
Fifth Palenque Round Table, 1983

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Cover illustration:

GI 'Hunahpu

Birth: 1.18.5.3.2 9 Ik 15 Ceh 2697 B.C.

Drawing by Linda Schele

Notes on Two Tablets of Unknown Provenance

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In the past decade two remarkably well-preserved tablets have surfaced in private collections. The first (Fig. 1) appeared in the Grolier Club exhibition and subsequently was published in Michael Coe's study (1973: No. 3) of the exhibition pieces. Later Karl Mayer included it in his book on sculpture of unknown provenance in the U.S. (Mayer 1980: Cat. no. 45). It will be referred to as the Grolier Panel in this study. The second (Fig. 2) has been published only once to my knowledge (Van Swieten 1976: no. 164), although Karl Mayer discusses what is known of it in his companion book on European sculpture (1978: Cat. no. 6). Mayer indicates that it was in the Galerie Emile Deletaille, and it will be referred to as the Deletaille Panel below. He further notes that Peter Mathews, in a personal communication, first made the important observation that similar name glyphs are mentioned on both tables, A3 and G6 of the Deletaille Panel corresponding to D8 and G3, respectively, of the Grolier.

Wherever the source of these panels might have been, it was apparently not a center for orthodox calendrics. The Grolier Panel has an incorrect Initial Series and three further calendar round (CR) dates, none of which connect by the given distance numbers (DNs). The combination 10 Muluc 16 Pax is also wrong as Muluc requires a month coefficient of 2, 7, 12, or 17. Coe makes ten corrections to this short series to get some semblance of agreement, but in doing so lengthens the series over 2 *katuns*¹ from that which the distance numbers indicate. The calendrics as given on the panel are to the left in the table below, and Coe's emendations are to the right. (Corrections to the calendrics below are underlined.)

9. 9. 2. 0. 9	3 Lamat 11 Zodz	:	9. 9. 2. 0. 8	3 Lamat	<u>1</u> Zodz
<u>1. 4. 0. 2</u>		:	<u>1.18. 4. 1</u>		
9.10. 6. 0.11 10 Muluc 16 Pax	:	9.11. 0. 4. 9 10 Muluc	<u>17</u> Pax		
<u>5.19</u>	:	<u>1. 8. 8. 19</u>			
9.10. 6. 6.10 2 Lamat 16 Cumku:	9.12. 8.13. 8	<u>12</u> Lamat 16 Cumku			
<u>15. 3.10</u>	:	<u>15. 3.10</u>			
9.11. 1.10. 0 9 Edznab 11 Cumku:	9.13. 3.16.18	9 Edznab 11 Cumku			

In fairness to Coe, his analysis preceded much of the recent work on syntax and relationship indicators upon which the following discussion depends.

Mayer (1980) indicates that Peter Mathews also suggested a revision whereby only eight corrections are required and "has the advantage that no radical alterations of any part of the text are involved." Mayer states that in Mathews' solution the time span of the two panels ranges from 9.8.9.12.4 (2 Ix 7 Pop) to 9.11.7.7.18 (9 Edznab 11 Cumku). The first refers to a date on the Deletaille Panel and will be discussed below. The second is a revision of the final date of the Grolier Panel. Although Mathews' solution is not given by Mayer, I reconstruct it as follows (corrections to the text are underlined, implied dates are in parentheses):

9. 9. 2. 0.8	3 Lamat	<u>1</u> Zodz
<u>1. 4. 0.1</u>		
(9.10. 6. 0. 9)	<u>12</u> Muluc	<u>7</u> Pax
<u>6. 3.19</u>		
(9.10.12. 4. 8)	2 Lamat 16 Cumku	
<u>15. 3.10</u>		
(9.11. 7. 7.18)	<u>12</u> Edznab 11 Cumku	

Mathews' solution involves only corrections of coefficients except for the addition of 6 *tuns* to the second DN. The day names and the month names remain as given, and the span of the sequence is some thirty-six years shorter than Coe's.

I suggest there is yet another possible "solution" that better accords with the Deletaille Panel dates and subject matter. This results from accepting the amended Initial Series and first calendar round date and then the DN's as inscribed. This results in the series:

9. 9. 2. 0. 8	3 Lamat	<u>1</u> Zodz
<u>1. 4. 0. 1</u>		
(9.10. 6. 0. 9)	<u>12</u> Muluc	<u>7</u> Pax
<u>5.19</u>		

(9.10. 6. 6. 8) I Lamat I Zodz
15. 3.10

(9.11. 1. 9.18) I Edznab 16 Zip

This series is only 5 *tuns* 16 *uinals* shorter than Mathews' version, a seemingly slight but crucial interval as I shall show. In this version there are, however, eleven errors, again mostly CR coefficients except for two differing month names. However, no blocks need be added. In support of this version it may be said (negatively) that any correction to four dates which necessitates even eight corrections indicates something is badly awry. More positively, I believe that the two panels form a coherent series if the DN's from both are accepted as given, and that the errors in both relate to the association of CR dates with the Long Count.

