| \( \text{tuj7} \) | \( \text{ko7.\text{ej}} \) |
| \( \text{nas} \) | \( \text{wu7.\text{tak}} \) |

Kaufman & Justeson: Epi-Olmec writing and texts 2.28
In 2 of the 12 acrophonics bases, the initial syllable of the word is a CV syllable, so that no consonants in the syllable are neglected in creating the sign value. In 7 of the 12, a weak consonant (usually 7, sometimes j) is neglected to yield the CV form of the syllable. Thus, in 9 of the 12 cases, the segments that lead to the CV values would be spelled by the resulting value in the context of use of that sign according to the phonetic spelling rules of the script. These cases are numerous enough that weak consonants after the vowel of the word-initial syllable seem especially subject to omission in the acrophonic origins of CV sign values, and also to suggest that the spelling conventions and the acrophonic origins of syllable signs are related.

In contrast, the three remaining cases are too few to support any particular generalizations, and it may be that any syllable-final consonant could be ignored. By analogy with other writing systems, it is plausible that the syllable-final k in kok7ej ‘fish’ was ignored because it was identical to the syllable initial consonant; and it is also possible that the two instances involving syllable-final s reflect a particular susceptibility of s to deletion for the purpose of acrophonic origins.

Epi-Olmec word structure seems to provide a partial explanation for the epi-Olmec spelling rules. One practice is especially suggestive. The failure of epi-Olmec scribes to spell k or p before s undoubtedly owes its origin, in some way, to the rules governing epi-Olmec syllable structure, and in particular the consonant clusters that occur in epi-Olmec and proto-Sokean syllables: ks and ps are the only “weird” consonant clusters that can occur in Mije-Sokean syllables.

This fact suggests that the failure to represent 7 before consonants may also be an effect of Sokean syllable structure. Consonant clusters only occur at the ends of syllables, and, besides ks and ps, the only such clusters are the following:

<table>
<thead>
<tr>
<th>C7</th>
<th>7C</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>nip7</td>
</tr>
<tr>
<td>t</td>
<td>tzat7</td>
</tr>
<tr>
<td>tz</td>
<td>(xxtz7)</td>
</tr>
<tr>
<td>k</td>
<td>(xxk7)</td>
</tr>
<tr>
<td>j</td>
<td>tuj7</td>
</tr>
<tr>
<td>s</td>
<td>(xxs7)</td>
</tr>
<tr>
<td>m</td>
<td>(xxm7)</td>
</tr>
<tr>
<td>n</td>
<td>(xxn7)</td>
</tr>
<tr>
<td>w</td>
<td>kw7w</td>
</tr>
<tr>
<td>y</td>
<td>(kuy7)</td>
</tr>
</tbody>
</table>

(With the possible exception of tza7yji, all of these C7 and 7C clusters end a noun or verb root. Parenthesized roots are not currently recognized in epi-Olmec texts.) All of these consonant clusters consist of 7 either before or after any of the other 10 consonants in the language.

Every syllable-ending 7C and C7 is spelled identically to syllable-ending C. Syllable-ending ks and probably ps are spelled identically to syllable-ending s. The result is that every single syllable in the epi-Olmec language is spelled as though it were a CV or CVC syllable. Most non-final syllables happen to be CV or CV7, i.e., they typically do not end in consonants other than glottal stops. By failing to spell 7 before consonants, most non-final syllables therefore happen to be treated under the spelling rules as CV syllables.

The failure to spell k or p before s and the broader failure to spell 7 except before vowels can therefore been seen as effects in part of Mije-Sokean word structure. But the failure to spell j, w, or y when they do not precede a vowel has no such source. This seems to be strictly the result of their being “weak” consonants, like 7. This could be seen as a generalization from the parallel treatment of 7, but it is a fact that many ancient scripts, like Egyptian, do not

Kaufman & Justeson: Epi-Olmec writing and texts

2.29
always represent weak consonants; in the Egyptian case, acrophonic origins of phonetic signs or sign values treat weak consonants as though they were not present.

Four signs appear to represent CVC syllables, inasmuch as they are used for CVC sequences in different morphemes. Two have known acrophonic origins and two do not. All four happen to spell verb stems.

The sign saj, like sa, appears to be derived from the logogram for sa7sa7 ‘noble’ by the addition of the SKY logogram as part of the ear ornamentation. It is used both for saj ‘wing’ and for the verb stem saj ‘to give’.

The sign pak depicts a bone (Sokean *pak); it is used to spell the verb stem pak ‘to hit’ in the nominalization pak.kuy7 ‘bludgeon, club (literally, an instrument for hitting)’.

The sign puk depicts a container (probably puk.k7 ‘receiver, taker’) and occurs in spellings based on the stem puk to ‘to take, to receive’; Macri and Stark point out that it occurs in Izapa iconography on bird’s wings, presumably spelling puk ‘feather(s), hair(s)’.

The signs kak and yaj are abstract enough that their iconic sources are not clear, and can really only be guessed at. kak spells the stem kak ‘to exchange, to replace, to succeed in office’ in kak-wa ‘it got replaced’ or in its nominalization kak.w7 ‘succession’, as well as the first syllable of the word kakpe7 ‘scorpion’. yaj spells the 3rd person plural subject/object suffix -yaj on verbs and the pluralizing morpheme +yaj on ‘inanimate’ nouns, as well as the verb stem yaj in yaj-7i ‘it should be finished’. (It is an oddity of Mije-Sokean languages that the root of the verb ‘to finish’ serves this pluralizing function, whatever that verb might be in a given language.)

4.3. Relations between epi-Olmec and Mayan writing
Many epi-Olmec signs look similar to signs in Mayan writing. The examples of epi-Olmec ko and early Mayan ka show that parallel acrophonic processes were sometimes responsible for these similarities.

Shared iconography was also sometimes responsible. We discuss an especially interesting example.

The sign for the day Reed occurs in two epi-Olmec texts, and has the same generic appearance as the surrounding element; they differ in that the surrounding element of the GTB is executed more schematically, with no interior detail. It is the iconicographic context that clinches the identification with reeds. The element occurs on the Humboldt Celt in an iconicographic complex that also occurs on the Chalcatzingo vase. On the vase, however, it is much more naturalistic, and displays both the tassel that surmounts a reed stalk and the successive “leaves” that project upward and fall down alternately on either side of the stalk. Taube identified them with corn, but neither kernels nor the developed husked cob are ever marked on these depictions.

The structure of the GTB of signs explains a curiosity about a well-known Mayan sign complex. The most common Mayan spelling for the word 7a:ja:w as a title is by the two-part
sign whose reading as \(7a:ja:w\) was demonstrated by Lounsbury. This sign consists of a sign similar to late forms of the Mayan po syllabogram, followed (in all early examples) by the sign for the day Reed. In fact, a whole series of such titles are known in the Early Classic that consist of different first elements – sky, sun, star, moon, jaguar mat – followed by the sign for Reed. Several of these compound signs represent titles.

The placement of these Mayan title logograms is unusual. Mathews showed that the Reed-based sign for \(7a:ja:w\) (almost) always surmounts the glyph group to which they pertain, but are in fact read afterward; this is indicated by fact that, when the same person’s title and name is spelled instead by any other logogram for the word \(7a:ja:w\), that spelling follows the glyph group to which it pertains.

Another peculiarity is that all of these Reed-based signs do not simply precede the glyph group to which they pertain; they surmount it. Most elongated signs, when preposed, can be placed either horizontally upon the following glyphs, or vertically to their left; the Reed-based signs are always placed above them. The epi-Olmec correlates suggests the reason: these compounds were treated as headgear, worn atop the pictured head that depicted the official; in the Mayan case, the glyphic correlate of the epi-Olmec headgear titles continues to be worn as headgear atop the glyph referring to the official. The epi-Olmec data also make it clear that the function of the Reed day sign in the Mayan compound plays a symbolic role that was not based on the approximate phonetic resemblance of Mayan \(^*7a:j\) ‘reed’ to \(^*7a:ja:w\) or to the classifier \(*7aj=\).

Sometimes, though, the signs appear to have been borrowed by one system from the other. The signs \(na\) and \(mm\) appear to have been borrowed by Mayans from Mije-Sokeans; the sign YEAR/DRUM appears to have been borrowed by epi-Olmecs from Mayans, probably through interaction involving the use of the written format of the long count and associated chronological systems.

The Kaminaljuyu script has some signs known from both Mayan and epi-Olmec writing, others from Mayan but not from epi-Olmec, and still others from epi-Olmec but not from Mayan. We suppose that the script represented a Mije-Sokean or Mayan language – possibly both.
Texts
Codes for grammatical categories and morphemes

absolute person markers
XA exclusive absolute: {7u+}
3A third person absolute: {0}

ergative person markers
XE exclusive ergative: {na+}
IE inclusive ergative: {tun+}
2E second person ergative: {7in+}
3E third person ergative: {7i+}

verb-deriving prefixes
AWAY : {ku>}
MOUTH with the mouth: {7aw=}
BODY on the body: {ni7.}
ELSE in someone else's place: elsewhere, for someone else: {ko.}
ASSOC together, jointly: {nu.}
CAU causative {yak=}

verb-inflecting suffixes
NDIR indirective: {jya7}
PRF perfect: {-nay7}
ENTIRELY : {-pu7}

plural person marking suffixes
AP animate plural: {-ta7m}
IP inanimate plural: {-yaj}
3P third person plural: {-yaj}

aspect-mood suffixes
II independent incompleted: {-pa}
DI dependent incomplete: {-e ~ -i}
IC independent completed: {-wu}
DP dependent completed: {-ji}
OPT optative: {-7i}

stative-deriving suffix
STAT stative: {.na7}

noun-deriving suffixes
PN passive nominalization: {.e}, {.i}, {.e7}, {.i7}, {.u7}
AN active nominalization: {.u7}, {.a7}, {.i7}
NSTR instrument noun: {.kuy7}, {.7}

locative enclitics
LOC locative: {+mu7}
FROM : {+k}

subordinating enclitics
REL relativizer: {+wu7}
WHEN : {+7k}

Kaufman & Justeson: Epi-Olmec writing and texts 2.33
The Stela of La Mojarra (MOJ)

Loc MS# Glyph Reading = Pronunciation
---
A1-9
A1 95 CHRON₁
A2a 110 PATRON₂
A2b 72 YEAR/7AME7 OR DRUM, presumably /kowa/
A3 3 3 = /tuku/
A4 8 8 = /maktas=tujtu/
A5 5 5 = /mo(ko)s/
A6 3 3 = /tuku/
A7 3 3 = /tuku/
A8 5 5 = /mo(ko)s/
A9a 13 13, presumably /mak=tuku/
A9b 155 DN:SNAKE = /tzajin/

T CHRON₁, LCIG, PATRON₂, + YEAR/ /DRUM-3 8.5.3.3.5 13=SNAKE
R tzajin
G
L
 PT It was the third day of the seventeenth month;
 the long count was 8.5.3.3.5, and the day was 13 Snake.

[1 May 143 CE; A1-3 is the LCIG] [EN1]

B1-4
B1a 114 tuk
B1b 143 pa
B2 125 SUN = /sw/ [EN2]
B3 152b EAT, presumably /ku7s/
B4 104 MOON/POY7A OR TWENTY/7I7PS

T tuk-pa SUN=EAT MOON
R 0-tuk-pa swe=ku7s,u7 poy7a
G 3A-happen-II sun-eat-AN moon
L it-happens sun=eat-ing moon

Kaufman & Justeson: Epi-Olmec writing and texts

2.34
A solar eclipse took place somewhere between about 6.30 AM and 10 AM on the morning of 1 May 143 CE, with 60-80% of the solar disk covered; so close to the horizon, such an eclipse was probably visible (Bradley Schaeffer, personal communication, 1995). Venus had shone/appeared as evening star the previous night, on 8.5.3.3.4; at 45° 17' 57" it was not visibly closer to the sun than it was at its maximum eastern elongation of 45° 18' 09", the night before. Venus is represented as a piercer of other heavenly beings or gods in the Dresden codex.
D1a 129 KNOTTED.CLOTH
D1b 75 HALLOWS/KO.NU7KS

D2 63 ma
D3 176a sa
D4 150 SPRINKLE/WIK
D5 127 ta
D6 63 ma
E1 184 NOBLE, possibly /sa7.sa7(=pun)/
E2 181 WAR.LEADER
E3 20 wu

E4a 54 kak
E4b 59 SUPPORT
F1 127 ta
F2 63 ma
F3 38 ji
F4 170 ki
F5 179 pi
F6 20 wu

T KNOT+HALLOW ma-sa-SPRINKLE-ta-ma
R X+ko. nu7ks.1 masa=wik.i-ta7m
G ?-ELSE-greet-PN god-sprinkle-PN-AP
L coronated sprinkling-hallowed-ones

T NOBLE WARLEADER wu kak+Support-ta-ma
R sa7sa7(=pun) WARLEADER +wu7 kak.e=Support.(A7)-ta7m
G noble(+person) ?? REL support-PN-AP
L noble warleader -type replacement-supporters

T 7i-ki-pi-wu
R 0-7i+kip-wu
G 3A-3E-fight-IC
L they-fought.against-them

FT Coronated ones hallowed by sprinkling fought against noble(s and)
war-leader-type succession-supporters [would-be successors/usurpers].
OR
Coronated ones hallowed by sprinkling fought against noble (and)
war-leader-type succession-supporters [would-be successors/usurpers].
[The evening of 8.5.3.3.7. The day was 2 Deer, the 5th day of the seventeenth month; 3 May 143 CE.]

