

The “Axe/Comb” Glyph as *ch’ak*

JORGE L. OREJEL
 University of Texas at Austin,
 Department of Computer Sciences
 and Institute of Latin American Studies

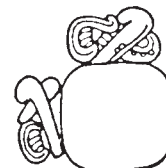
THE “AXE” GLYPH, T190 (Fig. 1a), was identified by Kelley (1976:135) as a seemingly ideographic usage of an instrument used in warfare. Kelley also noted that the earliest identification of the axe glyph was that of Thomas (1882:126), while Brinton (1895:103-104) suggested its reading as *bat*, “axe” in Yucatec. In his analysis of the possible uses of the axe glyph, Kelley mentioned the seemingly strange fact that Thompson (1962) assigned a separate catalog number, T333, to the combination T190:25 (Fig. 1b), in which the T25 sign has the value **ka**.¹ After considering Berlin’s (1958:114) reading of the “*batab n katun(s)*” title in monumental inscriptions—known to be indicative of the age of Maya rulers (Schele, personal communication)—Kelley suspected that “the true reading [of T333] should be either *batac* [*batak*] or *batca* [*batka*]” (Kelley, 1976:135). He also pointed out a reading by Cordy (1946) as *kabat*, “to fall,” and deemed it as plausible on the basis of both the unusual positioning of its constituents, and the apparent agreement of its meaning with the context in the codices.

More recently, Bricker and Bricker (1986:56) have suggested a new reading for T190 on the basis of its occurrence in T333, as *wak*: “to extrude, pop out.” The arguments supporting this reading can be summarized as follows: The axe glyph appears infixed in the eye of the head variant of the numeral 6, which reads *wak*, with the occurrence of T25 *ka* in T333 as a phonetic



a

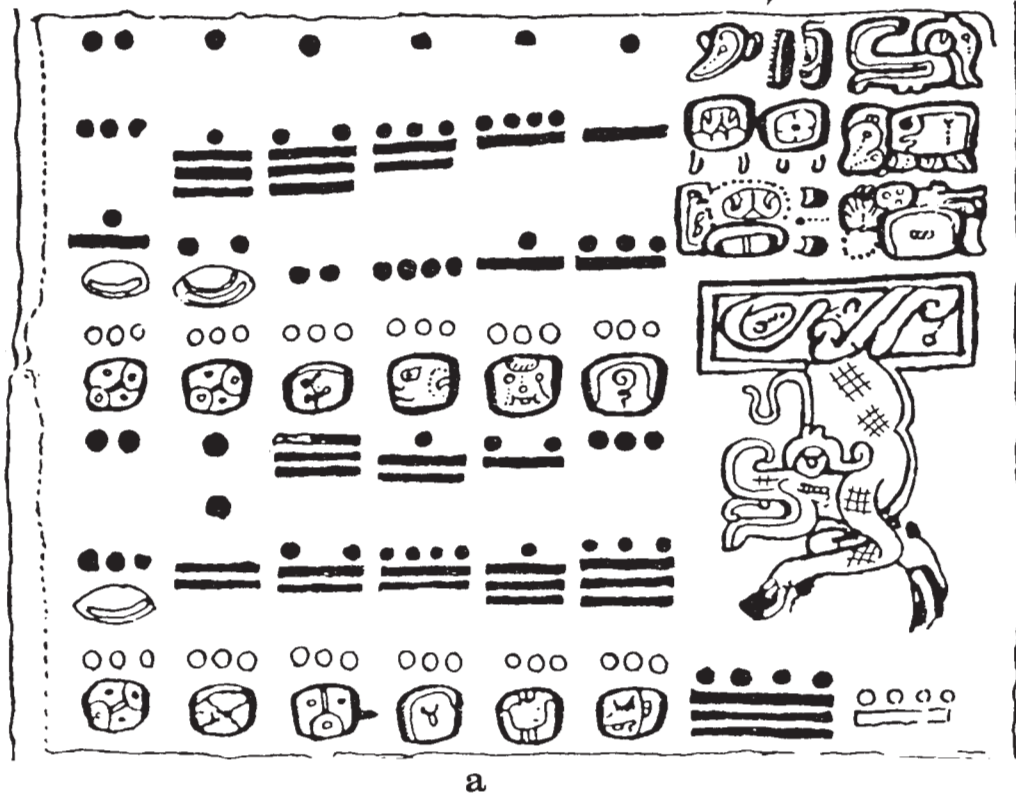
a: The “axe” glyph, T190 (From Thompson 1962)
 b: The “axe/comb” glyph, T333 [= T190:25] (From Thompson 1962)



