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PACAL

Probably the greatest ruler of Palenque. He ruled from 9.9.2.4.8 (A.D. 615) to 9.12.11.5.18 (A.D. 683). He ascended the throne at age 12 years 125 days, and died at age 80 years 158 days. He is entombed in the sarcophagus of the Temple of the Inscriptions.

Above is one of several forms of the glyphic expression of his name. It is from the west panel of the Temple of the Inscriptions, column A, row 3.

LEFT GLYPH. Superfix: *Mah K'ina*, a title of honor and respect for lineage heads and rulers. Main sign: An iconic sign for Shield, possibly read as *Pacal*, a Mayan word for shield, or as *Chimal*, another widely used word for shield, which was a borrowing from Nahuatl.

RIGHT GLYPH. Top: a phonetic sign for the syllable *pa*. Center: a phonetic sign for the syllable *ca*. Bottom: a phonetic sign for the syllable *la* or for a final *l* following *a*. The three together read *Pa-ca-l*, a spelling of the Maya word for shield.

His name was probably a double name, with a personal name 'Shield' (either *Pacal* or *Chimal*) and a lineage name 'Shield' (certainly pronounced *Pacal*). The name *Pacal* is well documented as a lineage name among the Quiché, still in use throughout the sixteenth century. It was probably known and so used among other Mayan peoples also.

The title *Mah K'ina* was also known in the highlands still in colonial times and is documented for that period. It too must have had wide currency. It is of two parts, which could be used separately or as a compound. The first part was current in colonial times as a Cakchiquel title for heads of lineages, and it is still in use today among the Chol for the chief mayordomos of their principal saints.

Floyd G. Lounsbury

The Iconography of the Panels of the Sun, Cross, and Foliated Cross at Palenque: Part II₁

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Previous analyses of the three Palenque temple panels have dealt with the long inscriptions which flank the figural designs and which, like most Classic Maya inscriptions, deal with calendric, historical, and religious matters. Forstemann (1897), Thompson (1960) and others have fully interpreted the calendric content of these inscriptions, including past dates in cycle one, and more contemporary dates leading to probable dedication of the three panels in A.D. 692 or 9.13.0.0.0 (Fuente, 1965: 136). Kubler (1972) has interpreted the historical content by finding glyphs for two important Palenque leaders who, he suggests, may be represented by the attendant figures that appear in all three panels. Kelley (1965) and Berlin (1963) have interpreted the religious content of these inscriptions. Berlin isolated three glyphs which he suggests represent the deities of the three panels, and Kelley has attempted to show that the inscriptions record the births of these three gods whom he identifies as a Merchant god (Sun), *Kukulcán* (Cross), and *Bolon Dz'acab* (Foliated Cross).

By contrast, the glyphs which appear in isolated positions in the centers of the three panels, interspersed with the figural designs, have been only summarily treated. The glyphs of long-nose deities with the numbers 7 and 9, which flank the shield on the TS panel,

were mentioned by Thompson (1970: 225) as a pair of earth gods. I have dealt more fully with them in a previous paper (Cohodas, 1973) in which I suggest that they show the progression from the TS Panel, indicated by the head with the number 7, to the TC Panel, indicated by the head with the number 9.²

On the TC Panel (plate 1), four isolated glyphs flank the Cross. Berlin (1959) tentatively identified these glyphs as name glyphs for the two attendant figures, while Kelly (1965) has interpreted one of these glyphs as the sign for the day *Ben*. Three of these glyphs are repeated on the TFC panel (plate 3) with the addition of the glyph *ch'en* or moon. The four glyphs on the TC Panel will be discussed in detail in the first part of this paper, for it is suggested that they may reveal a great deal which is not contained in the inscriptions on the panels. It will be postulated that they pertain to a series of corrected agricultural calendars which never appear in the long Maya inscriptions. The symbolism of these calendars will be employed to clarify the intent of these four glyphs. In the second part of this paper, the information gained from the description of the agricultural calendars will be employed to suggest a tentative identification of the two attendant figures.

For an understanding of the nature of the material

¹Part I was presented at the XIII Mesa Redonda of the Sociedad Mexicana de Antropología in Jalapa, Mexico, Sept. 15, 1973.

²It is also possible that the god with the number seven refers not to the symbolism of the TS panel, but rather to the symbolism of the TFC panel. First, both the head with the number seven and the head with the number nine share the long-lipped underworld features which also occur on the faces at the bottom of the cross on the TC and TFC panels: the number nine head certainly refers to the TC panel. By contrast, all deity heads on the central axis of the TS panel show jaguar rather than long-lipped features. Second, the *kan* cross, the water symbol which appears in the head of the long-lipped deity with the number seven also appears in the head of the TFC deity. Third, the number seven is symbolic of the surface of the earth and, by extension, of the sun at horizon. It may thus refer equally to the rising (TFC panel) or the setting (TS panel) sun. The months in which the annual ascent (autumnal equinox) and descent (vernal equinox) occur are *Zip* and *Ceh*, respectively. Both *Zip* and *Ceh* mean deer, an animal associated with the number seven, and both months may be patronized by the Fourth Lord of the Night whose name glyph contains the number seven.

presented in this paper, it is necessary to review the conclusions from Part I of this paper. It was suggested in this paper that the three temple panels are to be read in a narrative sequence which is concerned with agricultural fertility, and which describes the cycles of the sun and the maize with the attendant ceremonies.