[13 year time increment leads to 8.5.16.3.7. The day was 2 Deer, on the 260th day of the year – quite possibly a ritually significant date in its own right. This was two days, and one or two nights, after a penumbral lunar eclipse, magnitude 66%, which was visible at La Mojarra and the Tuxtlal Mountains, and which would have occurred on the 13th anniversary of the beginning of the battle. It was also an approximate Venus anniversary of the date of the Venus event.]
I5-J5

T AND THEN BUNDLE-ti SIX po-7a wa
R AND THEN 0-pit.i tujtu poy7a +wa7
G and then 3A-tie-PN six month REL
L and then it-is-prisoner six month -type
FT And then there was an imprisonment that was for six months.

[Six-month time increment leading to 8.5.16.9.7, 23 June 156 CE, the day before summer solstice. The day was 5 Deer, the 15th day of the first month.]

J6-8

T 7o-tu-pa
R 0-7otuw-pa
G 3A-speak-II
L he-speaks
FT He [HML] speaks:

K1-4

T na-ku tu-si
R na+ku7 0-tus.i
G XE-hand 3A-prick-PN
L my-arm it-is-bristling/prickling
FT "My arm is bristling/prickling."

Kaufman & Justeson: Epi-Olmec writing and texts 2.38
K5-L3

K5 140  tzu
K6 101  si,
K7  20  wu
L1 182  STB+VENUS+REEDS+BEAD = COMMANDING.GENERAL
L2  114  tuk
L3a 119  MOUNTAIN = /kotzuk/
L3b  57  LORD/KO.YUMI

T  tzu-si wu  COMMANDING.GENERAL tuk  MOUNTAIN+LORD
R  tzusí +wu7  COMMANDING.GENERAL tuk.u7  kotzuk  ko.yumi
G  child REL ??  harvest-AN mountain ELSE-leader
L  child -type commanding.general harvester mountain lord
FT (said) the youthful commanding general Harvester Mountain-Lord [EN4]

L4-9

L4  44  na
L5 133+133  tze+tze
L6  115  CHOP/TZETZ
L7  138  ji
L8  63  ma
L9  20  wu

T  na-tze+tze-CHOP-ji  ma-wu
R  0-na+tzet-ji  0-maw.u7
G  3A-XE-chop-DC  3A-ruin-PN
L  when-I-chopped-him/it he-is-ruined
FT “When I chopped (off his head), he was ruined/it was his ruin.”
M1-7

M1 171  GO.UP/K17M
M2 153  je
M3 140  tzu
M4  56  te
M5  38  7i
M6 103+101 si
M7  20  wu

T  GO.UP je-tzu te 7i-si-wu
R  k17m.u7 je7.tzu te7 0<-7i>+7is-wu
OR k17m.i7
G  go.up-AN yon-manner that 3A-3E-see-IC
L  ascent that.way the.latter he-saw-it
OR ascending.one
FT  As for the ascent/installation/accession OR ascending one, that was how
the latter/aforementioned (the prisoner) saw/witnessed it/him.

[In this very important clause, the object is focused, and we have OSV word order. The captive would-be
usurper saw the scion of the ruling faction he had wanted to displace being installed in office at the same
moment that he was executed by him.]

M8-16

M8  95  CHRON1
M9a 152  PATRON1
M9b  72  YEAR/7AME7 OR DRUM
M10  15  15, presumably /yut/ OR /mak=mokos/
M11  8   8 = /tuku=tujtu/
M12  5   5 = /mo(ko)s/
M13 16  16, presumably /mak=tujtu/
M14  9  9 = /makas=tujtu/
M15  7  7, presumably /kuy/ OR /wus=tujtu/
M16a [effaced]  5 = /mo(ko)s/
M16b 154  DN:DEER. presumably /mu7a/

T  CHRON1, LCIG.PATRON1+YEAR//DRUM-15 8.5.16.9.7 [5]=DEER
R  mu7a
G
FT  It was the fifteenth day of the first month;
the long count was 8.5.16.9.7, and the day was 5 Deer.

[M8-M10 is the LCIG]
[The date is June 23, 156 CE, making explicit the date reached by the time count at J2-5]
N1-4

T  FOUR  TIME₄₊MONTH  wo-ma
R  maktas  poy7a  0-wǒ7m.a7
G  four  month  3A-sprout-AN
L  four  month  it-is-sprout
FT  For four months was the sprouting;

[Four month time increment leading to 8.5.16.13.7. The day was 7 Deer, the 15th day of the fifth month. The date was 11 September 156 CE. These four "months" (80 days) ran from 23 June to 11 September, during the rainy season.]

N5-8

T  7i-GO.UP  YEAR  BUNDLE
R  7i+ki7m-i  ʔameʔ  0-pit.i
G  3E-go.up-DI  year  3A-tie-PN
L  when-he/it/they-go(es).up  year  it-is-bundle
FT  When he goes up/ascends, the year is bundled. OR When he/they go(es).up/ascend, a(nother) year is (in a) bundle(d). OR When he goes.up/ascends, there/it is a year-bundle.

T  7i-GO.UP-YEAR  BUNDLE
R  7i+ki7m.uʔ=ʔameʔ  0-pit.i
G  3E-go.up-AN-year  3A-tie-PN
L  his-ascent-year  it-was-bundle
FT  His ascent/re-accession year was (a) bundled (thing).

N7-8: cf. N1-4 word play on `prisoner' and `bundled'

[One year time increment leading to 8.5.17.13.7, 6 September, 157 CE. The day was 3 Deer, on the tenth day of the fifth month.]

N9-12

Kaufman & Justeson: Epi-Olmec writing and texts

2.41
N9-12

T  pu-wu  7i-OFFERING
R  0-puw-we  7i+OFFERING
G  3A-scatter-IC  3E-offering
L  it-got-scattered his-offering
FT  His offering got scattered.

N13-17

T  SKIN-DRUM  su+su  je  GOVERNOR
R  0-naka=kowa  su7ksu7  je7  GOVERNOR
G  3A-skin-drum  hummingbird  yon governor
L  it-is-skin-drum  hummingbird  yon governor
FT  That governor('s headdress) was a skin-drum (and a) hummingbird. [EN5]
N18-29

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N18</td>
<td>52</td>
<td>pe</td>
</tr>
<tr>
<td>N19</td>
<td>20</td>
<td>wu</td>
</tr>
<tr>
<td>N20</td>
<td>38</td>
<td>7i</td>
</tr>
<tr>
<td>N21</td>
<td>51</td>
<td>MACAW.POWER1 [EN6]</td>
</tr>
<tr>
<td>N22</td>
<td>38</td>
<td>7i</td>
</tr>
<tr>
<td>N23</td>
<td>83</td>
<td>ECCENTRIC.FLINT</td>
</tr>
<tr>
<td>N24</td>
<td>38</td>
<td>7i</td>
</tr>
<tr>
<td>N25</td>
<td>37</td>
<td>ku</td>
</tr>
<tr>
<td>N26</td>
<td>67</td>
<td>MIDDLE/KUK</td>
</tr>
<tr>
<td>N27</td>
<td>74</td>
<td>tza,</td>
</tr>
<tr>
<td>N28</td>
<td>165</td>
<td>ja</td>
</tr>
<tr>
<td>N29</td>
<td>169</td>
<td>me</td>
</tr>
</tbody>
</table>

T  pe-wu  7i-MACAW.POWER, 7i-ECCENTRIC.FLINT
R  0-psy-wu  7i-MACAW.POWER  7i-ECCENTRIC.FLINT
G  3A-brandish-IC  3E-??  3E-??
L  they-got-brandished his-macaw.power his-eccentric.flint

T  7i-ku-MIDDLE-tza,ja-me
R  7i+kuk=tza7=jam.e
G  3E-middle-stone-remember-PN
L  his-middle-stone-remembrance

FT  His Macaw.power, his eccentric.flint, and his pectoral stone memento got brandished.

(This clause describes the action that is depicted in the scene on the front of the stela; in a nice interplay of text and image, HML's hand swings into column M just at the end of the clause that describes this very action. Something similar may be happening in the Alvarado stela.]
ABOUT TEN SIGNS MISSING

N*30-32

ja
BEDECK, possibly /wu=tzuk/

T ... ja BEDECK-wu
R ... ?? 0-wu=tzuk-wu
G 3A-good-do-IC
L ... ?? he-got-bedecked
FT ... (he) got bedecked

[cf. S17-18/21]

N*33-37

NOW/...TI
PRIEST
SUN = /sww/
ko
LORD/KO.YUMI
BEARD.MASK
wu

T NOW PRIEST+SUN ko+LORD BEARD.MASK wu
R ADV,-ti ko?=sww 0-ko.yumi BEARD.MASK +wu7
G now head=sun 3A-ELSE-leader ?? REL
L now priest he-was-lord beard.mask-type
FT Now the priest was he who is a lordly beard-mask (wearer);

OR Now the lordly beard-mask wearer was a/the priest.
After thirteen days, the god(s) Macaw Monster and Scorpius, and King Harvester Mountain-Lord and (or on) an ascension throne appeared in rulership.
[13-day time increment leading to the night of 8.5.17.14.0. The day was 3 Macaw, day 3 in month 6, which was the night beginning on 19 September 157 CE. This night was the 9th Venus anniversary (9 x 584 days) of the first Venus event, and like the associated eclipse date, it fell at new moon.]

O18-24

| O18a 144a | ?SKY.GOD₄ |
| O18b 144b | SKY/TZAP  |
| O19 143   | pa        |
| O20 160   | ?QUETZAL or TROGON, presumably /tu7ki/ |
| O21 45    | ko        |
| O22 170   | ki        |
| O23 65    | mi        |
| O24 171   | GO.UP/KI7M |

T SKY.GOD₄=SKY-pa QUETZAL ko-ki-mi-GO.UP
R tzap tu7ki <7i+>ko.ki7m-i
G sky trogon 3E-ELSE-go.up-DI
L sky quetzal when-he-ascends-ELSE
FT When Sky Quetzal [EN7] was ascending for others/elsewhere...

O25-26

| O25 75 | HALLOW/KO.NU7KS |
| O26a 134a | n₄ |
| O26b 151   | SPAN/TZAT7  |
| O26c 44    | EARTH/NAS   |

T HALLOW n₄=SPAN+EARTH
R 0-ko.nu7ks.i nu.tzat7.e=nas
G 3A-ELSE-greet ASSOC.measure-FO-earth
L it-is-hallowed jointly-handspan.measured-ground
FT ...(at) the hallowed ground jointly measured by hand spans...
OR ...the ground jointly measured by handspans had been hallowed.

ABOUT EIGHT SIGNS MISSING
O*27-29
POUND, probably /naks/ wu
DRUM, presumably /kowa/ OR YEAR/7AME7

T POUND-wa DRUM
R 0-naks-wu kowa
G 3A-pound-IC drum
L it-got-pounded drum
FT The drum got pounded;

O*30-33
wi
?BEFORE/WIN
FOLD, probably /paks/
pa2
tu
cloth/TUKU7

T wi-BEFORE FOLD+pa2 tu+CLOTH
R win 0-paks-pa tuku7
G face 3A-fold-II cloth
L in.front it-gets-folded cloth
FT <then> the garments were getting folded in front.

O*34-P2
7i
PIERCED, probably /wu7tz/
si1
7i
7o
tu
pa

T 7i-PIERCED si1-7i 7o-tu-pa
R 7i+wu7tz-i <7i+si7i7 0-7otuw-pa
G 3E-pierce-DI 3E-buttocks 3A-speak-II
L when-it-gets-pierced his-buttocks he-speaks
FT When his buttocks were getting pierced, he [HML] speaks:

Kaufman & Justeson: Epi-Olmec writing and texts 2.47
P3-9

na
BLOOD = /nu7pin/
7i
ko
LOSE/TOKOY
pu
wu

na-BLOOD 7i-kO-LOSE -pu -wu
na+nu7pin 0-7i+ko.tokoy-pu7-wu
XE-blood 3A-3E-ELSE-lose-ENTIRELY-IC
my-blood he-spilled/hid-it-entirely-ELSE

"He [probably the calendar priest (or possibly Sky Quetzal)] spilled/hid my blood in another's place."

P10-15

ECCENTRIC.FLINT
7aw
GO.UP/ki7m
?? (undamaged, but uninterpreted)
7aw=sww
kak

ECCENTRIC.FLINT 7aw-GO.UP ?? TIME kak
ECCENTRIC.FLINT 7aw=ki7m.u7 ?? 0-7aw=sww kak.u7
MOUTH-go.up-AN ?? 3A-MOUTH-festival replace-AN
ruler(ship) ?? it-is-time success-ion/-or
(The) royal ruler(ship) is/was (a/the) X time/count success-ion/-or;

P16-18

?? (?building, ?mantle, ?headwrap)

KNOTTED.CLOTH
HALLOW/ko.nu7kS
CLOTH/tuku7

?? KNOT+HALLOW CLOTH
?? 0-X+ko.nu7kS.u tuku7
?? 3A-X-ELSE-greet-AN cloth
?? it-is-coronation cloth
Y is/was a coroniation cloth.