b

FIGURE 1. THE “AXE” AND “AXE/COMB” GLYPHIC SIGNS

FIGURE 2. "AXE" COMPOUNDS IN THE DRESDEN CODEX

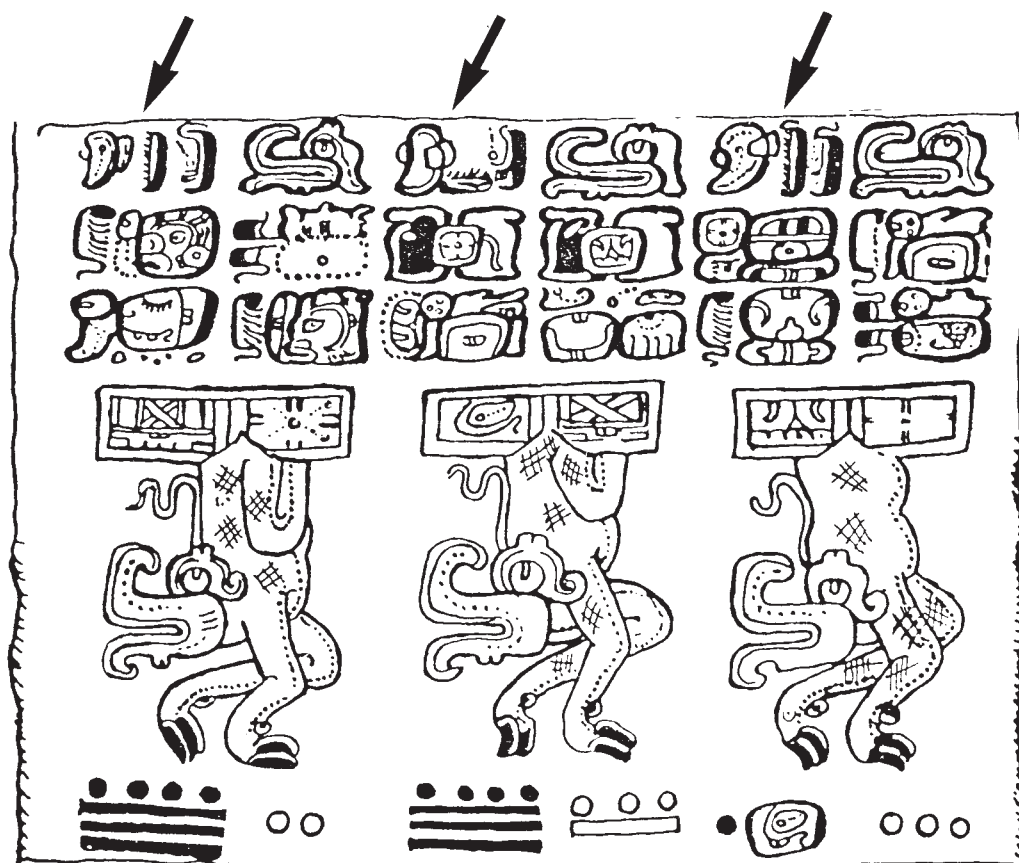


a: DRESDEN 44b
b: DRESDEN 45b

Note the compound T190.25.181 (arrows) as the verb that starts the "captions" above the representations of the "Mars Beast"

complement reinforcing such a reading. The gloss "to pop" can be equated with the sudden "popping out" of Venus as evening star in the western sky after sunset, so that the *wak* reading is suggested by the fact that "T190:252 ... is associated with the first appearance of Venus as an 'evening star' in texts on Stela 2 at Aguateca, Stela 16 at Dos Pilas, and Monument 6 at Tortuguero."² Finally, the reading "to extrude" fits the astronomical context provided by the Mars table of the Dresden Codex, which is associated with the retrograde motion of the planet. Bricker and Bricker pointed out that during retrograde "Mars is brighter and more prominent (in the sky) than at other times during its cycle," and by iconographic analysis of pages 44b-45b of the Dresden Codex (see Figure 2), they concluded that the various stages of brightness of Mars may have been indicated by the pictures which "depict the 'Mars Beast' 'extruding' from sky bands" (Bricker & Bricker 1986:56).