The TS Panel (plate 2) was thought to represent the iconographic theme of death-sacrifice, associated with the direction west and pertaining to the descent of the sun at the vernal equinox. The consecration of the maize seed and the burning of the milpas in preparation for planting are the ritual activities related to this event. Sacrificial ceremonies were employed to cause the descent of the sun through sympathetic magic. The visage of the Jaguar God of the Number Seven represents the earth at the wester horizon.

The Panel of the TC was explained to represent the iconographic theme of water-underworld, related to the direction north and the summer solstice, and describing the sojourn of the sun and the maize in the Underworld. Ceremonies to bring rain were the major ritual activities at this time. Nine is the symbolic number of this panel because it refers to the Nine Lords of the Night and Underworld and to the God of the Number Nine, the *Chicchan* rain serpent.

Finally, the panel of the TFC was shown to display the theme of emergence-rebirth associated with the direction east and pertaining to the autumnal equinox when the sun and the maize rise from the Underworld and the newborn maize is celebrated in the offering of the first fruits. The frontal faces in the central axes of the three panels were thus shown to represent the sun as it undergoes various transformations in its yearly cycle of death and rebirth, and the manikins were shown to represent the transformations of the maize as it goes through the same cycle.

None of this type of information has been discovered in the inscriptions, and most probably little of it would be included. Yet the glyphs which occupy the center of the panels may provide the link between the figural designs which are concerned with events that are endlessly repeated because they are governed by the agricultural cycle, and the inscriptions which record specific, non-repeating points in time. These four glyphs appear to be calendric glyphs which are used symbolically as they are not associated with any of the longer inscriptions. They appear to pertain to a cyclic agricultural calendar which is not recorded in any Classic Maya inscriptions. Before analyzing these glyphs, it is necessary to explain the nature of the Maya inscriptional calendars and to demonstrate the contemporary existence of non-inscriptional, agricultural calendars.

Maya inscriptions record two major calendric counts of cyclic nature, the solar year or *haab*, and the sacred almanac or *tzolkin*. The *haab* contains 365 days, which are divided into 18 months of 20 days each, with 5

extra days at the end of the year. Three hundred sixty-five days is approximately $\frac{1}{4}$ day shorter than the actual year. Since the inscriptional calendar was not corrected or intercalated for the extra $\frac{1}{4}$ day, the season in which the inscriptional *haab* began changed over the centuries. The *tzolkin* is composed of 260 days, which are the permutations of 20 named days and 13 numbers. In the inscriptions, the 260 day *tzolkin* repeated endlessly in immediate sequence. The conjunction of the *haab* and the *tzolkin* formed a 52-year cycle known as the calendar round.

These calendric counts are known only from prehistoric Maya inscriptions, primarily from the Classic period. In the historic period, or the four hundred years since the conquest, many Maya groups have used the *haab* and *tzolkin* as agricultural calendars. Because of this agricultural use, the two calendars have been maintained in fixed positions with respect to the seasons. The 365-day calendar is intercalated in line with the Gregorian year and begins in late July.³ The *tzolkin* no longer repeats immediately. It runs from February to October and then is absent for the 105 days until the beginning date is reached again. These fixed positions of the *haab* and *tzolkin*, beginning respectively in late July and February, have remained exactly the same since they were recorded in the 16th century by Bishop Landa.

Some scholars have contended that the *tzolkin* (notably Girard, 1962) and the *haab* (notably Bowditch, 1906) were also maintained in fixed seasonal positions in prehistoric times, so they could be used to regulate agricultural activity. Despite the differences between the inscriptional use of the two calendars, and the agricultural use proposed by Girard and Bowditch; there is evidence for both types of calendar in use simultaneously in prehistoric times. The symbolism of the various months and days which make up the two calendars suggests that they were also primarily agricultural at their inception, providing a continuity of agricultural use from the Preclassic to the present day.

Such agricultural symbolism is very evident for the *tzolkin*, which as recorded by Landa in Yucatan and by Duran in highland Mexico, where it is called the *tonalpohualli*, began in late February. Duran (1971: 414) recorded a ceremony on the *tonalpohualli* date 4 *Ollin* (Maya 4 *Caban*) celebrating the destruction of the sun and related to the significance of 4 *Ollin* as the date when the present era comes to an end upon the destruction of the Sun god *Tonatiuh*. This ceremony was four days before a ceremony to *Xipe Totec* on March 21, the vernal equinox. Both ceremonies relate to the significance of the vernal equinox as the time of the annual descent and the destruction of the sun. As Duran's *tonalpohualli* differs by one day from Landa's *Tzolkin*, the *Xipe* ceremony would correspond to the ceremony recorded for the day 7 *Ahau* (three days after 4 *Caban* and 4 *Ollin* (Tozzer 1941: 162). The 7 *Ahau* ceremony