[The syntax is unclear here]

Kaufman & Justeson: Epi-OlmeC writing and texts 2.48
P19-22

P19a  96a  ?TIME,
P19b  144a  ?SKY.GOD₄
P19c  94b  RAIN
P20  63  ma
P21  10  10/MAK
P22a  144a  ?SKY.GOD₄
P22b  144b  SKY/TZAP

T  TIME₄+SKY.GOD₄=RAIN  ma-TEN  SKY.GOD₄=SKY
R  0-tuj?=?aw=suw=jej.a7  mak  tzap
G  3A-rain-MOUTH-festival-live-AN
L  he-is-rainy season[-spirit]  Ten  Sky
FT  (The god) Ten Sky is/was a/the rainy season god.

{This date, 8.5.17.14.0, falls in the latter part of the rainy season.}

P23-30

P23  45  ko
P24  23  PIERCE, probably /wu7tz/
P25  124  ku
P26  20  wu
P27  38  7i
P28a  171  GO.UP/KI7M OR ?RULE
P28b  101  si₃
P29  38  7i
P30  87  yaj

T  ko-PIERCE-ku-wu  7i-GO.UP+si₃-7i-yaj
R  0-ko.wu7tz=kuy7-wu  7i+ki7m.u7=si7i7-yaj
G  3A-ELSE-pierce-cover-IC  3E-go.up-AN-buttocks-3P/IP
L  it-got-pierced-and-covered-ELSE their-ascent-buttocks
   OR his-ascent-buttock.cheeks
FT  Their [HML and his cronies's] power-assuming buttocks got pierced and
   covered for others.
   OR His [HML's] power-assuming buttock-cheeks got pierced and covered for
   others.
   OR if P31 is read with P23-30, and <wu> was present immediately after in the
   effaced part [cf. MOJ V17-18] Their/His Reeds-Cross-Pillar-type
   ascension/power-assuming buttock (cheek)s got pierced and covered for others.
P31-39

P31 61

[TITLE₂ (Reads=Cross-Pillar) = ancestor/Olmec (?)]

[About 6 signs missing]

P*32 38
P*33 132
P*34 107
P*35 120
P*36 46
P*37 124var
P*38a 76
P*38b 78
P*39 20

? (probably 7i)

LET.BLOOD

PENIS = /kan/
mu
ku

PRINCE

"(ANGLE.)BRACE"
wu

T (TITLE₂) x x x x x x ? LET.BLOOD
R ancestor(?)
7i+LET.BLOOD.E
kan=joj+mu7+k
G ??
3E-let.blood-DI
penis-inside-LOC-FROM
L ancestral(?)
he-was-blood-letting from-inside-penis

PRINCE+BRACE wa
PRINCE +wu7

FT (ancestral(?)) ... when he was blood-letting from inside the penis, he was a prince-type.

OR (if P31 is read with P23-30) When the ancestral(?) ... was blood-letting from inside the penis, he was a prince-type.

P*40-Q2

P*40 24
P*41 28
P*42 38
P*43 97
P*44 29
Q1 82
Q2 103+101

NOW/...TI

puk
7i
7o
wa
ju OR TIE/JU7PS
si

NOW/...TI
puk-7i
7o-wa-ju(7ps)-si
ADV₁-ti 0-puk-7i
7owasju7ps.i
now 3A-take-OPT
macaw-lash-PN
it-should-get-taken macaw-lashing
Now a macaw-lashing/?band was supposed to get taken.

Kaufman & Justeson: Epi-Olmec writing and texts

2.50
Q9-12 (13-14)

Q9a  79  ??
Q9b  78  "(ANGLE.) BRACE"
Q10  83  ECCENTRIC.FLINT
Q11  20  wu
Q12  121  ?FLOWER
Q13a 45  ko
Q13b  57  LORD/KO.YUMI
Q14  145  BEARD.MASK

Q9-14

T  ??+BRACE  ECCENTRIC.FLINT  wu  ?FLOWER  ko+LORD  BEARD.MASK
R  ??  ECCENTRIC.FLINT  +wu7  0-?  ko.yumi  BEARD.MASK
G  ??  ??  REL  3A-?  ELSE-leader  ??
L  'notable' 'royal' -type he-is-flower lord beard.mask
FT  The notable royal-type X was a flower-lord beard-mask (wearer) [EN8]

OR Q9-12

T  ??+BRACE  ECCENTRIC.FLINT  wu  ?FLOWER
R  ??  ECCENTRIC.FLINT  +wu7  0-?  G  ??  ??  REL  3A-?
L  'notable' 'royal' -type he-is-flower
FT  The notable royal-type X was a flower.
Q13-25

**Q13a 45**  ko  
**Q13b 57**  LORD/KO.YUMI

**Q14 145**  BEARD.MASK

**Q15 182**  KING

**Q16 114**  tuk

**Q17a 119**  MOUNTAIN = /kotzuk/

**Q17b 57**  LORD/KO.YUMI

**Q18 38**  7i

**Q19 45**  ko

**Q20 56**  te

**Q21 124**  ku

**Q22a 23**  PIERCE, probably /wu7tz/

**Q22b 24**  NOW/...TI

**Q23 80**  STAR.WARRIOR

**Q24 75**  HALLOWS/KO.NU7KS

**Q25 20**  wu

---

**T**  ko+LORD  BEARD.MASK

**R**  ko.yumi  BEARD.MASK

**G**  ELSE-leader ??

**L**  lord  beard.mask

**T**  KING  tuk  MOUNTAIN+LORD

**R**  (0-)KING  tuk.u7  kotzuk  ko.yumi

**G**  (3A-)?? harvest-AN mountain ELSE-leader

**L**  (he-is-)King Harvester Mountain-Lord

**T**  7i-ko-te  -ku

**R**  0-7i+kot-e  +7ku

**G**  3A-3E-put.away-DI  WHEN

**L**  when-he-put.in/on/away-it +when

**T**  PIERCE× NOW  STAR.WARRIOR HALLOWS-wu

**R**  wu7tz.u7  ADV,-ti  STAR.WARRIOR  0-ko.nu7ks-wu

**G**  pierce-AN  now  ??  3A-ELSE-greet-IC

**L**  piercingly  now  star.warrior  he-got-hallowed

**FT**  When (the lordly beard-mask (wearer)), King Harvester Mountain-Lord, was putting it [garment?, macaw lashing/band?, beard-mask?, eccentric flint?] away, piercingly now the star-warrior got hallowed.

**OR**  The lordly beard-mask (wearer) is King HML. When he was putting it [garment?, macaw lashing/band?, beard-mask?, eccentric flint?] away, piercingly now the star-warrior got hallowed.

---

Kaufman & Justeson: Epi-Olmec writing and texts

2.52
When King Harvester Mountain-Lord was putting it [garment?, macaw lashing/band?, beard-mask?, eccentric flint?] away, piercingly now the star-warrior got hallowed.

The aforementioned one [HML] sings a song which is about/of an animal-guise/day ('s length?):
Q34-42

Q34 24  NOW/...TI
Q35  44  na
Q36 107  PENIS = /kan/
Q37  28  puk
Q38  62  ma
Q39 117  ?LOINCLOTH, probably /ni7.jup.7/
Q40 147  pu
Q41a 129  KNOTTED.CLOTH with straps
Q41b  60  GOVERNOR('s headdress)
Q42  49  7a

T  NOW  na-PENIS-puk
R  ADV,ti  na+kan=puk.a7
G  now  XE-penis-take-AN
L  now  my-penis-reciever

T  ma  ?LOINCLOTH-pu  KNOT+GOVERNOR-7a
R  ma  0-ni7.jup.7  0="ruler"=ko7=mon7.a7
G  earlier  3A-BODY-cover-NSTR  3A-??-HEAD-wrap-NSTR
L  earlier  it-is-body-cover-ing it-is-ruler's-head-wrap

FT  "Now my penis-recievers [staunchers] had earlier been a
body-covering and a ruler's head-wrap."

Q43-47

Q43  54  kak
Q44  77  SCORPIUS/KAKPE7
Q45  52  pe
Q46 170  ki
Q47  20  wu

T  kak-SCORPIUS-pe  ki-wu
R  kakpe?  0-kij-wu
G  scorpion  3A-shine-IC
L  Scorpius  it-shone
FT  Scorpius shone.

[Venus was in Scorpius, a propitious situation for warfare among ancient Mayans, and apparently also among other Meso-Americans.]
Q48-R3

Q48  24 NOW/...TI
Q49  173 ?? NOBLE.SKY.ANIMAL
R1   152 JAGUAR = /kajaw/
R2   91 APPEAR
R3   20 wu

T  NOW NOBLE.SKY.ANIMAL JAGUAR APPEAR-wa
R  ADV,-ti sa7sa7=tzap=ko.pun kajaw 0-APPEAR-wu
G  now noble-sky-ELSE-person jaguar 3A-appear-IC
L  now noble sky animal jaguar it-appeared
FT Now a noble sky animal jaguar [= Mercury?] appeared/got.revealed/shown.forth.

[This was the sign that the first of 23 jaguars should be taken over the course of 23 days by the protagonist.]  [EN9]

R4-8

R4a  109 pak
R4b  37 ku
R5   63 ma
R6a  32 STAR/MATZA7
R6b  30 tza
R7   31 SHINE, presumably /kij/
R8   20 wu

T  pak+ku ma-STAR+tza SHINE-wa
R  pak.kuy7 matza7 0-kij-wa
G  beat-NSTR star 3A-shine-IC
L  bludgeon star it-shone
FT The bludgeon star [Venus] shone.

[This date was the exact ninth Venus "anniversary" of (9 x 584 days since) the first-mentioned such event, at B7-C4, and was at maximum elongation (47° 00' 44'') of Venus as evening star.]
R9-17

| R9  | 89 | AFTER/JUS
| R10 | 178| su?
| R11 | 13 | 9 = /maktas=tujtu/
| R12 | 165| ja
| R13 | 63 | ma
| R14 | 152| JAGUAR = /kajaw/
| R15 | 28 | puk
| R16 | 124| ku
| R17 | 38 | 7i

T  AFTER-su  NINE  ja-ma  JAGUAR puk-ku-7i
R  jas  maktas=tujtu  jama  0-kajaw=puk-7i
G  back  four-past.five day  3A-jaguar-take-OPT
L  after  nine  day  he-should-jaguar-take
      jaguar it-should-get-taken

FT  Nine days later (once again) a (tenth) jaguar was supposed to get taken.
OR: Nine days later he was supposed to take a jaguar [with incorporated Direct Object]

[nine day time increment leading to 8.5.17.14.9, 28 September 157 CE. The day was 12 Water, day 12 of month 6]
R18-22

R18 33 SKIN, presumably /naka/
R19 72 DRUM, presumably /kowa/
R20 55+55 ?su+?su
R21 98 yu
R22 60 GOVERNOR('s headdress)

T SKIN-DRUM su+su yu GOVERNOR
R 0-naka=kowa su7ksu7 yu7 GOVERNOR
G 3A-skin-drum hummingbird this ??
L it-is-skin-drum hummingbird this governor
FT This governor('s headdress) was a skin-drum (and a)
hummingbird. [EN5]

R23-27

R23 75 HALLOW/KO.NU7KS
R24 61 TITLE2 (Reeds+Cross-Pillar) = ancestor/Olmec (?)
R25 81 TITLE4 (*x-badge")
R26a 1 ONE = /tum-u/
R26b 72 YEAR/7AME7 or DRUM
R27 167 MACAW.MONSTER.PERSON [non-verbal predicate of
preceding subject?]

T HALLOW TITLE2 TITLE4
R ko.nu7ks.i TITLE2 TITLE4
G ELSE-greet-PN ?? ??
L hallowed ancestor(?) x-badge

FT The hallowed ancestral(?) "x-badge" had had for one year Macaw Monster
role/status.

[It was nine days later.
HML was supposed to take a(nother) jaguar; OR a(nother) jaguar was about to be
taken.
HML was wearing a hummingbird and a skin drum?
HML had been a Macaw Monster devotee for a year.
cf. ?Associations of hummingbirds with warfare (as in Huitzilopochtli)?]
R27-40

MACAW.MONSTER.PE RSON [subject of following verb?]

R27 167
R28 38 7i
R29 149+42 ne
R30 138 ji
R31 53 ja,
R32 68 SYMBOL/KI7PS.J
R33 101 si,
R34 38 7i
R35 149+50 LOSE/TOKOY
R36 999 ya?
R37 38 7i
R38 170 ki
R39 179 pi
R40 20 wu

T 7i-ne-ji
R 0-7i+ne7w-ji
G 3A-3E-put.stones-DC
L when-he-put.stones.in.order

T ja,-SYMBOL-si 7i-LOSE-ya? 7i-ki-pi-wa
R jay7=ki7ps.i 7i+yak=tokoy.a7 0-7i+kip-wa
G write-think-PN 3E-CAU-lose-AN 3A-3E-fight-IC
L written-symbol its-overthrow(er) he-fought.against-him

FT When he [the Macaw Monster player/person] placed stones in order he fought against the overthrow(er)(s) of inscribed monuments.

R41-48

R41 38 7i
R42 22 BLOOD = /nu7pin/
R43 2 TWO//\we,  
R44 38 7i
R45 43 nu
R46 101 si,
R47 71 ??
R48 25 we
R49 142 pa

T 7i-BLOOD wu 7i-nu-si, ?? we-pa
R 7i-nu7pin +wu7 7i+nuk5-l 0-wej-pa
G 3E-blood REL 3E-go-DI ?? 3A-shout-II
L his-blood thing when-it-goes he-shouts
FT As for his [HML's] blood, when it was flowing, he [HML] shouts:

Kaufman & Justeson: Epi-Olmec writing and texts

2.58
S1-6

T  na-BLOOD  ko-SPRINKLE-ki-pa
R  na+nu7pin  o-ko.wik-pa
G  XE-blood  3A-ELSE-sprinkle-II
L  my-blood  it-gets-sprinkled-ELSE
FT  "My blood is getting sprinkled for.others/elsewhere."