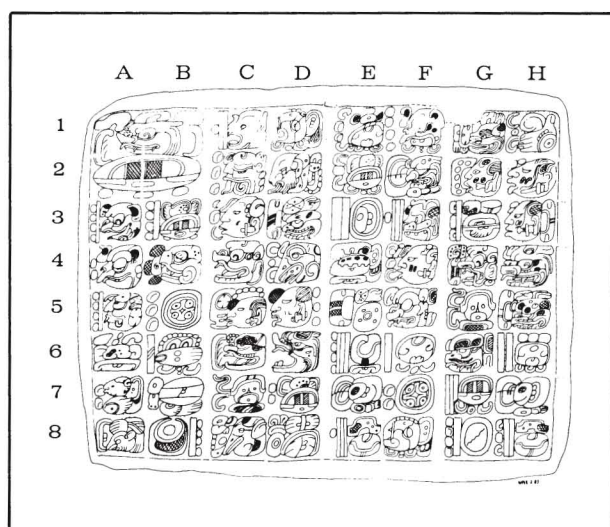


Fig. 1 The Grolier Panel.

The chronology of the Deletaille Panel is only slightly better. It records four CR dates which are not anchored in the LC. The distance number 2.17.15 correctly connects the middle two CR dates (2 Ix 7 Pop and 11 Muluc 12 Cumku), but the first and last dates are incorrect by normal criteria. Mayer quotes Mathews as suggesting that the LC position of 2 Ix 7 Pop is 9.8.9.12.14 which would then lead forward to 9.8.12.12.9 11 Muluc 12 Cumku. The values of the other two dates are not given. I believe that these dates should be moved ahead one CR as this provides the best fit to the dynastic events recorded.

The Grolier Panel records two births (the IS and at F8) of two males I shall designate Male 2 (Mathews' Hun Chac Chan) and Male 3 (see Fig. 3). Intervening is an event (T5:609:23.181b)² that occurred to Male 2 when he was roughly 24, if the DN's are accepted (38 or so by Coe's emendation). The final date is simply a count to a CR date with the event probably recorded on an adjacent panel. Of interest is the fact that Male 2 is recorded as being born on 9.9.2.0.9 or 8 with Male 1 as his father

(C7-D8). Male 1 is recorded as being a "2 *katun ahau*" which, if the usual pattern is followed, would indicate he was between 20 and 40 (born ca. 9.7.2.0.8 to 9.8.2.0.7), a likely age for fatherhood. It would also seem likely that Male 2 would be his eldest son and next in the line of succession, as non-ruling males rarely receive much notice in the inscriptions.

Male 3, the final birth mentioned on this panel, is recorded at G5-G6 as being the son of Male 2. Male 2 would be about 24 at the time of his son's birth, if the distance numbers are followed. If Coe's emendations are accepted he would be 3.6.13.0 or roughly 65, a rather advanced age for fatherhood, especially since Male 3 is again probably the eldest son. Given the subject matter, the DN's seem likely to be at least approximately correct and the CR dates wrong. The mother of Male 3 is Female 2, Lady 6-Sky-Ruler, as noted at H1-H5.

In contrast to the Grolier Panel, the Deletaille Panel is concerned primarily with a series of accessions to rulership indicated by the familiar T644 + 168:188M compound with the interesting substitution of a "toothache vulture" (T684v) at A2 for one of the 644 glyphs. It begins³ with the accession of Male 1 (the father of Male 2) on the CR date 5 Cimi 9 Zac. Then follows the accession of Male 4 (Ahau Kuk) on 2 Ix 7 Pop after an (incorrect) DN of 1.10.14.12. Male 4 apparently ruled for only a short time as only 2.17.15 (correctly) intervenes before the accession of the next ruler on 11 Muluc 12 Cumku. This ruler I believe to be Male 2, Hun Chac Chan. His name glyph is composed of a "winged-Edznab" plus the Chicchan head (T764) as in the Grolier. The prefix is unusual, but is perhaps a conflation of I, T130, and T109 (T109 being infixed in I). Furthermore, at G6 can be seen the name glyph for Female 2, Male 2's



Fig. 2 The Deletaille Panel.

consort. Deletaille G7 may relate to H3-G4 of the Grolier Panel. Finally, G1 of the Deletaille may have a T69 prefix which is part of the name glyph of Male 3 on Grolier G1. If the Deletaille accession passage does refer to Male 2, then the event on the Grolier Panel at E4 (T5: 609:23.181b)² would not be Male 2's accession. This is supported by the only other occurrence of the event I could find, on Lintel 26 at Yaxchilan, U2, where the event apparently occurred late in the life of Shield Jaguar and certainly well after his accession date.

The final date (3 Eb 5 Kayab) is incorrectly linked by a DN of 6.13.3. The error involves 13.0 or exactly 1 *tzolkin*. Perhaps this indicates that the calendrical material was arranged by *tzolkin*, and that the error resulted from slippage to an adjacent column by the scribe. If the DN is correct as given, 5 Kayab must be emended to 20 Zac (0 Ceh), or if the CR is correct, the DN must be corrected to 6.0.3.

The CR date 11 Muluc 12 Cumku, the accession of Male 2, can only have the position 9.11.5.7.9 in the LC if his birthday is even approximately right on the Grolier Panel, or one CR later than Mathews' placement. He would be about 42 years old upon succession, whereas placement one CR either way would make him either too elderly or place him in office before birth. Male 4 (Ahau Kuk) would then have taken office on 9.11.2.7.14, and the final date of the panel would then be 9.11.11.7.12 3 Eb 5 Kayab (or 9.11.12.2.13 3 Eb 20 Ceh). The first date is somewhat more complex. The DN 1.10.14.12 leads forward from 2 Ix 7 Pop to 5 Cimi 9 Mol, but backwards to 12 Ik 10 Ceh. The syntax unequivocally states that the DN leads forward to 2 Ix 7 Pop, so I think there was perhaps another look-up error. The scribe may have moved in the incorrect direction in his table and again made a mistake in the month name, although not the coefficient.