³The month *Pop* is the first month of the Yucatec year. In other surviving Maya calendars, the month which begins the year varies but the month corresponding to *Pop* always begins in late July. The corresponding Aztec month *Tlaxochimaco* also began in late July.

was a deer-hunting rite meant to appease the gods of the earth for the clearing and burning of the milpa and symbolically celebrating the descent of the sun as a deer. Therefore, the 4 *Ollin* ceremony of the destruction of the sun, the 7 *Ahau* ceremony of the descent of the sun, and the milpa burning are directly related to the significance and agricultural activities of the vernal equinox at which time these *tzolkin* dates have occurred for the last 400 years.⁴

The modern Tzotzil Maya preserve what may be a survival of further *tzolkin*-related symbolism. They celebrate the summer solstice ten days late (Gutierrez Holmes 1961: 36), in the month corresponding to *Cumku*, so that it falls on the 130th day of their *tzolkin*, or the exact midpoint. The traditional name of the 130th day, which the Tzotzil do not preserve, is 1 *Chuen*, the name of a monkey deity who is most likely the same as the monkey-headed God C, the god of the north. The summer solstice is an event related to the north since the sun reaches its northernmost point in the sky on this date. Therefore, the Tzotzil postpone their celebration of the summer solstice until the arrival of a date which is symbolically associated with the north.

A last example of *tzolkin*-related symbolism would concern the autumnal equinox. If the vernal equinox was celebrated on the *tzolkin* day 7 *Ahau*, as suggested by Landa's account, then the autumnal equinox and the rebirth of the Sun would occur 180 days later on the day 5 *Ahau*. This day translates in Nahuatl as *Macuilxochitl*, the Aztec god of games and dance who is a manifestation of the young (reborn) maize-sun god *Xochipilli*. The four examples of agricultural-related *tzolkin* symbolism presented here for the days 4 *Caban* (4 *Ollin*), 7 *Ahau*, 1 *Chuen* and 5 *Ahau*, suggests that a fixed *tzolkin* could have been useful in regulating the dates of agricultural activity.

The relationship between the symbolism of the eighteen months of the 365-day *haab* and the agricultural rituals is also most evident concerning the vernal equinox. The vernal equinox occurs in the month *Ceh*, meaning deer. The deer is especially symbolic of this solar event because of the celebration of the descending sun in the form of a deer and because of the deer hunt which accompanies the milpa burning (Cohodas 1973). Further symbolic aspects of the construction of this calendar will be discussed below in relation to the lunar count.

The four glyphs which flank the cross on the Panel of the TC may provide evidence for the existence of corrected agricultural versions of both the *haab* and *tzolkin*, however the interpretation of these glyphs is

debatable (fig. 1). One of these glyphs is destroyed and none of the remaining three glyphs can be positively identified. Yet if it is assumed that the four glyphs are meant to be related in a single system, and that this system pertains to the agricultural-time significance of the three panels; then a series of deductions may lead to a possible interpretation.

It may be noted that all four glyphs appear with numerical coefficients: three with a bar or the number 5 and the fourth with a bar-and-dot or the number 6. The use of number coefficients suggests that the glyphs are dates and that the system of four glyphs would form a calendric chart as occur in the Maya codices. It will be seen that two of these glyphs correspond rather closely to forms of Maya month glyphs, and that the remaining two may also be variants of month glyphs.

Kelley (1965: 114) identified the upper right glyph as the sign for the *tzolkin* day *Ben*. However the single rather than doubled loop at the top of the main sign indicates a closer relationship to the glyph *Kan* or maize. Among the date glyphs, *Kan* occurs alone as the *tzolkin* day *Kan*, and with a shell-shaped prefix as the glyph of the month *Cumku*. Although the superfix on the Cross panel glyph is not identical to this shell form; it appears that of the two, the glyph is most closely related to the *Cumku* sign.

Beneath this "*cumku*" is a glyph consisting of a dragon head with up-turned snout and Thompson's *te* (1) affix. According to Thompson (1960: 55) the *te* (1) affix occurs only with period glyphs and month signs, and never with day signs. We can thus be reasonably sure that this second TC Panel glyph is the introductory or personified form of the sign for the month *Zip*, whose patron is this same dragon with up-turned snout.

The most unusual of the four TC Panel glyphs is that formed in the upper left of the group. This glyph is composed of elements familiar in Maya hieroglyphic writing but seldom combined. The "X"-pattern formed of wavy lines suggest the glyph of the *tzolkin* day *Etz'nab*, while the presence of four dots between the arms of the cross is closer to the Yucatec form of the *tzolkin* day *Lamat* (Thompson glyph 638). The introductory form of the glyph for the month *Ceh* is the only date glyph which can be associated with this configuration, for it shares the cross and a similar scroll superfix (Thompson affix 44).⁵

The fourth glyph on the TC panel is now too destroyed to decipher. Some hope exists of recovering its original meaning, due to the repetition of the TC glyphs on the TFC panel. On this panel, the "*Ceh*" glyph is inscribed above the shorter attendant, and the "*Zip*"

⁴Pasztor's (1973) analysis of the Xochicalco stelae, dated to the Middle Classic period and approximately contemporary with the Palenque panels, shows another form of evidence for the use of corrected agricultural calendars in the Classic period. Stela 3, which Pasztor relates to the Palenque TS Panel as a representation of the descent of the sun on the vernal equinox, displays the date 4 *Ollin* as the identifying glyph for the major deity on the stela. Similarly, Klein (1973: 100-04) links the central image on the Aztec Calendar Stone with the descending Sun God *Piltzintecuhtli*. The face of this *Piltzintecuhtli* forms part of the 4 *Ollin* glyph.