S7-12

T  tu-na-DEAL.WITH-pu-ja-yaj-wu
R  o-tun+tup-pa7-jay7-yaj-wu
G  3A-IE?-shoot-?ENTIRELY-NDIR-3P-DC
L  we-dealt.with-him/them-for.him/them
FT  We [the raisers of this stela and their audience] arrow-shot/?dismembered him/them [the rebel(s)] for him/them. [EN9]
When he [HML's rival] set down bloodily, the macaw-bedecked one [HML or his rival] was an animal-guise-impersonator [EN10]

[cf. N*31-32]
[Begin quote by HML: S22-34 refers to captive would-be usurper]

S22 44  na
S23 22  BLOOD = /na7pin/
S24 20  wu

T  na-BLOOD   wu
R  0-na+na7pin +wu7
G  3A-XE-blood  REL
L  it-is-my-blood thing
FT  "It/He is my bloody thing/one."

S25 38  7i
S26 22  BLOOD = /na7pin/
S27a 65  mi
S27b 101  si,
S28 64  ti
S29 159  MACAW = /7owa/
S30 25  we
S31 143  pa
S32 44  na
S33 22  BLOOD = /na7pin/
S34 20  wu

T  7i-BLOOD-mi+si   ti
R  7i+na7pin=mi7ks-i +ti
G  3E-blood-quiver-DI
L  when-he-quivers-bloodily only

T  MACAW we-pa  na-BLOOD   wu
R  7owa  0-wej-pa  0-na+na7pin +wu7
G  macaw 3A-shout-II  3A-XE-blood  REL
L  macaw he-shouts  it-is-my-blood thing

FT  When he/it [HML's rival('s wing)] was doing nothing but quiver/flap bloodily, Macaw [HML] was shouting. "It/He is my bloody thing/one."
| S35  | 24  | NOW/...TI |
| S36  | 22  | BLOOD = /nu?pin/ |
| S37  | 56  | te          |
| S38  | 149+42 | ne       |
| S39  | 999 | ?STEP      |
| S40  | 138 | ji          |
| S41a | 42b | 7u          |
| S41b | 125 | SUN, presumably /sw/ [EN2] |
| S42a | 129 | KNOTTED.CLOTH |
| S42b | 75  | HALLOW/KO.NU7KS |
| S43  | 101 | si          |

T   NOW     BLOOD-te-ne-?STEP-jì
R   ADV-ti <7i+>nu?pin=te7n-jì  
G   now  3E-blood-tip.toe-DC  
L   now  when-he-stepped-bloodily

T   7u+SUN  KNOT+HALLOW-sì  
R   7u+suw X+ko.nu7ks.i  
G   XA-sun  ?-ELSE-greet-PN  
L   I-am-sun coronated

FT  Now, when he stepped (on tip-toe) (up, down, in, out, again?) bloodily, [he said] "I am the sun, a coronated.one/crowned.prince. [cf EN29]
**T7-10**

| T7a  | 38 | 7i |
| T7b  | 101 | si, |
| T8a  | 146 | ONE = /tum-ù/ |
| T8b  | 72 | YEAR/7AME7 OR DRUM |
| T9   | 169 | me |
| T10  | 81 | TITLE₄ ("x-badge") |

**T** 7i+si, ONE+ YEAR-me TITLE₄
**R** 7is tum-ù 7ame7 0-TITLE₄
**G** see one-NUM year he-is-badge
**L** behold one year "x-badge"
**FT** Behold, he [HML?] had been an "x-badge" for one year.

(Reference: Kaufman & Justeson: Epi-Olmece writing and texts, p. 2.63)
T11-12

T11  80  STAR.WARRIOR
T12  20  wu

T  STAR.WARRIOR  wu
R  0-STAR.WARRIOR  +wu7
G  3A-??  REL
L  he-is-star.warrior-type
FT  He was a star-warrior-type one.

T13-23

T13  171  GO.UP/K17M
T14  152  JAGUAR  =  /kajaw/
T15a  104  MOON/POY7A OR TWENTY/7I7PS
T15b  101  si₂
T16  3  3  =  /tuku/
T17  89  AFTER/JUS
T18  178  su?
T19  13  13  =  /mak=tuku/
T20  172  GUISE₁  =  /jama/
T21  28  puk
T22  124  ku
T23  20  wu

T  GO.UP-JAGUAR  TWENTY+si-THREE
R  ki7m.u7=kajaw  7i7ps-ko-tuku
G  go.up-AN-jaguar  twenty-and-three
L  ascent  jaguar  twenty-three

T  AFTER-su  THIRTEEN   GUISE₁  puk-ku-wu
R  jus  mak=tuku  jama  0-puk-wu
G  back  ten-three  day  3A-take-IC
L  after  thirteen  day  it-got-taken

FT  After thirteen days ascent/ascending jaguar (number) twenty-three got taken.

[13 day time increment leading to 8.5.17.15.2, 11 October 157. The day was 12 Wind, day 5 of month 7. Ascent Jaguar #23 was taken on the 23rd day/night of jaguar-taking. Evidently, one jaguar was taken each day (or night), and possibly sacrificed on that day, or at the end of the 23 days. Mercury was in the head of Scorpius, very near where Venus had been on the first day of jaguar-taking.]
**T24-30**

| T24  | 56  | te   |
| T25  | 149+42 | ne   |
| T26  | 44  | na   |
| T27  | 54  | kak  |
| T28  | 20  | wu   |
| T29  | 68  | SYMBOL/KI7PS.I |
| T30  | 101 | si₂  |

T  te-ne-na-kak-wu  
R  0-te7n.na7=kak-wu  
G  3A-tip.toe-STAT-replace-IC  
L  it-got-replaced-upright/on.tip-toe symbol  
FT  The symbol(-stone)s got replaced upright.

---

**T31-36**

| T31  | 176b | saj  |
| T32  | 20  | wu   |
| T33  | 38  | 7i   |
| T34  | 37  | ku   |
| T35  | 44  | na   |
| T36  | 68  | SYMBOL/KI7PS.I |

T  saj-wu  
R  0-saj-wu  
G  3A-share-IC  
L  it-got-shared.out his-set.aside-symbol  
FT  His set-aside symbols [?body-parts] got shared out. [EN12] => [EN9]
T37-46

T37 129  KNOTTED.CLOTH
T38a 148a  ?nu
T38b 101  si₂
T39 38  7i
T40 179  pi
T41 70  ni
T42 102  tu
T43 43  nu
T44a 48a  DEAL.WITH = ?SHOOT/TUP
T44b 47  pu
T45 165  ja
T46 20  wu

T  KNOT-?nu-si₂  7i-pi-ni  tu-nu-DEAL.WITH-pu-ja-wu
R  X+ko.nu7ks.i  7i+pini7  0-tun+tup-pu7-jay7-wu
G  ?-ELSE-greet-PN  3E-brother.in.law  3A-IE-?shoot-?ENTIRELY-NDIR-IC
L  crowned.one  his-brother-in-law we-dealt.with-him-for.him
FT  We [the raisers of this monument] arrow-shot/?dismembered [EN9] the
crowned one's brother-in-law for him.

[The reference to HNL as "the crowned one" seemingly emphasizes the legitimacy
of his position vis-a-vis his brother-in-law's.]

U1-3

U1  87/88  yaj
U2  38  7i
U3  99  DROPS.as.SACRIFICE

T  yaj-7i  SACRIFICE
R  0-yaj-7i  SACRIFICE
G  3E-finish-OPT  ??
L  let-it-be-finished sacrifice
FT  The dripping sacrifice was supposed to be finished/used.up.
U4-8

U4  38  7i
U5  45  ko
U6  150  SPRINKLE/WIK
U7  170  ki
U8  143  pa

T  7i-ko-SPRINKLE-pa
R  0-7i-ko.wik-pa
G  3A-3E-ELSE-sprinkle-IT
L  he-sprinkles-it-ELSE
FT  He [HML] was sprinkling it for others/elsewhere;

U9-14

U9  25  we
U10  149+42  ne
U11  68  SYMBOL/KI7PS.I
U12  63  ma
U13  176b  saj
U14  20  wu

T  we-ne  SYMBOL  ma  saj-wu
R  wen.e?  ki7ps.i  ma  0-saj-wu
OR  we7n.e
G  break-PN  think-PN  earlier  3A-share-IC
OR  split-PN
L  piece/broken  symbol  earlier  they-got-shared.out
OR  some
FT  the symbols [?body-parts] had gotten shared out earlier in pieces.
OR  broken symbols had gotten shared out earlier.
OR  a few symbols had gotten shared out earlier.

There is a column (V) of 35 heavily eroded glyph groups on the side of the stela to the viewer's right of
column U. Discovered by Sergio Vásquez and Fernando Muñiz in November 1995, in several particulars
it confirms readings or analyses previously announced.

Kaufman & Justeson: Epi-Olmeic writing and texts  2.67
V1-5

7i
si

13 = /tuku=metz-a/ (possibly 12 = /mak=metz-a/)

YEAR/7AME7 OR DRUM

V5 ?? TITLE

T 7i-si 13 YEAR TITLE
R 7is mak=tuku 7ame7 0-TITLE
G see ten-three-NUM year 3A-??
L behold thirteen year he-is-TITLE
FT Behold, there/he was for thirteen years a TITLE (?regional overlord).

[If the recorded numeral is 12, and is added to the last preceding date, this brings the date to within 58
days (8.6.9.15.2, or later) of the end of an Epi-Olmec decade, a major period-ending, 8.6.10.0.0, 13
Macaw. 13 Macaw is also the last day of the ritual calendar. The events that followed may have
continued up to the period-ending. But the number is more likely to be a 13. In either case, the reference
may not be to a time count but rather to the ruler's age; he was referred to as being a /tzuši/ 'child' just
475 days earlier. This seems likely since V6-8 and V11-18 are plausibly retrospective.]

V6-8

V6a nn ? AND THEN
V6b 34

V7a 93 tu CLOTH/TUKU7
V7b 100

V8a 105 FOLD, probably /paks/
V8b 142 pa,

T ?+AND.THEN tu+CLOTH FOLD+pa
R ? AND THEN tuku7 0-paks-pa
G ? and.then cloth 3A-fold-ll
L ? and.then clothing it-gets.folded
FT And then a garment was getting folded;

V9-10

V9 ?? "UTTER" [verb of speaking or singing]
V10 20 wu

T [UTTER]-wu
R 0-UTTER-wu
G 3A-??-IC
L he-{uttered}
FT  He [uttered]:

**V11-18**

- V11 38 7i
- V12 149+42 ORDER.STONES/NE7W
- V13 153 je
- V14 140 tzu
- V15 68 SYMBOL/KI7PS.I
- V16 ?? ?
- V17 61 TITLE2 (Reeds+Cross-Pillar) = ancestor/Olmec (?)
- V18 20 wu

T  7i-ORDER.STONES  je-tzu  SYMBOL  ?  TITLE2  wu
R  7i+ne7w.e  je7.tzu  0-ki7ps.i  ?  TITLE2  +wu7
G  3E-put.stones-PN  yon-manner  3A-think-PN  ?  REL
L  his-set.in.order.stones that.way  it-is-symbol  ancestor(?)  -type
FT  -- The stones that he set in order were thus symbols, ancestral(?) -type ones --

**V19-24**

- V19 44 na
- V20 133+133 tze+tze
- V21 123 PLANT/NIP7
- V22 38 7i
- V23 20 wu
- V24 114 ?tuk [sign identification not definite]

T  na-tze+tze  PLANT-7i  wu-tuk
R  na+tze+tze  0-nip7.i  0-wu=tuk.i
G  XE-chop-PN  3A-plant-PN  3A-good-harvest-PN
L  my-chopped-thing it-is-planted-thing it-is-well-harvested-thing
FT  "What I chopped has been planted and harvested well."
OR  "What I chopped is a planting and a good harvest."

Kaufman & Justeson: Epi-Olmec writing and texts 2.69
V25 164  GUISE; JAMA, or <ja>
V26  63   ma
V27  176  sa
V28  70   ni (or DRUM OR YEAR/7AME7)
V29  91   APPEAR
V30  20   wu

T  GUISE;  ma-sa-ni-APPEAR-wu
R  jama   0-masa-ni7.APPEAR-wu
G  guise   3A-god-BODY-appear-IC
L  animal-guise it-appeared-divinely-on.his.body
FT An animal-guise appeared divinely on his body.

END OF LA MOJARRA STELA 1
Running translation of the La Mojarra Stela
repeated themes (words and phrases) are underlined

A1-9 It was the third day of the seventeenth month; the long count was
8.5.3.3.3, and the day was 13 Snake.

B1-4 A sun-eating moor [solar eclipse] took place;
B5-C7 Piercingly the bludgeon star [Venus] had shone earlier [the day
before], late in the day.

D1-P6 Coronated ones hallowed by sprinkling fought against noble (and)
war-leader-type succession-supporters [would-be successors/usurpers].

G1-H2 Earlier a day, a night, and a day had passed,

[[two-day time increment leading to 8.5.3.3.7]]

H3-I4 (when) behold, there was a prisoner for thirteen years.

[13 (and 2 day) year time increment leading to 8.5.16.3.7, 23 June 156
CE, the day before summer solstice]

I5-J5 And then there was an imprisonment that was for six months.