In this paper we propose yet another reading for the axe/comb glyph, T333, as *ch'ak*, by showing how the various meanings in Maya fit the contexts of warfare and the Mars table in the Dresden Codex. By implication, T190 as constituent of T333 would then have the phonetic value of *ch'a*.³ In this respect, our argument is counter to the reading *wak* for T190 as described above.



b

Drawings by Villacorta & Villacorta (1930), with corrections by Ferdinand Anders

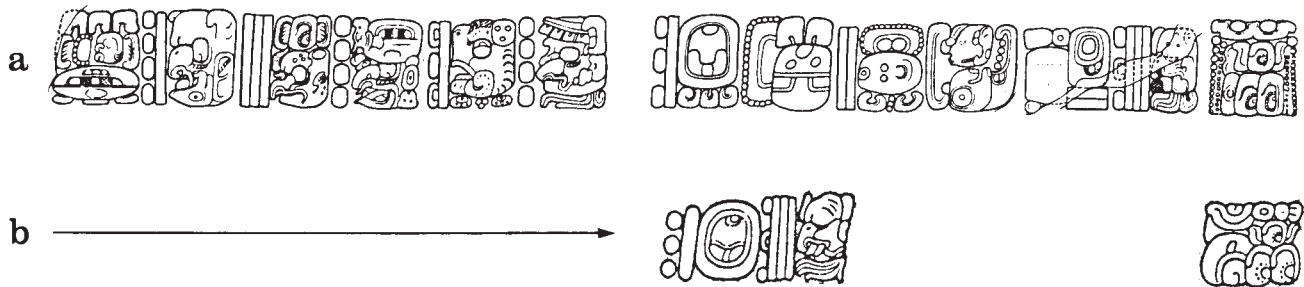
THE "AXE/COMB" GLYPH IN WAR CONTEXTS

The occurrence of T333 in texts dealing with warfare has been identified on monuments from Aguateca, Dos Pilas, Tortuguero, and Quiriguá (Schele 1982:351). When isolated, "some examples at Quiriguá, Aguateca, and Dos Pilas are associated with war and conquest events, and with 'star' events" (Schele 1982:109). In particular, Aguateca Stela 2 and Dos Pilas Stela 16 contain essentially the same text (Fig. 3), in which "the 'axe' event occurs one day after a 'star-over-Seibal' event identified by Lounsbury (n.d.) as the first appearance of Venus as Evening Star" (Schele 1982:196).

When occurring with T181 (the verbal suffix), the axe/comb glyph properly designates an event. On Tortuguero Monument 6 (Fig. 4) "[the first] 'axe' event occurred 244 days after a 'star-shell' event. . . , and is followed by another 'axe' event [whose occasion] was identified by Lounsbury (n.d.) as the first appearance of Venus as Evening Star. [The second event] precedes a 'star' event by 148 days" (Schele 1982:233).

In the light of the context established by "star" events of the form "star-over-object," where the object can be either "earth" (the *caban* glyph), a cross section of a shell, or the diag-

FIGURE 3. PARALLEL TEXTS FROM DOS PILAS AND AGUATECA



nostic part of the Emblem Glyph of a site, the axe glyph does not designate the sudden appearance of Venus as Evening Star, as Bricker and Bricker (1986) claimed, but the occurrence of a war-association event such as a decapitation. If T333 is assigned the reading *ch'ak*, the Yucatec Maya meanings (Barrera Vásquez 1980:122) completely agree with the intended meaning in a text dealing with war. Those entries (with the conventions of the *Diccionario Cordemex* appearing as prefixed superior numbers for variant definition sets, and regular numbers indicating usages within the set) are as follows:

²CH'AK 1: *cosa cortada* ["chopped thing"]

³CH'AK 1,8,9: *cortar con golpe, con hacha u otro instrumento* ["to chop with a blow, with an axe or another instrument"]

2. CH'AKAH 3,7: *cortar con golpes* ["to cut by blows"]

11: **ch'akah pol:** *decapitar* ["to decapitate"]

In addition, Brian Stross (personal communication) has brought to our attention the Cholti Maya word *ch'akib* (*hacha* ["axe, hatchet"]), and the related Chontal *ch'ak* ("half"), and Tojolabal *ch'ak* ("be finished"). Two of these words are Cholan (Cholti and Chontal) so that, together with their Yucatecan cognates, they indicate that the Lowland Mayan meanings to be of Classic Period vintage.