⁵*Etz'nab* is the sacrificial knife. *Lamat* is Venus who, as an evening star, was a god of deer and of sacrifice because he drags the sun down to its death in the west. Both of these additions are intellectual plays on the descent and sacrifice meaning of the month *Ceh*.

glyph appears next to the cross. Above this and to the left of the sun face of the foliated cross is another glyph which may repeat the destroyed TC panel glyph. It is formed of the number five, and oval superfix, and a cartouche with a doubled crescent (Thompson main sign 617). The most similar month sign is the introductory form of the glyph for the month *Mol*.

To summarize, the placement of the four glyphs on the Panel of TC, each with a numeral, suggests a chart of dates meant to define time periods. While none of these glyphs is identical to the known date glyphs, two ("*Cumku*" and "*Zip*") approximate the standard forms, and the other two ("*Ceh*" and "*Mol*" if it repeats the cross glyph) share enough attributes to warrant the identifications given above.

We are thus left with possible glyphs for the months *Ceh*, *Mol*, *Zip*, and *Cumku* arranged to form a rectangle perpendicular to the cross. This identification is strengthened by the relationship between these four

months. *Ceh*, *Zip*, and *Mol* are the months in which the vernal equinox, autumnal equinox, and winter solstice are celebrated in a fixed agricultural *haab*. The summer solstice would occur in *Kayab*, but, as seen above, its celebration may be delayed until *Cumku* for symbolic reasons. The chart on the panel of the TC may thus record the agricultural *haab* by means of the solar events which divide it into quarters. The chart would be read in sequence, clockwise. As explained above, the three Palenque panels are concerned with ceremonies which were celebrated on the two equinoxes and the summer solstice, so it is logical that the associated months would be recorded on the central panel of this group.

The present interpretation of the four TC panel glyphs gains further support when the glyphs are read with their numerical coefficients. The distance in days (counting the five *Uayeb* days) between 5 *Cumku* and 5 *Zip* is 65 days, or exactly one-quarter of the *tzolkin*. The distance between 5 *Zip* and 6 *Mol* is 91 days, or one-

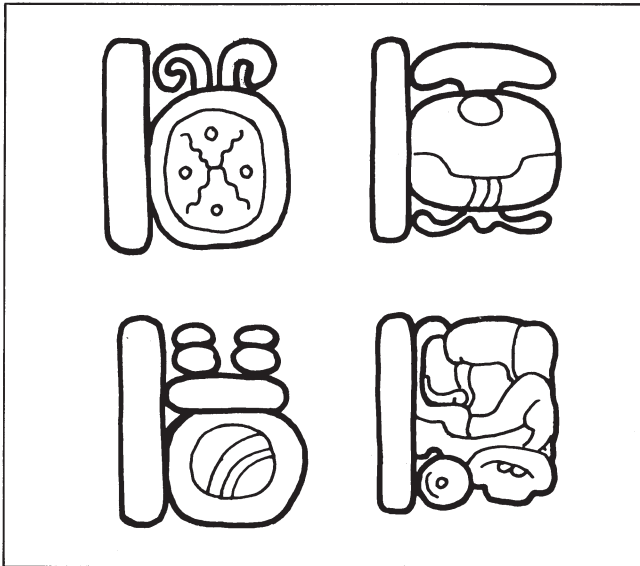


Fig. 1a Four month glyphs from Cross Panel. After Maudslay Vol. IV, Pl. 76.

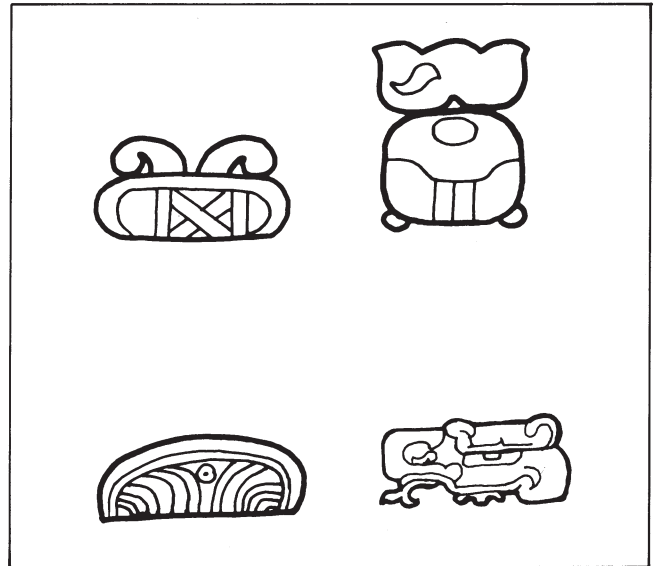


Fig. 1b Traditional forms of the four month glyphs. After Thompson 1960, figs. 19, 22, 23.