[six months time increment leading to 8.5.16.9.7]

J6-8 He [HML] speaks:

K1-7 "My arm was bristling/prickling,"

L1-3 (said) the youthful (boy-type) commanding general Harvester
Mountain-Lord.

L4-9 "When I chopped (off his head), he was ruined/it was his ruin."

M1-7 As for the ascent/installation/accession (OR ascending one), that was
how the latter/aforementioned (the prisoner) saw/witnessed it/him.

M8-16 It was the fifteenth day of the first month; the long count was
8.5.16.9.7, and the day was 5 Deer.

[13 years 6 months and 2 days after previous long count]

N1-4 For four months (is/was the) sprouting.

[four month time increment leading to 8.5.16.13.7]

N5-8 When he goes up, another year is in a bundle.
When he goes up/ascends, the year is bundled.
OR
When he/they go(es). up/ascend(s), a(nother) year is (in a) bundle(d).
OR
When he goes up/ascends, there/it is a year-bundle.
His ascent/re-accession year was (a) bundled (thing).
[one year time increment leading to 8.5.17.13.7]

N9-12 His offering got scattered.
That governor's headdress was a skin-drum (and a) hummingbird.

His Macaw.sign, his eccentric.flint, and his pectoral stone memento got brandished.

[ABOUT TEN SIGNS MISSING] [was the "spiller" mentioned here?]

... (he) got bedecked.

Now the priest was he who is a lordly beard-mask (wearer).

OR, Now the lordly beard-mask wearer was a/the priest.

After thirteen days, the god(s) Macaw Monster and Scorpius, and King Harvester Mountain-Lord and/or the ascension throne got revealed/appeared in rulership.

[13 day time increment leading to 8.5.17.14.0, 3 Face, day 3 in month 6: 9th Venus anniversary at new moon]

When Sky Quetzal was ascending for others (OR elsewhere) (at) the hallowed ground jointly measured by handspans ...

OR the ground jointly measured by handspans had been hallowed.

[ABOUT EIGHT SIGNS MISSING] [was the "spiller" mentioned here?]

The drum got pounded;
<then> the garment(s) was/were getting folded in front
[win paks-pa tuku7] [cf. Q3-8]

When his buttocks were getting pierced, he [HML] speaks:

"He spilled/hid my blood in another's place."

(The) royal ruler(ship) is/was (a/the) X time/count success-ion/-or;

Y is/was a coronation cloth.

(the god) Ten Sky is/was the rainy season god.

Their [HML and his cronies's] power-assuming buttocks got pierced and covered for others.

OR His [HML's] royal buttock-cheeks got pierced and covered for others.

[ABOUT 6 SIGNS MISSING] When the ancestral(?)... was blood-letting from inside the penis, he was a prince-type.

Now a macaw-lashing was supposed to get taken.

Earlier, (a) garment/cloth(s) was/were getting folded in plain sight.

[ma ken.e paks-pa tuku7] [cf. O30-33]

The notable royal-type X is/was a/the flower lord beard-mask (wearer).

King Harvester Mountain-Lord, when he was putting it [cloth/garment?, macaw lashing?, eccentric.flint?, beard-mask?] away, piercingly now the star-warrior got hallowed.
Q9-12 The notable royal-type one is a flower.
Q13-17 The lordly beard-mask (wearer) is King HML.
Q18-25 When he put it (etc.) away, piercingly now the star-warrior got hallowed.
Q26-33 The aforementioned one sings a song which is about/of an animal-guise/day ("s length):
Q34-42 "Now earlier my penis-receivers [staunchers] had been a body-covering and a ruler's head-wrap."
Q43-47 Scorpius shone. [Venus was in Scorpius, just past its head.]
Q48-R3 Now a noble heavenly animal jaguar [= Mercury?] appeared/got revealed/shown.forth.
R4-8 The bludgeon star [Venus] shone.
R9-17 Nine days later (once again) a (tenth) jaguar was supposed to get taken.
[nine day time increment leading to 8.5.17.14.9]
R18-22 This governor ("s headdress) was a skin drum (and a) hummingbird.
R23-27 The hallowed ancestral (?) "x-badge" had for one year Macaw Monster status/role.
R27-40 When he [the Macaw Monster player] placed stones in order he fought against the overthrowers of inscribed monuments (lit. symbols).
R41-48 As for his [HML's] blood, when it was flowing, he [HML] shouts:
S1-6 "My blood is getting sprinkled for others/elsewhere."
S7-12 We [the raisers of this stela] arrow-shot/?dismembered them [the rebel(s)] for him.
S13-21 When he [HML's rival] set down bloodily, the macaw-bedecked one [HML or his rival] was an animal-guise-impersonator.
FT When he [HML's rival] set down bloodily, the macaw-bedecked one [HML or his rival] was an animal-guise-impersonator [EN10]
S22-24 "It/He is my bloody thing/one."
S25-34 When he/it [HML's rival ("s wing)] was doing nothing but guiver/flap bloodily, Macaw [HML] was shouting: "It/He is my bloody thing/one."
S35-43 Now, when he [HML] stepped (on tip-toe) bloodily, [he said] "I am the sun, a coronated one/crowned.prince.
S44-T6 Then when my overthrowen (rival/one)'s wing came to rest bloodily, it/he had been guivering/flapping."
T7-10 Behold, he [HML?] had been an "x-badge" for one year.
T11-12 He was a star-warrior-type one.

Kaufman & Justeson: Epi-Olmec writing and texts

2.73
After thirteen days ascent jacuar (number) twenty-three got taken. (13 day time increment leading to 8.5.17.15.2)

The symbols got replaced upright.

His [HML's] set-aside symbols got shared out.

We [the raisers of this monument] had arrow-shot/dismembered the crowned one's brother-in-law for him.

The dripping sacrifice was supposed to be finished/used up.

He [HML] was sprinkling it for others;
The symbols had gotten shared out earlier in pieces.

Behold, there/he was a thirteen (OR twelve)-year ?regional.overlord. (possible 12- or 13-year time increment)

And then a garment was getting folded

He uttered:

The stones that he set in order thus were symbols, ancestral(?) type ones --

"What I chopped has been planted and harvested well."
OR "What I chopped is a planting and a good harvest."

An animal-guise appeared divinely on his body.

END
The Tuxtla Statuette (TUX)

A1-7

\begin{align*}
\text{A1a} & \quad 96c \quad \text{TIME}_2 \\
\text{A1b} & \quad 106 \quad \text{PATRON}_4 \\
\text{A1c} & \quad 72 \quad \text{YEAR}/\text{NAME7 OR DRUM, presumably /kowa/} \\
\text{A2} & \quad 8 \quad 8 = /tuku=tujtuj/ \\
\text{A3} & \quad 6 \quad 6 = /tujtuj/ \\
\text{A4} & \quad 2 \quad 2 = /metz-a/ \ OR \ /was.tuk/ \\
\text{A5} & \quad 4 \quad 4 = /maktas/ \\
\text{A6} & \quad 17 \quad 17 \quad /yat-ko-metz-a/ \ OR \ /yat-ko-was.tuk/ \ OR \\
& \quad \quad /mak=was=tujtuj/ \\
\text{A7a} & \quad 8 \quad 8 = /tuku=tujtuj/ \\
\text{A7b} & \quad nn \quad ?? \ 7u \quad \text{DN:QUAKE} = 7us \\
\text{A7c} & \quad 131
\end{align*}

T \quad \text{TIME}_2 + \text{PATRON}_4 + \text{YEAR}/\text{DRUM} 8.6.2.4.17 8u+\text{QUAKE} \quad 7us

R

G

FT It was the fourteenth month; the long count was 8.6.2.4.17, and the day was 8 Earthquake.

[The date was 22 February 162 CE. This was the 260th day of the year, and the sixth 365-day anniversary of the "captivity" date 8.5.16.3.7 on MOJ:H3-I4]

B1-3

\begin{align*}
\text{B1} & \quad 39 \quad 7i; \\
\text{B2} & \quad 97 \quad 70 \\
\text{B3} & \quad 39 \quad 7i_e
\end{align*}

T \quad 7i \quad 70-7i

R \quad 7i \quad 0-70y-7i

G \quad \text{who 3A-take.trip-OPT}

L \quad \text{who he-should-go.and.return}

FT "Who should go on a trip? [EN13]"
B4-C3

B4  73  7u₁

B5a 185  DO₂/TZUK or DEEDSMAN, pronounced /tzuk.₁ pu₄₃/  ki

B5b 171

B6  145  BEARD.MASK

C1  175  ?sa?7

C2  183  NOBLE₂/SA7SA7(=PUN)

C3  20  wu

T  7u₁-DEEDSMAN+?ki  BEARD.MASK  saʔ7-NOBLE   wu
R  7u₁+tzuk.i=pu₄₃  BEARD.MASK  saʔ7saʔ(=pu₄₃) +wuʔ
G  XA-do-PN-person  ??  noble-person  REL
L  I-am-a-“deedsman*  beard-mask  noble(=man)  -type
PT  I am a “deedsman", a beard-mask (wearer), a noble one.

C4-8

C4  4  4 = maktas

C5a  39  7i₁

C5b  141  ni₁

C6  45  ko

C7  126  SKY+PILLAR/KOM

C8  162  ?ya₂

T  FOUR  7i₁+ni₁-k₀-SKY+PILLAR-ya₂
R  0-maktas  7in+k₀.tz=kom+yaj
G  3A-four  2E-ELSE-sky-pillar-IP
L  it-is-four your-ELSE-sky-pillars
PT  Four are your elsewhere (otherworldly) sky pillars;
C9-D6

C9a 108  to
C9b 26   ke
C10 20   wa

D1a 39   7i₂
D1b 141  ni₂
D2  45   ko
D3a 151  SPAN/TZAT7
D3b 73   7u₂

D4  158  TURTLE/BUKI
D5  170   ki
D6  20   wa

T  to+ke    wa  7i₂+ni₂-k0-SPLAN-7u₂
R  0-tok.e  +wu7  7in+k0.tzat7.w7
G  3a-stain-PN REL  2E-ELSE-measure-AN
L  it-is-stained/painted -type  your-ELSE-spann-er

T  TURTLE-ki wa
R  tuki   +wu7
G  turtle  REL
L  turtle  -type

FT  Stained (with blood?) is your elsewhere (otherworldly) handspan measure which is made of turtle(-shell)."

D7-11

D7  22  BLOOD = /nu7pin/
D8  8   8 = /tuku=tuju/
D9  75  HALLOW/KO.NU7KS
D10 20   wa

D11 999  [3-4 signs effaced/eroded]

T  BLOOD EIGHT-HALLOW-wa
R  nu7pin 0-tuku=tuju=ko.nu7ks-wa
G  blood  3A-three-past.five-ELSE-greet-IC
L  blood it-got-hallowed-eight.times
FT  (With) blood (?it = turtle-shell or D11) got hallowed eight times.
It (?turtle-shell, ?blood, D11) got buried.

The god Longlip, was sharing out the Macaw-Slantbar cloth things.

[Is somebody impersonating the god on this occasion? Is this a real ritual, or one enacted in the traveler's mind? Is more than one person involved in these events?]
F11-G3

F11  149+42        ne
F12   27          ke
F13a  129        KNOTTED.CLOTH
F13b   75   HALLOW/KO.NU7KS
G1    68        SYMBOL/KI7PS.I
G2a   93            tu
G2b   100      CLOTH/TUKU7
G3    20           wu

ne-ke  KNOT+HALLOW  SYMBOL  tu+CLOTH  wu
ne(7)k.e  X+ko.nu7ks.u  ki7ps.i  0-tuku7  +wu7
stack-PN  -ELSE-greet-AN  think-PN  3A-cloth  REL
stacked/set.aside  coronation  symbol  it-is-cloth  -type
The stacked/set.aside  coronation  symbol(s)  are/is  made  of  cloth.

G4-G8

G4   61        TITLE2 (Reeds+Cross-Pillar) = ancestor/Olmec (?)
G5  149+42        ne
G6    84      ??  yaj;
G7a   93            tu
G7b   100      CLOTH/TUKU7
G8    20           wu

TITLE2;--ne  yaj,  tu+CLOTH  wu
TITLE2;  yaj  0-tuku7  +wu7
??  IP  3A-cloth  REL
ancestor(?)  PL  it-is-cloth  -type
The ancestral(?)  headbands(?)  are  made  of  cloth.

[yaj marks plural of an inanimate noun, which ends in /...e(7)n/, /...ne/, /...ney/, /...ne7/, /...new/, or /...ney/.  The object is a cloth headband bearing the symbols of glyph MS61 or relating to the office or status designated by MS61.]

Kaufman & Justeson: Epi-Olmec writing and texts 2.79
G9-11

G9  171b  SLEEP, presumably /mow/
better: DIE, presumably /ka7j/
G10  143  pa
G11a  20  wu
G11b  65  mi

T  SLEEP-pa  wu+mi
R  0-mow-pa  ?
G  3A-sleep-II  ?
OR  3A-die-II
L  he-sleeps  ?
OR  he-faints
FT  The ? was sleeping;

G12-H2

G12  35  AND THEN
G13  157  (ANIMAL.)FAMILIAR (or ?VISION)
H1  91  APPEAR
H2  20  wu

[2 false start glyphs]

T  AND THEN FAMILIAR  ?? APPEAR-wu
R  AND THEN FAMILIAR  ?? 0-APPEAR-wu
G  and.then  ??  ?? 3A-appear-IC
L  and.then familiar  ??  it-got-revealed/shown.forth
FT  And then a familiar animal got revealed/appeared [in a vision].