The above considerations make it clear that the reading of T333 as *ch'ak* in the context of war events conveys the intended meaning better than the *wak* reading for the T190 axe glyph proposed by Bricker and Bricker (1986). In the absence of a precise meaning, the glyph can be glossed in decipherments as indicating violent, war-like actions, with a possible specific reference to decapitations.

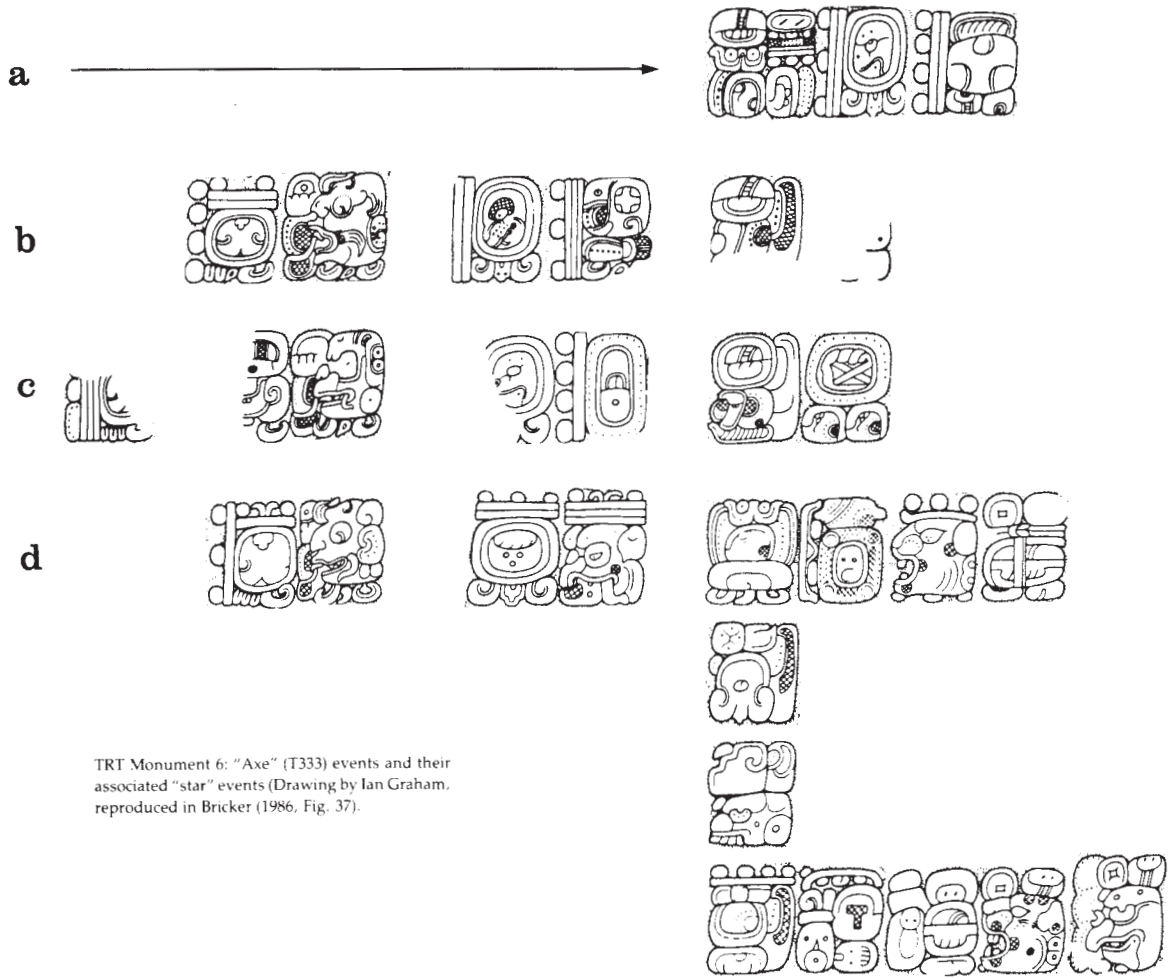
THE "AXE/COMB" GLYPH IN THE MARS TABLE OF THE DRESDEN CODEX