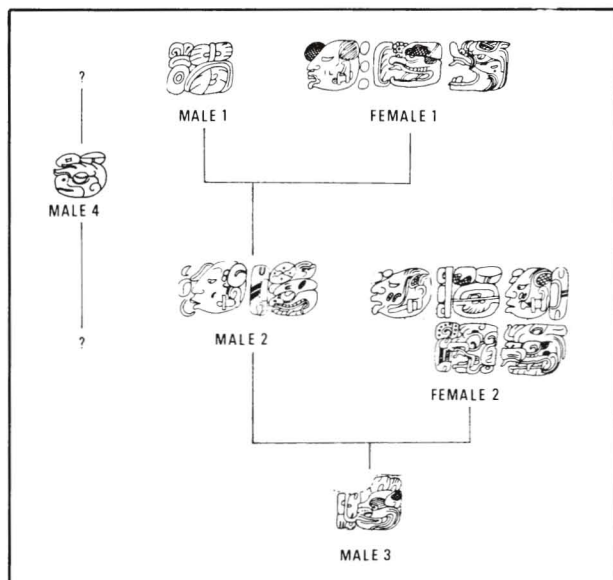


Fig. 3 The Dynastic Sequence of the Two Panels.

I believe this reconstruction of the chronology supports the amended chronology of the Grolier Panel, for if the DNs are accepted as correct, all the dates on that panel occur before the last three dates of the Deletaille Panel. This is important because if the Grolier Panel records the birth of Male 2, and if, as in Mathews' revision, the Grolier chronology terminates after his accession date as recorded on the Deletaille Panel, one would expect it to have been also recorded on the Grolier. Also, there is no mention on the Grolier of Male 4, his immediate predecessor. However, if the accession dates of these two rulers occurred after the dates on the Grolier, they would have been mentioned on adjoining panels. Male 4 apparently was not related directly to the line of succession and may have served as temporary regent who need not have been mentioned in the genealogical records of the Grolier Panel. The accession of Male 1 does occur within the span of the Grolier, but only a short while after the birth of Male 2. As Males 2 and 3 are the subject of the Grolier, perhaps that information was regarded as superfluous.

Thus, I tentatively offer a chronology for the panels following the corrections noted above. 'D' indicates a Deletaille date, 'G' a Grolier.

G9. 9. 2. 0. 8	3 Lamat	1 Zodz	Birth Male 2
D9. 9.11.11. 2	12 Ik	10 Ceh	Accession Male 1
G9.10. 6. 0. 9	12 Muluc	7 Pax	Throne event, Male 2
G9.10. 6. 6. 8	1 Lamat	1 Zodz	Birth Male 3
G9.11. 1. 9.18	11 Edznab	16 Zip	(not given)
D9.11. 2. 7.14	2 Ix	7 Pop	Accession Male 4
D9.11. 5. 7. 9	11 Muluc	12 Cumku	Accession Male 2
D9.11.11. 7.12	3 Eb	5 Kayab	Event Male 3?

There are thus no uncharacteristic omissions of accession events or the necessity to postulate prodigious feats of virility of longevity.

There are also several items of epigraphic interest. The accession expressions of the Deletaille Panel all employ the familiar construction of T684 or T644 plus 59. (168: 188)M or a variant thereof. The second part of the expression has been read as *ta/ti ahaulel* (Bricker n.d., Closs 1982) on the basis of parallels with the Acalan Chontal document (Smailus 1975) where the expression *chum-vanix ta ahaulel* is used for "to be seated in office." Below, I would like to discuss the verbs of these accession expressions.

The verb for all but the first seating expression is T644. Bricker (n.d.) suggested it corresponds to the Chontal root *chum*, as in the above mentioned phrase in the Acalan text. She supported her arguments by noting that it appeared to be a positional verb from the types of suffixes it occurs with, but offered no other iconographic support. Closs (1982) also noted the parallel with the Chontal phrase, but did not explicitly identify T644 as *chum*.

I concur with Bricker's identification and offer the following suggestions. A common variant, T644b (Fig. 4a), occurs with an infix consisting of either a lobed element preceding a small animal head or simply the lobed element. Usually the head is too small to make

much of, but Schele (1982: Chart 4.10) (Fig. 4b) illustrates an unusual example from Pomona in which the elements normally infixed are suffixed in a “seating of *tun*” expression. From this it appears as if the lobed affix is T19 and the animal head T741v, a frog or toad head. The 741v heads in these examples are distinguished from the uinal head (T741a) by their lack of a tympanum with three interior dots. Another example from the Hieroglyphic Staircase at Copan (Fig. 4c) clearly shows the same 741v infixed with a slightly different prefix that more closely resembles T115, hereafter referred to as T115v. I believe it is a variant of T19.⁴

These infixes, especially the Copan example, resemble another construction from Dos Pilas Stela 8, H14, (T115v.741v):25.181 (Fig. 4d). This event happened a few days after a death expression, and Peter Mathews, in an unpublished paper quoted by Schele (1982), assigned the reading (*tu*) *mucah*, “(he) buried.” Mathews believes the motivation for using T741v in the burial compound is that a word for “frog” or “toad” in at least