I1-5

I1a  148a  nu
I1b  148b  pu
I2  164  GUISE/JAMA
I3  63  ma
I4  143  pa
I5  170  ki

T  nu+pu-GUISE-ma  pa-ki
R  nu7pu=jama  0-paki7
G  buzzard-guise  3A-powerful
L  buzzard animal-guise it-is-powerful
FT  The buzzard (= vulture) animal-guise is/ was powerful.

END OF TUXTLA STATUETTE

Kaufman & Justeson: Epi-Olmec writing and texts

2.80
Running translation of Tuxtla Statuette
Words and themes paralleled on MOJ are underlined.

A1-7 It was the fourteenth month; the long count was 8.6.2.14.17, and the day was 8 Quačę.

B1-3 "Who should go on a trip?
B4-C3 I am a deedsman, a beard-mask (wearer), a noble one.
C4-8 Four are your elsewhere (otherworldly) sky(-?face) pillars;
C9-D6 Stained (with blood?) is your elsewhere (otherworldly) handspan-measure which is made of turtle(-shell)."

D7-11 (?With) blood (?it = turtle-shell) got hallowed eight times.
E1-3 It (?turtle-shell, ?blood) got buried.

F1-10 The god Longlip, was sharing out the Macaw.sign-Slantbar cloth things.
F11-G3 The stacked/set.aside coronation symbol(s) are/is made of cloth. G4-8 The ancestral(?) headbands(?) are made of cloth.

G9-11 The ? was sleeping (will pass out/was losing consciousness);
G12-H2 And then a familiar animal got.revealed/appeared [in a vision].

I1-5 The buzzard animal-guise is/was powerful.

END

A1-10 establishes the date.
B1-C3 addressing a god, speaking in public, or speaking to himself, the protagonist establishes his identity and what he will do.
C4-8 addressing a god, the priest names the far travel point of the priest's trip.
C9-D7 addressing the god, the priest names (one of) the implement(s) of the ritual.
D8-E3 describes (part of) the ritual.
F1-G8 names what the priest imagines accompanies his ritual acts or what he expects to see on his trip.
G9-12 says that the priest fell asleep or fainted.
G13-H2 states that a familiar animal appeared to the priest.
I1-5 says that the priest shape-shifted into a buzzard or gained power over a buzzard spirit.
A1-10 establishes the date.
The birds of the Tuxtla Statuette

The boat-billed heron. The human figure represented by the Tuxtla Statuette is wearing features of costume that are commonly thought to be representations of a duck’s bill and other bird parts, such as claws and wings. Dr. Ron Pine of the Field Museum in Chicago (personal communication, 1995) suggests that the bill belongs, not to a duck, but to a boat-billed heron (Cochlearius cochlearius). This 2.5-foot tall bird is nocturnal, has eyes that glow red in the dark, and in Mexico is found in and near the Central and Southern Gulf Coast only.

Although this bird is not a heron, it is lumped with herons in the native folk taxonomies of Mije-Sokeans who know these birds. Words for ‘heron’ that are comparable in M-S languages are SOT /wojun/, COA (lowland Mije) /woon/, TEC (colonial Soke) <veng>. MAR /wojnhja1/, MIG /wojnhja1/. The pronunciation with /nh/ is limited to Soke, while that with /n/ is found in both a Mijean and a Sokean language and thus more likely to be original. The SOT pronunciation /wojun/ is probably close to the ancestral form, which probably ended in /j/ from the evidence of MAR and MIG, but may show metathesis from earlier *wojna1. The Soke form in [nh] may show assimilation of *n to a following velar *j. Thus an approximation to the Sokean ancestral form is *wojna1. The /a/ of Western Soke may show vowel harmony from earlier /a/ by assimilation to the /o/ of the first syllable. To this would have been preposed a modifier that would distinguish it from other ‘herons’; but such modifiers are often omitted when the identity of an animal or plant can be determined contextually. In any case, if the name for boat-billed heron were spelled out in EO, it would be spelled <wo-na>, <wo-na>, <wo-no>, <wo-na-ju>, or <wo-no-ja>.

Such a word is unlikely to be spelled out on TUX. We have readings for the syllables <wo>, <nu>, and <na>. None of them is found on TUX. While our reading for <wo> could be wrong, it is unlikely that our readings for <nu> and <na> are wrong. ‘Heron’ might also be spelled logographically with phonetic complement: <HERON-nu>, <HERON-na>, <wo-HERON>, <HERON-ja>, <HERON-ju>. None of these is to be found on TUX, either. If spelled purely logographically, the only place HERON might appear is at G14, with MS157, which we have read FAMILIAR-ANIMAL because of the overall context: it does not resemble a boat-billed heron, but we should perhaps not rule that reading out.

The buzzard (vulture). At II-5 we have the stretch <x+?pu-GUISE-ma-pa-ki>. This can and should be parsed ‘animal-x animal-guise (is) strong’. Thus <x+?pu> should be an animal name. The best fit is pM-S *nu7pu ‘vulture’. There is no other plausible fit, even if a bird-name were not being sought. This yields a new reading <nu> for the the glyph at I1a, MS148a.

This reading produces an interesting problem. The statuette depicts a man wearing costume paraphernalia representing a boat-billed heron, but the text refers to a buzzard. These cannot be the same creature. The simplest solution/interpretation is to assume that the boat-billed heron represents some kind of spiritual patron of shape-shifting, and that the buzzard is the one achieved by the protagonist on the date in question.
The O'Boyle Mask Inscription (OBM)

A1-B4

A1 56  te
A2a 94b  RAIN, doubtless /tuj7/
A2b  nn  BEANS, doubtless /suk/
A3 138  ji
B1  nn  LONGLIP_/JI7TZ.I7-1
B2  nn  LONGLIP_/JI7TZ.I7-2
B3  nn  LONGLIP_/JI7TZ.I7-3
B4 104  MOON/POY7A OR TWENTY/7i7ps

T  te  RAINxBEAN
R 0-te7  tuj[7]=suk
G  it-is-that rain-bean  L  that  rain-bean

T  ji-/LONGLIPx1  LONGLIPx2  LONGLIPx3  MOON
R  ji7tz.i7 tum-u ji7tz.i7 metz-a ji7tz.i7 tuka poy7a
G  wrinkle-PN one-NUM wrinkle-PN two-NUM wrinkle-PN three month
L  Longlip 1  Longlip 2  Longlip 3  month

FT  (During) the months Longlip 1, Longlip 2, and Longlip 3 (there) are/were the [known, given] rainy-season bean <harvest>.

[These were a set of three successive months.]

C1-3

Clb  nn  BEANS, doubtless /suk/
Cla 161  BEDECK, possibly /wa=tzuk/
C2 37+nn  ku=?CROSS, probably /ku+jak/
C3 20  wa

T  BEAN$ARRAY  ku=CROSS-wa
R  suk  wa=tzuk.i 0-ku+jak-wa
G  bean-good-do-PN 3A-AWAY-cut-IC
L  bean bedecked he-crossed.over
FT  The bean-bedecked one (Jome7 Sak) crossed over.

Kaufman & Justeson: Epi-Olmeic writing and texts 2.83
C4-E1

C4 150 SPRINKLE/WIK
C5 44 na
D1 nn ?CAST.LOTS = /sij/
D2 138 ji
D3 149+42 ne
D4 20 wu
D4 120 jo
E1 169+nn mexNEW/JOME7

T SPINKLE na-CAST.LOTS-ji
R wik.i 0-na+sij-ji
G sprinkle-PN 3A-XE-gamble-DC
L sprinkled when-I- cast . lots . with-them

T ne-wa jo-mexNEW
R 0-ne7w-wa jome7
G 3A-put.stones-IC new
L they-got-set.in.order new-ones

FT When I cast lots with the sprinkled (stone) things, the new (stone) ones got set in a row.

[Possibly, divination to produce an interpretable set of stones, set in rows as in Yukateko (Bruce Love, personal communication), Yixl (Benjamin N. and Lore Colby) and K'iche' (Barbara Tedlock) divination.]

E2

E2 nn123 LONGLIP;JI7TZ.I7XPLANT;NIP7

T LONGLIP;XPLANT;
R 0-ji7tz.i7 nip7.i
G 3A-wrinkle-PN plant-PN
L it-is-wrinkled planting
FT It was Longlip planting month.

Kaufman & Justeson: Epi-Olmec writing and texts 2.84
Beans are harvested by uprooting the withered stalks with both hands, at least among Mayans and Mije-Sokeans.

The Epi-Olmec text

te7 tuj7=suk ji7tz.i7 tum-u, ji7tz.i7 metz-a, ji7tz.i7 tuku poy7a.
suk=wu=tzuk.i ku.jak-wa.
wik.i na+sij-ji, ne7-wu jome7.
ji7tz.i7 nip7.i.
metz=wis-i te7 nip7.i.

English translation

The months Longlip 1, Longlip 2, and Longlip 3 are that rainy-season bean <harvest>
The bean-bedecked one (Jome7 Suk) crossed over.
When I cast lots with the sprinkled (stone) things, the new (stone) ones got set in a row.
It was Longlip planting month.
That planting has been uprooted by twos.
The Chiapa de Corzo Sherd  (CHP-sh)

A1  138  j  ?ji
A2  ??  ??
...

B1-5

B1  124  ku
B2  20   wu
B3  138  ji
B4  nn   LONGLIP_{2}/JI7TZ.I7
B5  100  CLOTH/TUKU7

T  ku-wu  ji-LONGLIP_{2} CLOTH
R  0-kaw7-wu  ji7tz.i7  tuku7
G  3A-dye-IC  wrinkle-PN  cloth
L  it-got-dye-d pleat-ed  cloth
FT The pleated cloth got dyed.
...

C1-5

C1  nn   LONGLIP_{2}/JI7TZ.I7
C2  100  CLOTH/TUKU7
C3  20   wu
C4  93   tu
C5  124  ku

T  LONGLIP_{2} CLOTH  wu  tu-ku
R  ji7tz.i7  tuku7  +wu7  0-tuk.u7
G  wrinkle-PN  cloth  REL  3A-cut-PN
L  pleat-ed  cloth  -type  it-is-cut
FT The thing that is made of pleated cloth has been cut.

C6  138  ji
...

Kaufman & Justeson: Epi-Olmc writing and texts  2.86
ENDNOTES

[1] (MOJ:A1-9) The epi-Olmec long count had the same base as the Mayan in the ritual calendar, but its base in the vague year was one month earlier: see Justeson and Kaufman 1996 [1992]:22-23 for details. The result, demonstrated in part by the stated astronomical correlates of the La Mojarra text, is that an Epi-Olmec long count date fell 20 days earlier in absolute time than it would have among the Mayans.

[2] (MOJ:B2, S41b) ‘Sun’ is *jama in Sokean, as is ‘day’, and ‘animal-guise of shapeshifting shaman’. But while ‘shape-shifter’ is *ko jama in some forms of Sokean, in others it is *ko7-sunh. ‘Calendar priest’ is /ko+ux/ in some forms of Mije, and probably keeps the earlier meaning. Since we know that ‘sun’ was *suw in proto-Mije-Sokean, *ko7-sunh strongly suggests that /suw/ ‘sun’ probably still existed for some time after /jama/ was introduced for ‘day’, and we interpret MS125 as representing /suw/ in all cases.

[3] (MOJ:B7-C7) That it is Venus that is the “bludgeon star” is confirmed by the occurrence of this same clause, “the bludgeon star shone”, exactly on the ninth Venus-year anniversary of the event. (Justeson and Kaufman 1996 [1992] indicate that the span was 9 x 584 -1, but this calculation was from the long count date, while the Venus reference was to the previous evening.) The name presumably reflects the military import of Venus, well-established in Mayan texts and twice reflected on MOJ.

[4] (MOJ:K5-6) The word /tuwsu/ ‘child’ refers to prepubescent children, so HML was probably not yet born, or was only a baby, at the time of the initial battle.

[5] (MOJ:N13-16) It is not clear what a “skin drum hummingbird” would be, but the hummingbird fits in with the bird associations and identities of HML and other participants in this narrative, and that of TUX, and it has warlike associations.

The reading “hummingbird” is based on the possibility that MS55 is a reduplicated sign. If so, it would likely represent a word that could be spelled with the same sign written twice. A search of our databases yields only pM-S *su7kusu ‘hummingbird’ as a likely possibility, that word would be spelled <su-su>; other possibilities are Gulf Sokean *nuno7 ‘tree ear’ – not very evocative, or Mijesan *ka7ka ‘basket’, which has the advantage of resembling <kak>, but is from the wrong branch of the family and does not seem like a very likely symbol for rulership.

[6] (MOJ:N21) this sign [MS51] appears to depict the item in HML’s outstretched hand, and the object hanging in front of HML’s face, evidently a form of verbal expression that has a physical embodiment. The same object (or its elaborate border) is found on the back of a Macaw Monster on an Early Classic Mayan vase showing a blowgunner aiming at him [See Guernsey-Kappelman 1997, illustration 2.23 referring to Justin Kerr’s Maya Vase Book], though the border has a U-shape in it like that of MS62. The basic shape of MS51, and the interior of the objects in the iconography of MOJ, is found on the forehead band of the Main Bird God [AKA “Principal Bird Deity”] (Longlip, Macaw Monster) on an Early Classic Mayan Tzakol bowl illustrated in Guernsey-Kappelman on p 314, figure 2.64a. These variants seem possible/probably equivalent in meaning. It seems to be a major symbol associated with overlordship (i.e. supreme authority). Because of its association with the Main Bird God throughout southern Meso-America, we label it MACAW.POWER.1. MS62 at TUX:F5 has a simplified version of this sign (with a U-shape in the middle) as the left-hand part.