It is most fortunate that the Mars table in the Dresden Codex provides an independent context against which to test our new reading for the axe/comb glyph. Bricker and Bricker (1986) performed an extensive analysis of the Mars table, and concluded that it had to do with a 78-day approximation to the average retrograde motion of Mars (75 days).



a: DPL Stela 16, detail of text
 b: AGT Stela 2, detail of text

An "axe" event (decapitation or war) occurred one day after a "star-over-Seibal" event (the first appearance of Venus as Evening Star) falling on 9.15.4.6.4 8 K'an 17 Muan (Both drawings from Graham 1967, Figs. 5 & 7)



TRT Monument 6: "Axe" (T333) events and their associated "star" events (Drawing by Ian Graham, reproduced in Bricker (1986, Fig. 37).

FIGURE 4. "AXE" AND "STAR" EVENTS AT TORTUGUERO

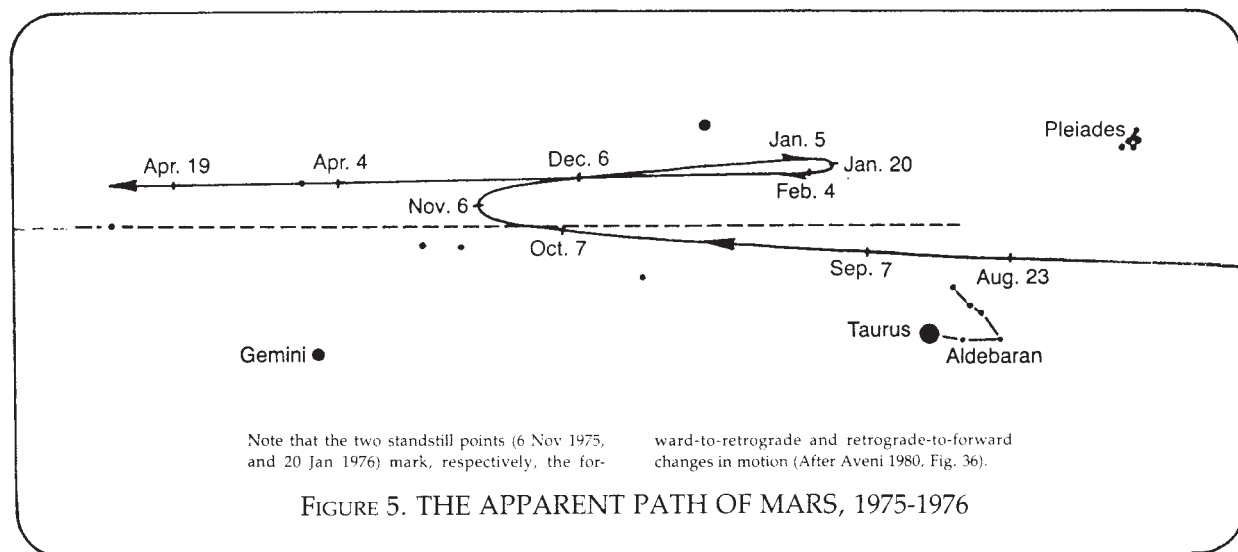
The glyph group T190.25.181 (equivalent to T333:181) starting the “captions” above the figures that show the “Mars Beast” can also be assigned the reading *ch’ak*. Additional meanings of the word and of two derivative forms in Yucatec are (Barrera Vásquez, 1980, pp. 122-123):

³ CH’AK	8. CH’AKAT 9: <i>atravesar</i> [“to cross”]
⁴ CH’AK	5: <i>atravesar a la otra parte</i> [“to cross to the other side”]
CH’AKAT BE	1: <i>camino que atraviesa</i> [“crossroad, crossing road”]
(AH) CH’AK NI’	1: <i>narigudo, de narices largas</i> [“long-nosed”]

It is remarkable that the “crossing” meaning of *ch’ak* constitutes a literal description of the retrograde motion of Mars. During forward motion, Mars moves eastward against the background of fixed stars until it reaches its first standstill (Fig. 5). During retrograde, the planet moves westward towards the second standstill, in fact *crossing to the other side* of the sky. After the second standstill, Mars resumes its normal west-to-east motion (Aveni 1980:88).