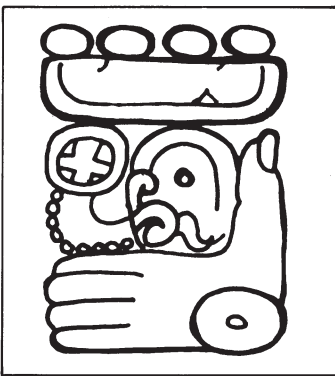


Fig. 2 First Lord of the Night. After Thompson, 1960, fig. 34, 6.



Fig. 3 First Moon of Old. After Thompson, 1960, fig. 36, 8.

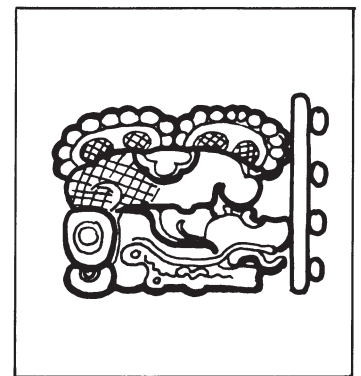


Fig. 4 Diety from the Cross Panel. After Maudslay Vol. IV, Pl. 76.

quarter of the solar *haab*. The shift from the quarter *tzolkin* to the quarter *haab* may have been meant to show the fixed position of the *tzolkin* in relation to the *haab*. That is, from 5 *Cumku* to 5 *Zip* (the summer months) the fixed *tzolkin* is in effect, but by 6 *Mol* the *tzolkin* has ended and only the solar *haab* is in effect. This is the same placement of the *tzolkin* that has survived into the present century.

The relationship between the agricultural and inscriptional form of the *haab* seems also to have been a concern of designers of the three Palenque panels. Bowditch (1906: 6) who wrote before the inscriptional calendar was understood to be of the fixed type, noted that all three panels at Palenque record dates meant to cluster around the vernal equinox (months *Zac* and *Ceh*). Actually the dates which Bowditch analyzed are far in the past, and they are in the uncorrected, inscriptional form. We may therefore understand them to be calculated to show dates far in the past when agricultural and inscriptional calendars coincided at the vernal equinox.

If the above interpretation of the four glyphs on the TC panel is correct, then these glyphs will have provided a major clue to the nature of Maya religion and ritual. The postulated agricultural use of the calendars brings them into close association with the Maya ritual cycle, for the calendars would regulate the celebration of ritual and the intervals between agricultural labors. Also, the ceremonies would have the auspicious benefit of being celebrated on the day and month ruled by the deities to whom they are directed. The rituals would have been beautiful tapestries that wove together all the major threads of Maya religion (the calendar, the cycles of heavenly bodies, the seasons) into the sturdy warp of the agricultural cycle. Thus the Maya calendar was not the sole domain of priests and nobles who used it for esoteric calculations and dynastic records. Rather it also served to unite the common man with the fantastic world of the unseen. For it is precisely the enormous array of gods and demons who patronize the days and months that both regulate and exalt the dreary labors of sustenance.

The symbolism of the calendars, as discussed above, also provides a great deal of information on the identification of the supernaturals represented, especially on the TC panel, and even allows a tentative identification of the attendant figures. The information is however not complete without a discussion of two other important time cycles which the Maya recorded in their inscriptions and which also appear to have had agricultural uses similar to those described for the *tzolkin* and *haab*. These cycles are the count of the Nine Lords of the Night and the lunar count.

As recorded in the inscriptions, the Nine Lords of the Night ruled singly over each night in an endless sequence. These Nine Lords were associated with the Long Count method of recording time in which the approximation of the solar year was only 360 days (*tun*). Calculations were then simple for each Lord ruled exactly forty times in the 360-day period (Thompson 1960: 210). Ethnographically, the Nine Lords were reported to rule in sequence over the nine months of the rainy sea-



Fig. 5 Jaina Figurine. Dumbarton Oaks Collections.

son, when their fertility powers are essential (Girard 1962: 142). The epigraphic evidence suggest a similar patronage of months in the solar *haab* with the addition that the Nine Lords may also have been associated with the dry months during the Classic Period.

Three of the Nine Lords carry number coefficients in their name glyphs. The First Lord appears with the number nine, the Fourth Lord with the number seven, and the Fifth Lord with the number five. The glyph of the First Lord consists of the number nine, the head of God C, the god of the north, and symbols of water (fig. 2). The association of the number nine, water, and the direction north relates directly to the panel of the TC and by implication to the month *Cumku*, and the celebration of the summer solstice on the day 1 *Chuen* which is also sacred to God C. If we assign the first Lord to the month *Cumku*, and we assume that the Lords rule in sequence over at least part of the year, then the fourth Lord, (counting back 1 — 9 — 8 . . . 4) with the number seven, is linked to the month *Ceh*, the month of the vernal equinox. As explained in the previous paper, the number seven is specifically associated with the vernal equinox, especially as it is represented on the TC panel with the shield bearing the visage of the God of the



Fig. 6 Uaxactun Ceramic. After F. Anton, 1970: pl. 70.