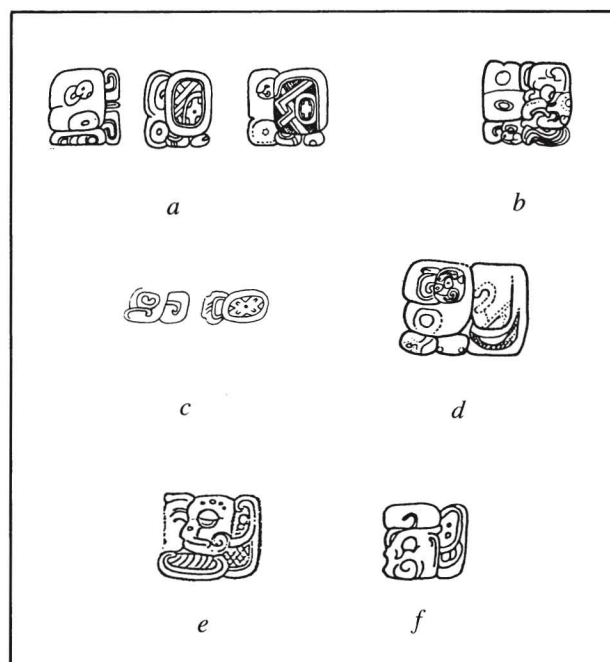


Fig. 4 Variants of the Seating Glyph and Related Compounds: (a) T644 with T19.741v infixed, with only T19 infixed, and with only T741v infixed (Thompson 1971: fig. 19).

(b) T644 with T19.741v subfixed. Pomona Wall Tablet, pG 1 (Schele 1982:4.10).

(c) T644 with T115v.741v infixed. Copan H.S., Gxiim (drawing by H. M. Bricker).

(d) (T115v.741v):25.181b. Dos Pilas Stela 8, H14, burial glyph (unpublished drawing by I. Graham).

(e) T19:203.181b. Piedras Negras Lintel 3, V5, burial glyph (Schele 1982:73.5).

(f) T19v/115v.(25:181P). Palenque Temple XVIII burial glyph (Schele and Mathews 1979: #471).

Yucatec, Itza, several Cholan languages, and in reconstructed proto-Cholan is *much*, while the word for “to bury” in these languages is *muc*. It should be noted that in none of these languages is the word for “frog” a homonym for “to bury,” and therefore T741v probably is functioning as phonetic /mu/. T25 would then provide the final consonant /-k(a)/. Schele (1982:223) also notes that Mathews speculated that the (T115v prefix functioned as “*tu* . . . a preposed tense-aspect particle and the third person pronoun of Set A” (*t* is the completive aspect for perfective transitives in Yucatec). Schele expresses some doubt about this. She notes that the prefix occurs in the seating expression T644 and is perhaps part of the verb itself.

First let us consider T115v in the burial and seating compounds. T115 has received a reading of *tu* mainly on the basis of the expected locative in the (*tu*) *yotot/yotoch* compound. The examples I wish to read as variants of T19 have a curling lobed infix like that of T19 rather than the usually pointed interior lobe of T115 in the *tu yotot* compound. They appear to freely alternate with T19 in other T644 compounds. If T115v is an aspect marker, it would be one of the very few (if not the only) such examples in the script. In exactly parallel constructions, as for instance on Piedras Negras Lintel 3, V5 (where T19 replaces T741v) (Fig. 4e), and on one of the stucco blocks from Temple XVIII, Palenque (Schele and Mathews 1979: #471) (Fig. 4f), there are no prefixes. The Palenque example is particularly interesting as it conclusively shows that T115v may function alone as the initial syllable of the birth compound and that T19 and T115v are interchangeable. In the Palenque example there is no question but that T19v/115v is functioning phonetically as /mu/.

Also, the construction of the block in the Dos Pilas example is unusual in that the suffix T25 overlaps the prefix. There is an overwhelming tendency in the script for prefixed grammatical particles, especially Set A particles, to overlap suffixes. I believe that this construction signals that the T115v prefix is to be read, not as a grammatical particle, but as an initial phonetic complement /mu/. Furthermore, if T115v were an aspect particle, it would indicate that *muc* was in the active voice. In the Dos Pilas inscription, one would then be forced to read “he buried Ruler Shield God K,” and the identity of the subject would be ambiguous as there appears to be no other associated nominal phrase. In both the other burial examples there are no prefixed Set A pronouns, which indicates that these are passive constructions of the form “X was buried.” It would make semantic, if not indeed syntactic, sense⁵ to prefer viewing the Dos Pilas example as another passive construction: “Ruler Shield God K was buried.”

Fox and Justeson (1983) criticize Mathews’ reading because of the principles of sign motivation they believe operative in the script. Derivation of /mu/ from *much* would be an example of the so-called principle of acrophony whereby a (C)V syllable is derived from a (C)VC

root by deletion of the final consonant. This has been vigorously rejected by Gelb (1963) as well as Fox and Justeson who believe that (C)V syllabic signs are derived from CV or CVc roots, where c represents a “weak” consonant such as /h/, /w/, /y/ or a glottal stop. In this particular example they view T741v as a logogram for *muc* based perhaps on a lost proto-Yucatecan root **muc* for “toad,” or perhaps resulting from hypercorrection by a Cholan scribe creating a Yucatecan text or vice versa.

I believe, however, that an examination of the contexts of T741v and its prefixes T19/115v leave little doubt that it is functioning syllabically and that it is, in fact, an example of acrophony. Since Fox and Justeson (1983) reject the syllabic usage of T741v, one must assume that wherever T19/115v.741v occurs a reading of (tu) *muc* is warranted. T115v.741v occurs in the Dos Pilas burial example, in the Pomona seating example, and on Piedras Negras Stela 3, E3, below T580. Since Maya roots are overwhelmingly (C)VC, it is very unlikely that a terminal -(tu)*muc* is being added. Even if T741 was functioning as syllabic /mu/, it would be unlikely that T115v.741v was syllabically spelling the “seating” root, as I know of no cases in which an initial complement follows a logogram.