[7] (O18-20) <SKY.GOD2-SKY-pa QUETZAL > represents /tza7u7ki/ ‘Sky Quetzal’: evidently the use of sky god name marked as such by MS144a as a name or epithet of a ruler. This may be a name of the protagonist or the name of an identity assumed by him. Shape-shifting ability is attributed to K’iche’ kings in the early Colonial ethnohistoric sources [Q’u7=kumatz <Kumatz> in Popol Vui and Tekum u-Mam in ??], and apparently also in Lowland Mayan iconography [Say WHERE]. Q’u7=kumatz means Quetzal Snake, and Tekum u-Mam is said to have changed (shape-shifted) into a quetzal in at least one account of his famous battle with Pedro de Alvarado. A Classic Mayan ruler of Copán was named Quetzal Macaw, and both these names are found in the present text. Quite likely, the protagonist was called both Quetzal and Macaw.

[8] (MOJ:Q9-14) This sentence seems to say that the beard mask-wearer was a royal personage, maybe the same as
them as referring to the same individual. It is still possible that the ‘macaw-bedecked shape-shifter-impersonator’ (7owa=wn=itzk.i jama=mkts.i7) of S17-2 is HML, but he could equally as well be HML’s rival. If HML’s rival was not bedecked as a macaw, then it is probable that it was as some other bird.

[12] If we take <SET> here in <7i-BLOOD-SET-ji> to be spelling {tup} ‘to shoot with arrows’ (rather than {tu7p} ‘sun to set, bird to perch’), then we can read this as /7i+nu7pin=tup-jj/ ‘when he got shot bloody with arrows’. Several iconographic representations and textual descriptions depict captured enemies, tied to trees or wooden frameworks, being killed by shooting them with arrows. In the story of Tolk’om <tol4om> in the Xajil Narrative (Annals of the Kaqchikels, sec. 37), Tolk’om is dressed up in a costume, tied to a tree, and enemy warriors dance and sing, firing arrows at him until he is killed; then, amidst a great deal of blood, his body is dismembered, and his parts distributed to seven different towns; later these body parts are thrown into a lake. Conceivably, some such event is related on MOJ.

On some of the Tajín murals, men are shown being dismembered, and disembodied/cut-off arms are shown in other places. Disembodied/cut-off heads are common and well-known in Meso-American iconography.

[13] (TUX:B1-3) Here begins a speech by someone in trance or seeing a vision of an otherworldly creature and place. /7oyl (B2) ‘to go and come back, to make a round trip’ refers to the spirit/soul journey being taken by the transformation animal who leaves the shape-shifter’s body and returns to it when he changes back; the possible presence of a second person ergative marker /7in+i/ (C5, D1) reflects that the traveler is addressing the spiritual being that he sees or senses; the use of /ko./ (C6, D2) ‘elsewhere’ on both /tzap=ʔwin=kom/ ‘sky-facing pillar’ and “tool” (/tzat7.w/) suggests that their homes are in another world. /7i/ (B1) ‘who?’ rhetorically establishes that a dialog is going on; /7u/+ (B4) ‘I (exclusive absolute subject)’ identifies the speaker; /7in+i/ (C5, D1) ‘your (second person ergative possessor)’ identifies the hearer’s property.
Epi-Olmec Vocabulary

Bolded forms are partially or entirely spelled out with syllabograms. Underlined forms are proto-Sokean forms that correspond to the inferred semantics of logograms. Unmarked forms are roots from which attested derived forms occur in Epi-Olmec texts.

ca 115 roots, ca 30 affixes

unacc = an intransitive (single-argument) use of a transitive (dual-argument) stem where only the patient is expressed

unerg = an intransitive use of a transitive stem where only the agent is expressed

s noun // sustantivo
sv verbal noun // sustantivo verbal
pcp participle // participio
vt transitive verb // verbo transitivo
vi intransitive verb // verbo intransitivo
adj adjective // adjetivo
adv adverb // adverbio
sr relational noun // sustantivo relacionar
dem demonstrative // demostrativo
num numeral // número
pron pronoun // pronombre
int interrogative // interrogativo
rel relativizer // relativizador
med mediopassive // mediopasivo

M-S Mije-Sokean (Mijean & Sokean)
S Sokean (Gulf Sokean & Soke Proper)
Soke Soke Proper (Eastern Soke & Western Soke)

Sources of Reconstructed/Read Forms


[TK = Terrence Kaufman; SW = Søren Wichmann]

The following information is given in each entry or subentry:
The Epi-Olmec form
grammatical class
English gloss(es)
how spelled, in angle brackets
what level reconstructible to: authority for reconstruction

Individual spellings of verbs list the actual prefixes and suffixes that happen to be attached to the verbs.

Kaufman & Justeson: Epi-Olmec writing and texts 2.90
LEXICAL ITEMS

7ame? s year. Spelled <DRUM/YEAR, DRUM/YEAR-me>. (M-S: TK)

7i pron:int-rel who?. Spelled <7i>. (S: TK)

7i7ps num twenty. Spelled <MOON/TWENTY-si>. (M-S: TK)

7is vt/unerg to see. Spelled <7i-si-wu>. (M-S: TK)

7is expl lo!, behold! Spelled <7i-si>. (M-S: 1991)

7otuw vi to speak. Spelled <7o-tu-pa>. (S: SW)

7owa s macaw, parrot. Spelled <7o+wa, MACAW>. (M-S: 1992)

7oy vi to go (and return), to take a trip. Spelled <7i-7o-7i>. (M-S: TK)

jak vt/vi to cut. (S: TK)

ku,jak vi to cross over. Spelled <ku-CROSS-wu>. (S: 1993)

jam vt to remember. (S: TK)

kuk=tza7=jame. pectoral stone memento. Spelled <7i-ku-MIDDLE-tza-ja-me>. (S: TK+1993)

jama s day; shape-shifter's animal guise.

Spelled <ja-ja, ja-ja, GUISE1, GUISE2>. (TK+1991)

nu7pu=jama ss buzzard animal guise. Spelled <nu-pu-GUISE2-ma>.

jay7 vt/vi to write. (M-S: TK)

jay7=ki7ps.i sv <v + v inscribed monument. Spelled <ja2-SYMBOL-si>

je7 dem that. Spelled <je>. (M-S: TK)

je7.tzu dem thus, like that. Spelled <je-tzu>. (S: 1992)

jej.a7 sv < vi god: 'living one'. Spelled <GOD-ja>. (S: 1994)

ji7tz vt/vi to (get) wrin(k)led(ed). (S?: 1994)

ji7tz.i7 sv < vi wrinkled, pleated; earthly Longlip god. Spelled <ji-LONGLIP2, ji-zi>. (M-S?: 1994)

joj sr inside. Spelled <jo>. (S: TK)

jome7 adj new. Spelled <jo-me-NEW>. (M-S: TK)

jup vt to cover. (M-S: TK)

ni7.jup.7 sv body-covering. Spelled <?LOINCLOTH-pu>

ju7ps vt to lash, to tie something onto something else (Soke: SW)

7owa=ju7ps.i sv macaw-lashing. Spelled <7o-wa=ju(7ps)-si>.

jus adv after[ward]. Spelled <AFTER, AFTER-su>. (M-S: 1993)

kaiaw s jaguar. Spelled <JAGUAR>. (M-S: TK)

Kaufman & Justeson: Epi-Olmec writing and texts

2.91
kak vt/unacc to (get) replace(d). Spelled <kak-wu>. (S: SW)
kak.e sv < vt exchange, replacement. Spelled <kak>.
kak.u7 sv < vt replacer, successor. Spelled <kak>. (Soke: 1992)

kakpe7 s scorpion; Scorpius. Spelled <kak-SCORPIUS-pe>. (M-S: TK)

ka7i vi to die, to lose consciousness. Spelled <DIE>. (S: TK)

kan s penis. Spelled <PENIS>. (M-S: 1992)

ken vt to see. (Soke: 1993)
ken.e pcp < vt seen: visible, public. Spelled <ke-ne>. (Soke: 1993)

kij vi to give light, shine. Spelled <SHINE-wu, ki-wu>. (M-S: SW)

ki7m vi to go up, accede. Spelled <7i-GO-UP>. (S: TK)
ki7m.u7 sv < vi accession, rising, ascent, installation. Spelled <GO-UP>. (S: SW)
7aw=ki7m vi to rule. (S: SW)
7aw=ki7m.u7 sv < vi rule(ship). Spelled <7aw-GO-UP, 7aw-GO-UP-mu>. (S: 1991)
ko.ki7m.i sv < vi accession/one.who.accedes on behalf.of.others/elsewhere. Spelled <ko-ki-mi-GO-UP>.

kip vt to fight against. Spelled <7i-ki-pi-wu>. (M-S: SW)

ki7ps,i sv < vi symbol(stone) [celt, figurine, stela; badge, token, memento, souvenir]. Spelled <SYMBOL-si> (M-S: TK+1992)

ko7=suw s priest. Spelled <PRIEST-SUN>. (M-S: 1993)

kotzuk s mountain, hill. Spelled <MOUNTAIN>. (S: TK)

kom s notched house-post, pillar. (M-S: TK)
tzapi(=?win)=kom sv type s sky(-?face) pillar. Spelled <ko-SKY-?FACE-PILLAR>

ko,yumi s lord. Spelled <ko-LORD-mi>. (S: TK)

kot vt to put away. Spelled <7i-ko-te>. (S: TK)

kowa s drum. Spelled <DRUM/YEAR>. (M-S: TK)

kuk=tza7=jame s pectoral stone memento. Spelled <7i-ku-MIDDLE-tza-ja-me>.

kuw vt to raise; to put up/away. (Soke: SW+1994)
kuw.na7 adv < vt raised; put up/away. Spelled <ku-na>. (Soke: SW+1992)

kuv or wus=uwu num seven. Spelled <ONE-ONE-FIVE>. (Soke or M-S: TK)

ku7 s hand, arm. Spelled <na-ku>. (M-S: TK)
ku7s vt to eat. Spelled <EAT>. (S: TK)

kuv7 vt/unacc to (get) dye(d). Spelled <ku-wu>. (S: 1993)

Kaufman & Justeson: Epi-Olmec writing and texts

2.92
kuy7  vt/unacc  to (get) covered(ed). (M-S; SW)

ko.wu7?tz=kuy7  vt + vt/unacc  to get pierced and covered for others. Spelled <ko-PIERCED-ku-wu>.
(S+M-S; SW)

ma  adv  earlier. Spelled <ma>. (M-S; TK)

mak  num  ten. (M-S; TK)

mak tzap  num+n  Ten Sky (a god). Spelled <ma-FIVE-SKY>. (M-S; TK+1992)
mak=metz-a  num twelve. Spelled <ONE-ONE-FIVE-FIVE>.
mak=tuku  num thirteen. Spelled <ONE-ONE-FIVE-FIVE>.
mak=mo(ko)s  or yut  num fifteen. Spelled <FIVE-FIVE-FIVE>. (Soke: TK)
mak=tulu  or yut ko tum-u  num sixteen. Spelled <ONE-FIVE-FIVE-FIVE>.
mak=wus=tulu  or yut ko metz-a  num seventeen. Spelled <ONE-ONE-FIVE-FIVE-FIVE>.
mak=tuku=tulu  or yut ko tuku  num eighteen. Spelled <ONE-ONE-FIVE-FIVE-FIVE>.

mak'tas  num  four. Spelled <ONE-ONE-ONE-ONE>. (M-S; TK)
mak'tas=tulu  num  nine. Spelled <ONE-ONE-ONE-FIVE>. (M-S; TK)

masa(n)  n/adj  holy (thing), god. (M-S; TK)
masa=wik.i  sv  something/someone hallowed by sprinkling. Spelled <ma-sa-SPRINKLE-ta-ma>. (S: 1992)
masa=n7.APEAR  vi  to appear divinely on the body. Spelled <ma-sa-ni-APPEAR>.

matza7  s  star. Spelled <ma-STAR-tsa>. (M-S; TK)

maw.u7  pcp < vt  ruined, destroyed. Spelled <ma-wu>. (Soke: TK)

metz=  num  by twos. Spelled <me-tze>. (M-S; TK)
metz-a  num  two. Spelled <ONE-ONE>. (M-S; TK)
mak=metz-a  num twelve. Spelled <ONE-ONE-FIVE-FIVE>.

mi7ks  vi  to quiver. Spelled <mi-BLOOD-mi-si, mi-si-na-wu>. (M-S; SW)

mo(ko)s  num  five. Spelled <FIVE>. (M-S; TK)
mak=mo(ko)s  num fifteen. Spelled <FIVE-FIVE-FIVE>.

mon7  vt  to wrap. (M-S; TK)

RULER=ko7=mon7.a7  sv  ruler's head-wrap. Spelled <KNOT+GOVERNOR-7a>.