Richard Johnson (personal communication) has pointed out a striking interpretation of T333, when read as *ch’ak*, that supports its reading in Yucatec as *wak*. If we assume that the Maya counted from one to ten with their fingers, then during a count of a number greater than five the change from “five” to “six” presumably involved passing the count from one hand to the other or, again, crossing from one side to the opposite one. In Yucatec, *wak’* means *rajar* [“to tear open”] according to Barrera Vásquez (1980:908) like an axe might do, and the crossing from five to six suggests that *wak* may be a related reading, somewhat supporting Bricker and Bricker’s (1986:56) inference that the axe glyph should be read as *wac* by virtue of being infixed as the eye of the head variant of numeral 6.

Oddly enough, the *wak* reading is also supportable in Chol, but for the behavior of Mars, for *wa’acni* means *pasear* [“to stroll, to laze around”] (Aulie and Aulie 1978:128). However, the *ch’ak* reading is also supported in Chol, not for the behavior of Mars but rather for that of Venus, which is as it should be (Brian Stross, personal communication). The ill omen associated by the Maya to the first appearance of Venus as Evening Star (see preceding section) is accurately described by the Chol words *chac*, meaning *maldecir* [“to curse”], and *ch’aconel*, glossed as *hechiceria* [“witchcraft”] (Aulie and Aulie 1978:56).⁴



The last derivative form of *ch'ak* listed above provides additional information with regard to the iconographic interpretation of the Mars Beast in the Dresden Codex. Normal linguistic expectation (Brian Stross, personal communication) would assign the term (*ah*) *ch'ak ni'* [literally "he of the chopped nose"]. However, the actual literal meaning reported by the dictionary can be glossed as "he the long nosed." This meaning is also an accurate description of the most prominent feature of the Mars Beast, depicted in the Dresden with a long nose which appears curved (as if the Maya wanted to suggest the retrograde motion of the planet ?), yet another support for our *ch'ak* reading.

CONCLUSION

The argument presented in this paper has shown by means of two independent contexts that the correct reading for the axe/comb glyph (T333) must be *ch'ak*. On the one hand, in the context of war events recorded on the monuments, T333 has a reading related to violent actions such as decapitations, and can be glossed either as "axe event" or "war event", and *wak* does not support such readings in Chol. On the other hand, in the astronomical context of the Mars table in the Dresden Codex the "axe/comb" glyph designates the retrograde motion of the planet, irrespective of the possible symbolic significance of such a motion to the Maya. *Ch'ak* is descriptively accurate; *wak* is somewhat less so, although Johnson's observation renders it a possible Postclassic reading for the axe (T190) glyph.

One of the implications of the reading of T333 as *ch'ak* is the possibility of reading one of its constituents, namely T190, as the syllable *ch'a*, so that the combinations T190:25 and T190.25 would read **ch'a-ka** (although T25 may function merely as a phonetic complement). Since T190 occurs isolated only in the Madrid Codex (Thompson, 1960:59) and considering Kelley's (1976:16) remarks on the inconsistencies and errors found in that codex, we assume that the equation $T333 = T190:25 (= T190.25)$ holds, with the right-hand side spelling out the reading of the left-hand side.

SUBMITTED APRIL 1989

ACKNOWLEDGEMENTS

We acknowledge the comments received from Linda Schele and Brian Stross on an earlier draft of this paper. We are also indebted to Richard Johnson for his keen observation on the significance of our new reading with respect to the numeral 6, and to Brian Stross for bringing to our attention the implications of Johnson's observation with regard to the Chol meanings, as well as the reference to the Chorti texts dealing with Venus. Finally, the discussions with Nikolai Grube during the 1989 Maya Hieroglyphic Workshop in Austin, Texas, on his independent reading of T333 as ch'ak are greatly appreciated.