I believe that when T19/115v and T741v co-occur, T19/115v functions as the phonetic determinative of T741, in effect the complement of a complement,⁶ yielding syllabic /mu/. In fact, it might be better to regard the prefix as an attribute to the T741v head, akin to the T59 affixed to the 741b vulture head, or the *ahau* affixed to T741a. The Pomona seating example, where the compound occupies a single suffix position, clearly shows that it may operate as a single unit, there as the final complement /-mu/. This provides a plausible analysis of the burial construction as a full syllabic spelling in the passive voice.

Fox and Justeson’s principle of sign derivation I believe is probably statistically valid, and is a fruitful way to approach the script, but it should not be elevated to the status of an inviolable law. In attempting to adapt easily recognizable objects, especially from the animal world, to their highly pictorial script, the Maya must have been confronted with certain CV or CVc combinations that had few correlates in their surroundings. (The roots /mu/ or /mu/ + a “weak” consonant in particular appear to be rather unproductive with regard to animals or objects.) It seems that in such cases it is not unreasonable to assume that arbitrary decisions were made to adapt CVC signs to CV syllabic signs. In such cases we must separate the motivation from the function. There is then no need for admittedly speculative reconstructions of **muc* for ‘toad’ or improbable situations of scribal hypercorrection (Fox and Justeson 1983).

In this case I believe it possible to demonstrate that T19 and T741v share a common motivation. T19, I believe, was motivated by the Yucatecan root *much’*, which is glossed as “crespo, rizado, crespo cosa” (“curly, frizzy, curly thing”) in the *Diccionario Cordemex*, and perhaps

represents a forelock of hair. (There appear to be no Cholan reflexes.) Thus, if one ignores the final glottal stop (which may contrast less in root-final position), there is a certain amount of rigor in choosing allographs.

The root that is complemented by the T19.741v in the T644b seating compound is, as Bricker suggests, *chum*, “to be seated” in several Cholan languages. As T741 is in effect redundant, it may be omitted in some examples of T644b leaving only T19 to complement the root. However, there are some puzzling suffix patterns to T644. At Palenque there are nearly fifty examples of T644. MacLeod (1979) has suggested that the affix pattern :130:116 frequently following T644 indicates the positional perfective marker /wa/ + /ne/ = -*wan*, but the reading order of 130 and 116 is often ambiguous and occasionally actually conflicts with the expected order of affixes (e.g., Schele 1982: Chart 112.9,19 where the order is 116:130). In four instances at Palenque (e.g., Temple of the Inscriptions East N3,S2) T644 has only T116 as a suffix. Thus, a possible interpretation is that T116 may function as a complement either to the root or to the suffix -*wan*. (One would have to view T130 as both a logograph for -*wan* and phonetic /wa/. The reversed suffix :116:130 may also simply be a mistake.)

This finds rather neat support in the Acalan document, where there appears to be both free and conditioned variation between *chum* and *chun* (references are to page numbers in Smailus 1975):

32 <i>chumvanix ta ahaulel macvabin</i>	Macuabin was seated as <i>ahau</i> .
68 <i>chumvaniob ya ta chanpoton</i>	They stayed there in Champoton.
69 <i>chumuanix ta ahaulel Lamatazel</i>	Lamatazel was seated as <i>ahau</i> .
42 <i>tuxakha ya chunvani capitan kin</i>	There captain Kin established himself.
92 <i>xach uchuntelli ta gouernadoril don luis paxua</i>	Then Don Luis Paxua was seated as governor.

Smailus (1975:139) also notes the modern Chontal *chunwani*, “sentóse.” Thus, the use of T116 as a lone complement and the reading order reversals of 116 and 130 may at times result from variant spellings of the root.^{7,8}

The second verbal expression occurring with the accession expressions is T684, present on the Deletaille Panel at A2 with T747b as the infix. T684 occurs in several variant forms (Fig. 5), but the element common to all is the tied bands surrounding the infixes. Indeed, one variant is simply this band alone (Copan Str. 11, north door e). The variants may be classified as follows (references are to examples in Schele 1982):

1. The tied band – Chart 7.8,9.
2. The “sacred bundle” – Charts 7.3,10?; 71.5,8,11; 106.11. The outline makes it clear that this is the bundle so often seen in pottery scenes being presented to the ruler or resting on his throne. I assume that the several examples with curled or folded elements belong here and represent bound and folded pelts or mantles.
3. T684a. T683 is the infix. Charts 7.12; 53.1; 63.2; 71.4,6,7,9,10,12,13,14,16,19,20,21. This is probably the most common form and preserves the outline

of the bundle.

4. T684b. An animal head is infixed. Chart 7.3. The animal variant is most common at Palenque where it functions, not as a verb, but as the name of two rulers known variously as Kan Xul or Hok in the literature. These examples all have T281 (*kan*) as a prefix or infix. I believe the infixed head is the pocket gopher *ba*, T757 or a variant thereof, which functions as a syllabic sign with the same value.

5. A vulture head is infixed. Charts 7.5,13; 37.4; 45.1; 71.1,3,23. As the Deletaille example makes clear, and as several other examples confirm, the bird head is T747b, distinguished by the T59 determinative on its forehead. T747a, an *ahau* allograph, occasionally substitutes in the second portion of the compound.