Number Seven.⁶ Such relationships may appear tenuous, but they are confirmed by almost parallel sequence of lunations.

The Maya inscriptions record a lunar year which was approximately (177-plus days) one half of the solar year, or just short of nine of the eighteen solar months. Within each lunar year, the Maya counted the number of moons, or lunar months which had elapsed since the beginning of the lunar year, from zero to five (some unusual counts go from one to six because the month in progress is also counted). These records are contained in glyphs C and X of the lunar series. Glyph X has variants according to the number of moons recorded, numbered accordingly from X0 to X5. Each variant of glyph X may have two entirely different forms. The choice of form depends on whether glyph C shows a young or an old face. Therefore if three lunar months have elapsed, the form of glyph C will determine whether to record the glyph X3-young form of X3-old form, (Thompson 1960: 240-242).⁷

This system of six young and six old moons may also be linked with the agricultural or fixed form of the *haab*. The months *Ch'en* and *Kayab*, both dedicated to the Moon Goddess, would be the start of each of the two approximate lunar years in the solar year. Extended parallels between the two halves of the year which are formed by this division confirm this link between the lunar and solar counts.⁸ The old group of moons would correspond to the rainy season (*Kayab* to *Mol*) and the old face of glyph C is most likely the Old Moon Goddess of the earth and of water. The Chorti (Girard, 1962: 134,

273) confirm this association of old moons with the rainy season. To become old, the Moon Goddess would, like the sun, descend into the Underworld. Her descent would occur at the summer solstice, in the month *Kayab* (while the sun descends at the vernal equinox). Conversely, the young group would correspond to the Young Moon Goddess and the dry season (*Ch'en* to *Pax*). The young goddess would ascend from the Underworld in *Ch'en* or near the winter solstice.

The variants of glyph X associated with the Young and Old Moon Goddess groups confirm the relationship of this cycle to the agricultural *haab*. The first moon of the old group would correspond to the month *Cumku*, which follows *Kayab*. The variant of glyph X which expresses this first old moon (fig. 3) contains the head of God C in a glyph which is unmistakably similar to the glyph of the First Lord of the Night, also a patron of the month *Cumku*. Therefore both the First Lord of the Night and the first moon of the rainy season contain the head of God C, the god of the north, precisely because they refer to the northern sun of the summer solstice. Furthermore, the third and fourth moons of the old group, which span the autumnal equinox, can be represented by a variant of glyph X which consists of the head of the patron of the month *Zip*, the month in which the autumnal equinox occurs.

It therefore appears that all four of the major cycles of time which the Maya used in their astronomical calculations and recorded in their inscriptions (solar year, *tzolkin*, lunar count, and Nine Lord count) had separate existences in the ritual sphere in which their lengths

⁶See note 1.

⁷This is an exceedingly simplified version of Thompson's analysis.

⁸The sequence of animal symbols frog, deer, fish, and dog is repeated almost identically in both halves of the year or sequences of nine months: in *Uo*, *Zip*, *Zotz*, and *Xul* in the first half, and in *Zac*, *Ceh*, *Mac*, and *Kankin* in the second half.

were adjusted to remain in a fixed relationship with the seasons. The crucial point in time, when the symbols of all calendars coincide, is at the celebration of the summer solstice, for it is under the patronage of four forms of God C, the God of the north: as the day 1 *Chuen*, the First Lord of Night, the first moon of the rainy season, and, as shown below, the deity of the month *Cumku*.

The Earth Monster who is the patron of the month *Cumku* is related to God C as another form of the Sun God of the north.⁹ As God of the North, the Sun may be shown as the celestial God C, including his appearances as the first Lord of the Night and the first moon of the rainy season, and also as the underworld sun of the summer solstice, the dragon of the month *Cumku*. The profile heads with the number nine which occur under the smaller attendant on the TC panel, and to the right of the shield on the TS panel, and the frontal face at the bottom of the cross on the TC panel, are all representation of this *Cumku* deity. As seen in the first mentioned head (fig. 4), the deity is distinguished by the shell which forms his forehead. The symbolic glyph of the month *Cumku* (fig. 1b) shows the same shell as the prefix, while the deity head is replaced by the *kan* glyph for maize. In the head beneath the cross, the shell is one part of the so-called triad glyph. The further connection with God C occurs with this type of *Cumku* deity representation, for Thompson (1960: 171) notes that the head of God C can substitute for the face with triad glyph. The *Cumku* deity is therefore the Underworld or Earth Monster form of the Sun God of the North and the summer solstice, and the counterpart to his celestial representation as God C. Since the panel of the Cross represents an Underworld scene (Cohodas, 1973) — the Underworld sojourn of the sun and the maize at the summer solstice — only the Underworld or *Cumku* form of the sun is represented.