EDITOR'S ACKNOWLEDGEMENT

I would like to give special thanks to Cheryl A. Lane of White Post, Virginia, for her excellent job—performed on a purely volunteer basis—in helping to prepare the above text for publication.

NOTES

1. In the readings presented here we follow the guidelines given by Stuart (1988) for this series. However, since the readings quoted from earlier sources in the literature often do not conform to those guidelines, we provide the original reading plus the conformal one, with the latter in brackets.
2. Interestingly, Bricker and Bricker (1986) did not equate T333 with T190:25 (or T190.25).
3. Evidence, albeit weak, for reading T190 as *ch'a* is the fact that the *ka* phonetic complement offered by T25, as a constituent of T333, reinforces the reading and gives T333 the reading *ch'ak* (Orejel, 1988).

4. The survival of ancient Maya beliefs (with some Christian traits) concerning Venus is documented at least in Chorti texts (Fought, 1972):

"There is a star that rises when it has just become dark ... That star has been named by them as San Ramon Watcher over the earth ... There are times when it unites its body with the moon. And people say, 'When that star unites its body with the moon, that is a sign that someone is going to kill himself in the village. If not, a war is going to be made in the towns.' [p. 427]. . . San Ramón is venus as the Evening Star." [p. 436].



LIST OF REFERENCES

- AULIE, WILBUR, AND EVELYN W. DE AULIE
1978 *Diccionario Ch'ol-Espanol, Espanol-Ch'ol*. Mexico, D.F.: Instituto Linguistico de Verano.
- AVENI, ANTHONY
1980 *Skywatchers of Ancient Mexico*. Austin: University of Texas Press.
- BARRERA VÁSQUEZ, ALFREDO
1980 *Diccionario Maya Cordemex, Maya-Español, Español-Maya*. Mérida: Ediciones Cordemex.
- BERLIN, HEINRICH
1958 El glifo "emblema" en las inscripciones mayas. *Journal de la Société des Américanistes*, n.s. 47:111-119. Paris.
- BRICKER, VICTORIA R.
1986 *A Grammar of Mayan Hieroglyphs*. Middle American Research Institute, Tulane University, Publication 56. New Orleans.
- BRICKER, VICTORIA R., AND HARVEY M. BRICKER
1986 *The Mars Table in the Dresden Codex*. Middle American Research Institute, Tulane University, Publication 57. New Orleans.
- CORDY, NAPOLEON
1946 Examples of Phonetic Construction in Maya Hieroglyphs. *American Antiquity*, 12:108-117. Menasha, Wisconsin.
- FOUGHT, JOHN G.
1967 *Chorti (Mayan) Texts*. Philadelphia: University of Pennsylvania Press.
- GRAHAM, IAN
1967 *Archaeological Explorations in El Petén, Guatemala*. Middle American Research Institute, Tulane University, Publication 33. New Orleans.
- KELLEY, DAVID H.
1976 *Deciphering the Maya Script*. Austin: University of Texas Press.
- LOUNSBURY, FLOYD G.
n.d. Letters on Venus Phenomena in the Classic Inscriptions, especially at Bonampak. Written to Mary Miller, 1981. Cited by Schele (1982).
- OREJEL, JORGE L.
1988 Decipherment of Hieroglyphic Inscriptions from Selected Sites of The Petexbatun Area. Unpublished manuscript.
- SCHELE, LINDA
1982 *Maya Glyphs: The Verbs*. Austin: University of Texas Press.
- STUART, GEORGE
1988 *A Guide to the Style and Content of the Research Reports on Ancient Maya Writing*. Research Reports on Ancient Maya Writing, No. 15 (Supplement). Washington, D.C.: Center for Maya Research.
- THOMPSON, J. ERIC S.
1962 *A Catalog of Maya Hieroglyphs*. Norman: University of Oklahoma Press.
- VILLACORTA, J. ANTONIO, AND CARLOS VILLACORTA
1976 *Códices Mayas*. Guatemala: Tipografía Nacional. Segunda Edición (orig. pub. 1930).