Schele treats several of these variants as infixation of affixes or particles to a sign that basically represents the bundle. T683 she views as an infixed perfective suffix. However, she notes that it occurs on Naranjo Stela 20 in an auxiliary construction: "The fact that T684 retains T180 (sic) as an infix in the main sign causes some problems because a verbal noun should not be marked with this verbal affix" (Schele 1982:59). Another of her examples (Chart 71.13) from El Cayo also shows T683 infixed with T181 as a suffix, which would seem to be unnecessary reduplication of the verbal suffix. As for the vulture infix, she regards the Tikal Stela 4 example as an infixation of the locative *tal'ti* in another auxiliary construction. This may be true for the Tikal example (although here too there appears to be an unexpected T181 affix), but the Deletaille example, and those from Piedras Negras Stelae 25 and 36, are simple expressions of the form "CR date" + "accession compound" + "name." It would be most unusual to have a locative prefixing these events, especially as none of the other T684 accession variants have one. Nor is the T747b vulture head functioning as the locative for the following *ta ahaulel* expression, for T59 is in fact present. (It should

be noted that in the one-block confluations of the accession compound, expected reading order may be distorted, and the elements forming the *ta ahaulel* compound are arranged around the T684 main sign as affixes.) We must look for another explanation.

Victoria Bricker (n.d.) has also considered T684, and is inclined to assign a separate reading to each of the variants. She views the T683 infix as a bound-up medalion of office which functions as a phonetic complement (*uh* "moon" or "necklace") to the reading she ascribes, *ul/*uh*,⁹ "to come or arrive (in office)." The animal variant she believes may be an opossum, Chol *och*, in which case the expression would read *ochel ta ahaulel*, with much the same meaning. She also suggests that the head may be T758 and represent an iguana head, *huh*, which might play upon Chol *uh*, "to end or finish." She makes the final suggestion that the vulture variant represents *kuch*, the Yucatec and Cholti word for vulture and with the homonym *kuch*, "to arrive," again within the semantic field of the previous readings.

This is closer to the mark, but I believe her readings to be incorrect. First, I do not think the animal of T684b can be identified as T765, for the characteristic cross-hatched supraorbital area is never present. Nor do I believe T758 represents an iguana. Secondly, economy of explanation would suggest that these variants, which occur in such restricted and similar contexts, are in fact identical.

I believe that the root that best explains the variants, and has at least some ethnohistorical and iconographic support, is *tab*, a root which in the relevant lowland languages means "tumpline" (e.g., Yucatec, proto-Cholan item #477, **tahn'*; proto-Tzeltal-Tzotzil **i6hb'*). The *Diccionario Cordemex* indicates a wider range of meaning centering on "cord" or "fasteners" (e.g., *u tab chim* – "cerraderos de bolsa"). It may also function as a verb. In the *Chilam Balam* chronicles it usually appears as a derived transitive with *-t*-suffixed, but in the *Motul* (Martínez Hernández 1929:808) it appears as a root transitive with the meaning of "to fasten." As the affix pattern of T684 indicates it is an intransitive or passive verbal root⁹ with no unusual suffixes, this entry is of importance. I have, however, found no use of *tab* as a verb with the same meaning in a Cholan language.

Knots are commonly seen on the sides of monumental masks on temple façades and also around the "sacred bundle," frequently appearing in pottery throne scenes. There are frequent references in the *Chilam Balam of Tizimin* (Edmonson 1982) to a ruler's tying on a mask of office, and also to the tying of the katun that symbolized its end. In most of these the verb is *kax*, but several use *tab* (references are to line numbers in Edmonson 1982):

- | | |
|----------------------------|--|
| 1. <i>kaxan u u ich</i> | Tied was its face |
| <i>kaxan y ahaulil</i> | Tied the lordship (4306-4307) |
| 2. <i>U kax cuch katun</i> | The tying of the bundle of the katun |
| <i>ti ho ahau katun</i> | which was the 5 Ahau katun (2506-2507) |
| 3. <i>Ulel Ytzmäl</i> | Coming up was Izamal |

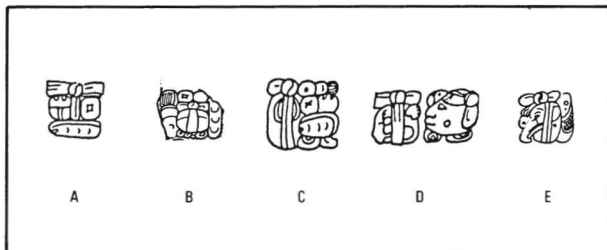


Fig. 5 T684 Variants:

(a) T684v with tied band only. Copan Str. North Door, East Panel, D2 (Schele 1982:7.9).

(b) T684v in the form of the "sacred bundle." Aguateca St. 5, A9 (Schele 1982:106.11).

(c) T684v with T683 as infix. Piedras Negras St. 15, C5 (Schele 1982:71.15).

(d) T684v with an animal infix. Piedras Negras St. 25, I12 (Schele 1982:7.3).

(e) T684v with a vulture infix. Deletaille Panel, A2.

<i>Tabtab i</i>	To be all tied up
<i>Tu men sipc i</i>	By the fault
<i>Ah Ulil Ahau</i>	of Ul Ahau
<i>Lai</i>	Who
<i>U hetz Katun uch i</i>	Was the seating of the katun (240-246)
4. <i>U kax cuch katun</i>	The tying of the burden of the katun
<i>He x y ahaulil cabob</i>	That was also the lordship of the land
<i>Kaxan u u ich</i>	Tied was the face
<i>Ti ualac y ahaulil</i>	Of him who was to return the lordship (2545-2548)

The act of tying on a mask may be represented in many pottery scenes showing lords wearing cutaway masks, and to the scenes represented on Yaxchilan Stela 11 and Lintel 2 from Temple I, Tikal, in which masked rulers confront their underling. Perhaps during the Classic Period the tying ceremonies occurred, not at the end, but at the commencement of a ruler's reign (see Edmonson 1982: note to line 2545).