Within this symbolic assemblage, the Moon Goddess should play an equal part, for she is the goddess of the earth and of fertility who gives birth to the maize. Also she has descended into the Underworld on the summer solstice to become the Old Water Goddess. The Aztec hymn for the eighth-year ceremony to the Maize God (Sahagun, 1950-71, vol. 3: 212-13) shows that the Moon Goddess (*Xochiquetzal*) mates in the Underworld (the ball court) with the descended Sun God (*Piltzintecuhtli*) to conceive the maize (*Centeotl*). Did the Maya of the Classic period similarly believe that the moon and sun mated in the Underworld to conceive the maize? Certain art works from Jaina and Uaxactun suggest that they did. A Jaina figurine (fig. 5) shows an old man who wears a deer headdress, seducing a young woman, suggesting the mythic mating of the Sun God and Moon Goddess. This mating would occur in late spring, after the sun has descended into the Underworld in the form of a deer, on the vernal equinox, and before the descent of the moon on the summer solstice. Or rather it would seem that in addition to engendering the maize, the mating actually causes the descent of the moon on the

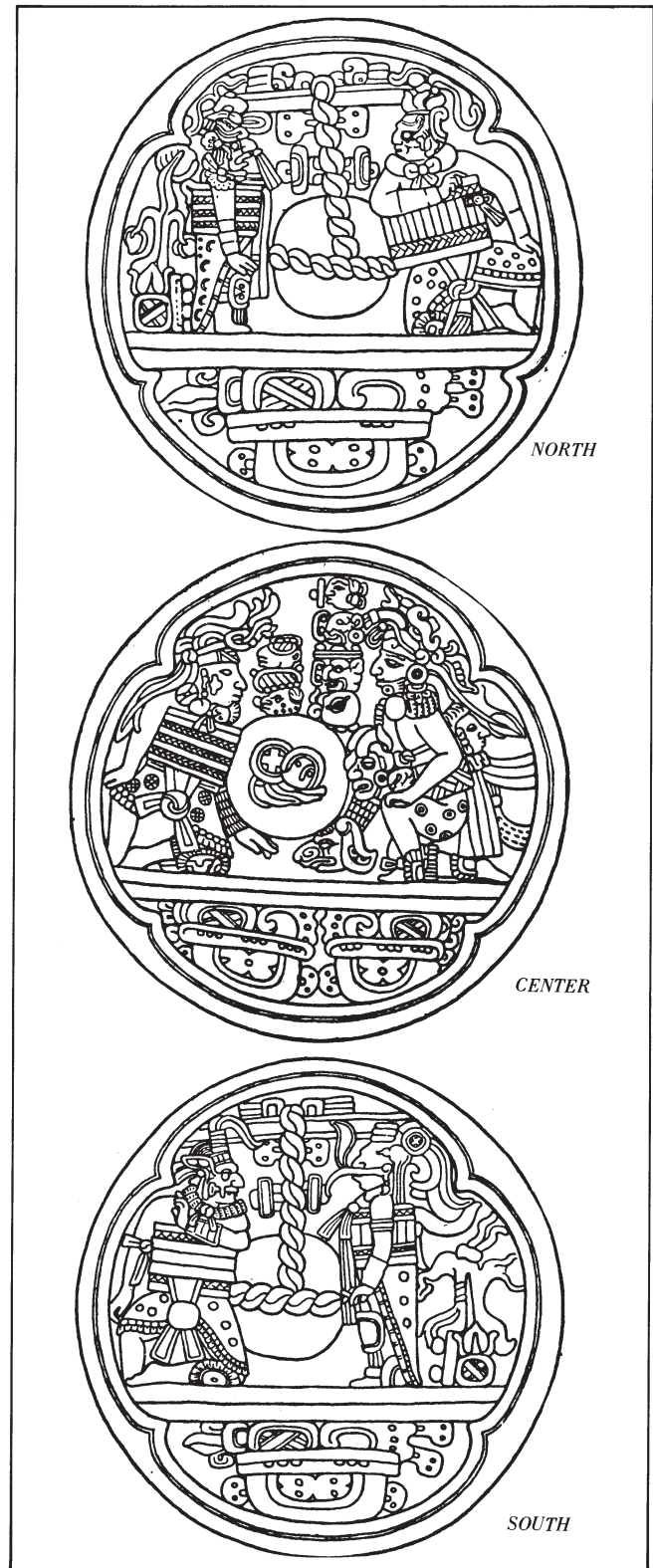


Fig. 7 Copan Ball Court Markers. After Morley, 1937-38, vols. 2-4.

⁹As in Central Mexico, (the four Tezcatlipocas) there appear to have been four Maya Sun Gods: the day sun, probably *Kinich Ahau* in the east; God C in the north, the Jaguar God in the west, and God A, the Death God in the south.

solstice, in order to transform her into the Old Water Goddess. In the Chorti rain ceremony (Girard, 1962: 77-117), which takes place at the sacred fountain of the rain serpent of the north (*Noh Chih Chan*), a pair of turkeys are encouraged to copulate at the foot of a cross. Girard suggests that this copulation symbolizes the union of the sun and moon deities, and is a necessary ritual to induce the coming of the rains. Similarly a painted ceramic from Uaxactun (fig. 6) displays a monkey holding the breast of a nude female. Since the Sun God of the North is the monkey-headed God C, he may be represented by a naturalistic monkey.¹⁰ Therefore the Uaxactun painting may also be interpreted as the mating of the Sun God and Moon Goddess on the summer solstice: parallel to the Jaina pair. Next to the couple on the Uaxactun ceramic is a cormorant catching a fish, a symbol of water and rain that also appears on the headdress of the figure from the left jamb of the shrine of the TC. The Classic Maya may thus have associated with the summer solstice and the beginning of the rainy season a mythic copulation of the Sun God and Moon Goddess which causes her descent, the coming of the rains, and the conception of the new maize.