mow  vi  to sleep. Spelled <SLEEP>. (S; TK)

mu7a  s  deer. Spelled <DN: DEER>. (S; TK)

mutz  vi  to play. (S; TK)

mutz.i7  sv < v  impersonator. Spelled <PLAY-tzi>. (S: 1994)

naka  s  skin. Spelled <SKIN>. (S; TK)

naks  vt/unacc  to (get) beat(en) [drum]. Spelled <BEAT>. (M-S; TK)

nas  vi  to pass. Spelled <na-sa-wu>. (M-S; TK)

nas  s  earth. Spelled <EARTH>. (M-S; TK)

nu.tza7.e=nas  adj < vt + s  ground jointly measured by hand-spans. Spelled <nu2-SPAN=EARTH>.
ne7k  vt  to set aside.  (S: SW)
   ne7k.e  pcp < vt  set aside.  Spelled <ne-ke>.  (S: SW+1993)
OR: *nek stacked

ne7w  vt  to set stones in a row/wall/circle  (M-S: SW)
   ne7w.e  sv/pcp  (stones) set in order.  Spelled <ORDER.STONES = ne>.

nip7  vt/unacc  to plant, sow; bury.  Spelled <PLANT-pi-wu>.  (M-S: TK)
   nip7.i  sv < vt  planting, planted (thing).  Spelled <PLANT, PLANT-7i>.  (M-S: SW)

ko.num7ks  vt  to bless, hallow.  Spelled <HALLOW-wu>.  (M-S: SW)
   ko.num7ks.u  sv  hallowing.  Spelled <HALLOW>
   ko.num7ks.i  pcp < vt  blessed, hallowed.  Spelled <HALLOW-si, KNOT?-nu-si>.  (M-S: SW)

nu7pu  ss  buzzard (= vulture).  Spelled <nu-pu>.  (M-S: TK)
   nu7pu=jama  ss  buzzard animal guise.  Spelled <nu-pu-GUISE2-ma>.

nu7pin  s  blood.  Spelled <BLOOD>.  (M-S: TK)

nuks  vi  to go along.  Spelled <7i-nu-si>.  (M-S: TK)

pak.kuy7  sv  bludgeon.  Spelled <pak-ku>.  (S: 1992)

paki7  adj  hard, strong, powerful.  Spelled <pa-ki>.  (S: SW)

paks  vt/unacc  to (get) fold(ed).  Spelled <FOLD-pa>.  (S: SW+1992)

pey  unacc  to get waved/swung.  Spelled <pe-wa>.  (S: SW+1993)

pini7  s  brother-in-law of man.  Spelled <pi-ni>.  (S: TK)

pit  vt  to tie (in a bundle) (M-S: TK)
   pit.i  sv < vt  bundle; prisoner.  Spelled <TIE, TIE-ti>.

poy7a  s  moon; month, veintena.  Spelled <po-7a, MOON, MONTH>.  (M-S: TK)
   sw=ku7s, u7 poy7a  s  type s  sun-eating moon, solar eclipse.  (S: TK)

puw  vi/unacc  to (get) scatter(ed).  Spelled <pu-wu>.  (S: 1991)

pak  vt/unacc  to (get) take(n)/acquire(d)/achieve(d).  Spelled <puk-7i, puk-ku-7i, puk-ku-wu>.  (M-S: TK)

sa7sa7=tzap=ko.pun  s  noble sky animal (Soke: 1999)

sa7sa7=pan  s  noble, aristocrat.  Spelled <sa2-NOBLE2>.  (Soke: SW+1993)

saj  vi/unacc  to (get) share(d) out.  Spelled <7i-sa, sa, saj-wu>.  (M-S: SW)

saj  s  wing; shoulder.  Spelled <7i-sa>.  (M-S: TK)

si7i7  s  backside, butt.  Spelled <si-7i>.  (S: 1992-1994)

sii  vi  to cast lots.  Spelled <GAMBLE>.  (Soke: 1994)

Kaufman & Justeson: Epi-Olmec writing and texts

2.94
su7ksu7 s hummingbird. Spelled <suxsu>. (M-S: SW)

suk s bean(s). Spelled <BEANS>. (M-S: TK)

suw s sun. Spelled <SUN>. (M-S: TK)
7aw=suw s time-span. (S: 1993)
koʔ=suw s priest. Spelled <PRIEST-SUN>. (?M-S: 1993)

te7 dem the aforementioned; the latter; it; that. Spelled <te>. (M-S: 1992)

te7n vi to stand (on tip-toe), to step (on) (S: TK)
te7n.na7 adv upright(ly), on tip-toe. Spelled <te-ne-na>. (S: TK+1992)

tok vt to stain
tok.e pcp stained. Spelled <to-ke>. (S: 1993)

ko.tokoy(-paʔ) vt to cover up/over OR to spill on behalf of others/ elsewhere. Spelled <7-ko-LOSE-pu-wu>. (TK+1992)
(yak=)tokoy.aʔ sv < v overturning/upsetting/dumping OR agent etc. Spelled <7i-LOSE-ya>. (M-S: TK+1992)
(yak=)tokoy.e sv < v overturned/upset/dumped one.
Spelled <na-LOSE-ye>. (M-S: TK+1992)

tuiʔ s rain. Spelled <RAIN>. (M-S: TK)

tuʔtu num six. Spelled <ONE-FIVE>. (M-S: TK)
tukan=tuʔtu num eight. Spelled <ONE-ONE-ONE-FIVE>. (M-S: TK)
wus=tuʔtu num seven. Spelled <ONE-ONE-FIVE>. (M-JS: TK)
mak=tuʔtu or yat ko tum-ya num sixteen. Spelled <ONE-FIVE-FIVE-FIVE>
mak=wus=tuʔtu or yat ko metz-a num seventeen. Spelled <ONE-ONE-FIVE-FIVE-FIVE>.
mak=tuʔku or yat ko tuʔku num eighteen. Spelled <ONE-ONE-ONE-FIVE-FIVE-FIVE>

tuk vi to happen. Spelled <tuk>pa>. (S: TK)

tuk vt to cut, harvest. (M-S: TK)

tuk.w7 sv < vt harvester. Spelled <tuk>.
tuk.w7 pcp < vt having been cut. Spelled <tu-kw>.
wu=tuk.i sv well-harvested (thing). Spelled <wu-tuk>.

tuki s water turtle. Spelled <TURTLE-ki>. (S: TK)

tuʔki s trogon, quetzal. Spelled <TROGON>. (TK 1997) [Final /i/ implied by omission of following <ʔi>].

tukuʔ s cloth, garment. Spelled <CLOTH, tu+CLOTH>. (M-S: 1992)

tuk¥ num three. Spelled <ONE-ONE-ONE>. (M-S: TK)
mak=tuk¥ num thirteen. Spelled <ONE-ONE-FIVE-FIVE>. (M-S: TK)

tum-ya num one. (S: TK)

tus vt to prick, sting. (S: TK)
tus.i adj < vt with hair standing on end. Spelled <tu-si>. (S: 1992)
tuw  vt to shoot with arrows.  
       Spelled <tu-nu-ARROWSHOOT-pu-ja-wa>, <tu-nu-ARROWSHOOT-pu-ja-yaj-wa>. (M-S: TK)

tu7p  vi sun to set, bird to land. Spelled <SET>. (S: SW)

tza7  s stone. (M-S: TK)  
       kuk=tza7=jame  s pectoral stone memento. Spelled <7i-ku-MIDDLE-tza-ja-me>.

tza7yji  adv late in the day. Spelled <tza-ji>. (Soke: SW+TK)

tzajin  s snake. Spelled <DN-SNAKE>. (M-S: TK)

tzap  s sky. Spelled <SKY, SKY-pa>. (M-S: TK)  
       mak tzap  num+n Ten Sky (a god). Spelled <ma-FIVE-FIVE-SKY>. (M-S: TK+1992)

tzat7  vt to measure by hand-spans. (M-S: SW)  
       tzat7.n  sv hand-span measuring device. Spelled <7i-ni-k-o-SPAN-7u>.  
       nu.tzat7.e=nas  adj < vt + s ground jointly measured by hand-spans. Spelled <nu-y-SPAN=EARTH>.

tzetz  vt to chop (off). Spelled <na-tze-tze-CHOP-ju>. (M-S: SW)  
       tzetz.e  sv < vt chopped off (thing). Spelled <na-tze-tze>.

tzu7  s night. Spelled <TIME-SKY-NIGHT>. (M-S: TK)

tzuk  vt to do (< to touch). Spelled <DO>. (Soke < M-S: TK)  
       wu=tzuk  vu/vi to array, adorn, bedeck. Spelled <BEDECK>. (Soke: 1993)  
       tzuk.l=pun  sv deedsman. Spelled <DO-xlki>.

tzusi  s child under 12. Spelled <tzu-si>. (S: TK)

wan.e  sv < vi song, chant. Spelled <SING-ne>. (S: TK)  
       wan.e=tzuk  vi:incorp to perform a chant (Soke: TK+1992)

wej  vi to shout. Spelled <we-pa>. (S: TK)

wen.e7  sv < vt (something) broken, piece. Spelled <we-ne>. (S: SW+1992)  
       OR we7n.e  sv < vt a few, some. Spelled <we-ne>. (M-S: SW+1992)

wik  vt/unacc to (get) sprinkle(d). (S: 1992)  
    ko.wik  vu/unacc to (get) sprinkle(d) for/others/elsewhere.  
       Spelled <7i-ko-SPRINKLE-ki-pa, ko-SPRINKLE-ki-pa>. (S: SW+1992)  
wik.i  sv < vt result of sprinkling. Spelled <SPRINKLE>. (S: SW+1992)  
       masa=wik.i  sv something/someone hallowed by sprinkling. Spelled <ma-sa-SPRINKLE-ta-ma>. (S: 1992)

win  sr in front. Spelled <wi-BEFORE>

wis  vt to uproot. (M-S: SW)  
    wis.i  pcp < vt uprooted. Spelled <UPROOT-si> or <wi-si>.

wo7m  vi to sprout. (S: SW)  
       wo7ma7  s sprout. Spelled <wo-ma>.
wu7iz  vū/unacc  to (get) pierce(d). Spelled <ʔi-PIERCE+i>. (S: SW+1993)
wu7iz, u7  sv  piercingly, as a piercer. Spelled <PIERCE>.
wu7iz=kuy7  vt + vū/unacc  to get pierced and covered. Spelled <ko-PIERCE-ka-wu>. (S+M-S: SW)

wu  adj good. (S: TK)
wu=tuk, i  sv < vt well-harvested (th)ing. Spelled <wu-tuk>.
wu=tukk  vt to bedeck, adorn, array. Spelled <BEDECK>. (Soke: TK+1993)

was, tak  num two. Spelled <ONE-ONE>. (M-S: TK)
was=tuitu  num seven. Spelled <FIVE-ONE-ONE>. (M-I:S: TK)
mak=wus=tuitu  or vut ko metz-a  num seventeen. Spelled <FIVE-FIVE-FIVE-ONE-ONE>

yaj  vi:med  to be finished. Spelled <yaj>. (S[elite]: TK)

yu7  dem this. Spelled <yu>. (M-S: TK)

yut  or mak=mo(ko)s  num fifteen. Spelled <FIVE-FIVE-FIVE>. (Soke: TK)
yut ko tumu or mak=tuitu  num sixteen. Spelled <ONE-FIVE-FIVE-FIVE>
yut ko metza or mak=wus=tuitu  num seventeen.
Spelled <ONE-FIVE-FIVE-FIVE-FIVE>.
yut ko tuku or mak=tukw=tuitu  num eighteen.
Spelled <ONE-ONE-ONE-FIVE-FIVE-FIVE>

AFFIXES AND CLITICS READ (33)
these are all spelled out with syllabograms

<table>
<thead>
<tr>
<th>form</th>
<th>gloss</th>
<th>when</th>
<th>reconstructed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma</td>
<td>'earlier'</td>
<td>TK</td>
<td></td>
</tr>
</tbody>
</table>

adverbial particle

absolutive person markers

7u+  X Abs  TK
θ    3 Abs  TK

ergative person markers

na+  X Erg  TK
tu+  I Erg  TK
7in+ 2 Erg  TK
7i+  3 Erg  TK

verb-derived prefixes

7aw= with the mouth  TK
ko. in another's place: on behalf/instead of others,
in someone else's place, elsewhere:
glossed interlinearly ELSE  TK
ku. away  TK
ni7. on the body  ??
nu. associative  TK

Kaufman & Justeson: Epi-Olmc writing and texts

2.97
verb-inflecting suffixes

-\textit{p}u7 completely TK
-\textit{j}ay7 indirective TK
-\textit{n}ay7 perfect/progressive TK

plural person marking suffixes

-\textit{ta}7m 1.2 plural; animate noun plural TK
-\textit{y}aj 3 plural TK

aspect-mood suffixes

-\textit{pa} independent incompletive TK
-\textit{w}u independent completive TK
-\textit{e} dependent incompletive TK
-\textit{i} dependent incompletive TK
-\textit{ji} dependent completive SW
-\textit{7}i optative TK

stative-deriving suffix

\textit{.n}a7 \(v \rightarrow \text{adv}\) 1992

noun-deriving suffixes

\textit{.k}uy7 \(v \rightarrow \text{n:instrument}\) TK
\textit{.e}(7) \(v \rightarrow s\) (esp. non-active) TK
\textit{.i}(7) \(v \rightarrow s\) (esp. non-active) TK
\textit{a7} \(v \rightarrow s\) (esp. active) TK
\textit{a}7 \(v \rightarrow s\) (esp. active) TK
\textit{.7 or .0} \(v \rightarrow s\) (with prefix/incorporate) TK

locative enclitics

+\textit{mu}7 generic locative TK
+\textit{k} from TK

subordinating enclitics

+\textit{wu}7 he who/that which is N/A/#/D [RELatizer] TK
+\textit{7}ka when [relative subordinator] 1993

other enclitics

+\textit{ti} only, just, nothing but TK