The several variants of T684 I believe to be related as follows. Variants 1 and 2 (Fig. 5 a,b) are perhaps simple logograms of the knot and the bound bundle. Variant 3 (Fig. 5c) has T683 infixed, which functions as a determinative. T683, besides being an affix and the moon sign, functions as a sign for twenty. One variant appears, usually in Glyph A of the Lunar Series. The second variant also rarely appears in Glyph A (e.g., Grolier Panel 4, Coe 1973) and in the "vague" DN's of the Tablet of the Slaves, Palenque. Both appear as coefficients of 20 on Pixoy Stela 5. None of the Mayan words for twenty resemble words for moon particularly closely. Lounsbury (1978:762) states that aside from *uinic*, most words for twenty, such as *kal* or *may*, are related to words for "to tie up or bundle." He speculates that this may have originated in their use in commerce. In Yucatec the numerical classifier *taab* is used to classify groups of twenty, such as loads of maize or blankets, chickens, etc. (*Diccionario Cordemex*, quoting *Motul Ductionary*). It is also found in Tzeltalan languages (**t6hb* is entry 633 in Kaufman 1972), suggesting that the term may originally have had a fairly wide Lowland distribution. Thus, its appearance in T684 may result from their being homonyms.

I believe that variants 4 and 5 (Fig. 5d, e) have infixed phonetic complements. It has been noticed by many epigraphers that the T59 forehead determinative of the T747b vulture head refers to the Chol term for vulture, *ta' jol*, literally "shit head" (Aulie and Aulie 1978). (T59 represents a pine torch, Chol *taj*, with the glottal stop in *ta'* being unrepresented.) The head would thus be an initial phonetic complement to *tab*. Variant 4 I believe contains the final phonetic complement bound inside, T757 or *ba*. Although the ethnographic parallels are not as explicit as with T644, the phrase using T684 might have meant something akin to "he was bond as *ahau*" with the implicit understanding that it was the mask of leadership that he was assuming.

There is one other possible interpretation of *tab*. In Moran's Cholti dictionary (1935:32) we find the entry *tabse*, "subirse." It appears as if the -s- here is a suffix deriving transitives from intransitives, and the root itself is intransitive. The meaning of the root may thus be in

accord with the iconography of accession at sites such as Piedras Negras where rulers are seated in elevated niches above attendants. One problem is that Kaufman and Norman reconstruct the term as **t'6b*, noting cognates only in Chontal and Chorti. This presents the problem of whether the glottal stop would be represented. It should be noted that in the Acalan Chontal document it is written as *tab-* where in other contexts in the document *th* is used for /t'/. If this is the correct reading, it suggests that the stop may have been ignored. The meaning of the phrase might then have been "he rose to lordship."

Another interesting substitution in these inscriptions is of T585 for T764 in the name of Male 2 at E5 on the Grolier Panel. A similar substitution may be observed in the Emblem Glyph of Piedras Negras, as for example on Stela 36. T585 is usually accepted as having the phonetic value *be* from Landa and from the footprint variant in pottery texts. T764 is a form of the day Chicchan and otherwise appears to have the value of *can* or *chan*, "snake." Here, the appearance of T25 before a similar snake head at C6 of the Grolier panel would suggest it had the Yucatec value *can*.¹⁰ The substitution indicates that either T585 or T764 are polyvalent.

I have been guided in my readings by the impression that the Maya script is strikingly similar in structure to logosyllabic scripts. Evidence is growing that signs are frequently polyvalent, and that the links between values can be both semantic and phonetic. As an example one might cite T1010, a head variant for *kin*, "4", and probably *ahau*.¹¹ The links are at one level semantic: "sun/day (*kin*)" = "sky (*chan* or *caan*)" = "lord ((*Kinich?*)*ahau*)."
At another level they are phonetic: "4" (*can* or *chan*) = "sky" (*caan* or *chan*). My explanations for T683 and T764 above would also suggest that these signs may have multiple meanings. While this might seem to lead to a methodological morass, the values usually do have definite semantic and/or phonetic associations. I also believe that like Egyptian monumental inscriptions there is little emphasis on economy of expression, and perhaps need-less reduplication and complementation is not infrequently used for artistic purposes. Egyptian inscriptions can show quite complicated patterns of complementation, complements of complements, and the like, and, as I have tried to show with the discussion of T644, the Maya script may also.

One other point has been suggested, that CVC signs may function as CV phonetic complements or syllables on occasion. Concrete examples are as yet scarce other than those suggested. T238 clearly is an allograph for T181 at Palenque and in Landa's alphabet, yet apparently the motivation was *ac*, "turtle." Another possible example is T669, Landa's /k'a/, which appears to be motivated at least partially by Yucatec *kab*, proto-Cholan **k'ab*, "hand." Nor do I think that evidence against acrophony is as conclusive as Gelb, Fox, and Justeson believe. The formation of the script probably did not develop along so rational a plan, and we must be wary of imposing *a priori* principles in advance of a more complete understanding of the script.

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Notes

¹ This paper unavoidably has to employ several orthographic systems for Maya terms. All Maya terms are italicized, and all direct quotes are in the original orthography. Common epigraphic terms such as calendrical terms follow common usage, which is usually that of Colonial Yucatec. Reconstructed terms are preceded by a '*'. Proto-Cholan terms are those of Kaufman and Norman (n.d.), proto-Tzeltal-Tzotzil those of Kaufman (1972). Phonemic representations are within slashes, /k/ is the equivalent of Colonial 'c', /k'/ that of 'k'. '6' represents the schwa vowel. In discussions of syllables, C represents a consonant, c a "weak" consonant (see text), and V represents vowels.

² Schele (1982) shows the prefix to the compound to be a jaguar claw. I have seen only photographs of the Panel, but the prefix appears to me to be T5, which also seems a plausible identification for the Yaxchilan Lintel 26 example.

³ The amount of uncarved stone remaining on the left border of the Deletaille Panel indicates that there were no further columns to the left, although there may have been a panel preceding it.

⁴ Knorozov (1967) initially assigned the syllabic value /mu/ to T19 on the basis of several compounds in the codices.

⁵ V. Bricker (personal communication) informs me that in a phrase with a transitive verb and only one nominal phrase, the nominal phrase would be understood to be the subject in Yucatec and the object in Chol. Thus, if the language of the Dos Pilas inscriptions is Yucatec as Fox and Justeson (1983) hypothesize, the use of a transitive burial glyph and one nominal phrase would be incorrect if that phrase is actually the person buried. If the language is Cholan, as the use of the *-wan* positional perfective suffix would suggest, the sentence would be syntactically correct but ambiguous.

⁶ T19 may have a value of /mo/ also, for on a panel in Mayer (1978: No. 2, Plate 18) at B7 it appears before what I believe is a parrot head as an initial phonetic complement to *moo*, "macaw." If so, this is another example of looseness in vowel complementation. The substitution of T19 for T741, *much'* for *much*, if correct, also implies that final stops were ignored in making puns. Chart 12 in Schele (1982) also indicates that T575 and T17 could be replaced by T741v. These also are similar in form to T19. In these compounds again T741 would be the final sign. If indeed T741 corresponded to a CVC root, this would suggest a compound root of the form (C)VCVC, which would be somewhat unlikely for Mayan, especially if it must end in /-muk/ or /-muč/.

⁷ There is also some evidence that the distinction between nasals is somewhat fluid in the script. Bricker (n.d.) gave evidence for considering a reading of *om*, "pile up, accumulate," for T513. Since then a corner of Step 1 of the Hieroglyphic Stairs of Structure 44, Yaxchilan, has been uncovered revealing a variant of the month Kankin,

T513:166.130. The month had the reading *oneu* or *uniu* in the Cholan area (Fox and Justeson 1980) and the use of T513 would seem inappropriate unless the distinction could be ignored. V. Bricker pointed out to me another example on Dos Pilas Stela 8, I3, where T513 precedes the normal sign for Kankin and acts as a complement.

⁸ This would leave T125/126, the final element frequently accompanying the T644.130.116.125 seating compound, to represent terminal enclitic *-ix* or */i*. Several people have suggested the identity of T125/126 and "i" or "y" for various reasons, although I believe there is as yet no thoroughgoing analysis of the element. It may be noted that T125/126 is the most frequent element, at least at Palenque and Quirigua, and that "i" + "y" is the second most frequent morpheme in the Chontal Acalan text and in the Chilam Balam of Tizimin and Chumayel (Ringle and Smith-Stark n.d.b). T125 occurs frequently as a prefix, perhaps as a phonetic sign in vowel initial words. In Kaufman and Norman's proto-Cholan vocabulary, there are several expressions for a number plus the suffix *-i* indicating "n days ago." T125 occurs frequently in Distance Numbers as a suffix to tun and uinal glyphs in perhaps analogous situations.

⁹ Most passive verbs derived from root transitives are probably indistinguishable from intransitives in their affix patterns in the script, regardless of whether Yucatec or a Cholan language is encoded. In Yucatec, a transitive CVC root becomes passive by infixation of a glottal stop, thus yielding a CV'VC root that is then inflected as an intransitive (Po'ot Yah and Bricker 1981). As this glottal stop is a "weak" consonant it probably would not have been represented and the reader would be left to infer passivization from context.

In the Cholan languages the picture is somewhat less clear as there are a variety of means for forming passives (Kaufman and Norman n.d.). One form common to both eastern and western Cholan languages (and hence reconstructable for proto-Cholan) is the infixation of *h* before the second root consonant to give a passive root CVhC. Again, since *h* is a "weak" consonant it may not have been represented. In Chol the root would be inflected as an intransitive as with Yucatec. In the eastern branch languages the thematic suffix *-aj* would have been added. Since the derived intransitive perfective suffix for these languages is 0 however, and since T181 probably had a phonetic value close to that of the thematic suffix, it may have been used for the suffix. Thus, in both Yucatec and the Cholan languages both passives and intransitives could well have lacked Set A pronouns and had T181b as a suffix.

¹⁰ In many contexts Yucatec /k/ corresponds to Cholan /č/. The /č/ contexts are also shared among its Greater Tzeltalan relations and thus would antedate our earliest examples of the script. Many indicators point to a Cholan language as the predominant language of the inscriptions, yet the evidence in the script is equivocal. T25, which in contexts such as the *bacab* and *chuc* glyphs that would suggest a clear value of /ka/, nevertheless has the T203 fish as an allograph. This would have had the value /čai/ in the Cholan languages. Perhaps the script indicates that there was a later shift of /k/ to /č/ as a result of contact with non-Yucatecan languages.

¹¹ One of the stucco tzolkin dates from Temple 18 at Palenque has T1010 as the main sign. There is some reason to identify it as *ahau*.

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