With this information, it may now be possible to suggest a tentative identification of the attendant figures which appear on all three Palenque panels. So far, only Kubler (1972) has treated these figures in depth. His analysis of the hieroglyphic texts led him to postulate that these attendants are historical personages whose glyphs are represented in Palenque inscriptions. He suggests that the tall attendant may be a ruler represented by the "jaguar-snake" glyph, but is not sure whether the smaller attendant, represented by the "pyramid" glyph, was ever a king at Palenque.

The two attendants may be further characterized by noting their positions on the three panels. The taller attendant appears only on the north and east sides of the panels, while the smaller attendant appears only on the south and west. The east and north are symbolically directions of abundance and fertility (Thompson 1960: 270). At Palenque, only the two panels associated with the north and east, the TC and TFC panels, show the plant form which has been interpreted (Fuente 1965: 136) as a maize plant or cosmic tree of abundance. By contrast, the smaller attendant is associated with directions, west and south, which are symbolic of death and destruction (Thompson 1960: 270).

The two attendants may also carry the attributes of day and night because of the taller attendant's association with the east and the smaller with the west. Kubler (1972: 322) notes that, on the TC panel, the taller attendant stands on signs for day and sky while the smaller attendant stands on signs for earth, moon, and venus.

Given these associations, it is now possible to suggest that the tall and short attendants are meant to impersonate the sun and moon, respectively. This impersonation is clearer in the set of three sculptures

which are most comparable to the Palenque panels. These are the secondary markers from the second ball court at Copan (fig. 7) which are the clearest precedent for the Palenque panels both iconographically, in the depiction of the same narrative, and compositionally, in the arrangement of two figures flanking a central symbol. One of the players on the Copan markers undergoes the transformations of the Sun God. On the south marker he is the Jaguar God of the Number Seven, associated with the vernal equinox, and appears on the west side of the marker. On the north marker he has changed his features to those of the day sun and appears on the east side of the marker. The other player also undergoes transformations which, however, are not yet understandable. This player is consistently associated with a plant, and, on the central marker, he wears this plant in the headdress. The best evidence for the sun-moon opposition on the Copan markers comes from the ball game myth represented in the *Popol Vuh*, in which two male twins, the ball players, become the sun and the moon.

The Palenque panels share much of the same evidence for the identification of the two attendants as representatives or impersonators of the sun and the moon. First, like the "sun" player at Copan, the taller attendant undergoes a transformation. On the TS and TC panels he wears only a simple loincloth, whereas on the TFC panel, associated with the rebirth of the sun, his costume has "flowered" into an elaborate array of jade beads and deity masks. Second, the smaller attendant wears the plant form in his headdress as does the "moon" player at Copan. Finally, the smaller Palenque attendant wears a peculiar twisted textile slung over his back. This garment is also held by female figures from Jaina. Judging from representations of similar women at Jaina who are engaged in such activities as weaving as well as mating with the Sun God, these women all impersonate the Moon Goddess.

While it has been established that the Palenque attendants are probably persons who impersonate the sun and the moon for agricultural rituals of major state importance, it remains to ascertain who these impersonators were. Kubler's identification of their name glyphs suggest that they were known personages at Palenque. At nearby Yaxchilan, the ruler and his wife may impersonate the sun and the moon, as seen on the stelae representing the water scatterers. Should the smaller attendant be female, then it would probably be the consort of "Jaguar-Snake", the ruler who is the taller attendant. However this smaller attendant does not wear garments that can be identified as specifically feminine apparel. Also Kubler notes that the glyph of the smaller attendant does not appear outside of the three temple panels, which would be unlikely were it to represent a queen. The small attendant may, therefore, be a priest or some other ritually important male whose only recorded fame was that he participated in these ceremonies around the time that these panels were dedi-

¹⁰On Yaxchilan Stela 7, which shows the ruler scattering water and is therefore related to the symbolism of the north, the basal panel shows the sun and moon as a monkey and a rabbit (Maler 1903: 146).

cated. A very tentative conclusion would then be that the two attendants are the ruler "Jaguar-Snake" and the priest "Pyramid" impersonating the sun and the moon at the three great agricultural rituals of state, all of which re-enact mythic events concerned with the sun and the moon.

This study has attempted to show that the agricultural cycle of the Classic Maya was governed by a sys-

tem of non-inscriptional agricultural calendars, inextricably bound together by the symbolism of the deities associated with the major rituals. The most important of these deities are the Sun God and Moon Goddess, whose various transformations are reflected in the calendric symbolism, celebrated in the agricultural rituals, and represented by sacred impersonators.

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Discussion following Cohodas' paper:

Coe: I'm not questioning the general conclusions, but I would raise two points which are not clear to me. One is that if you have a perpetual fixed *haab* which is tied in with the seasons there has to be a method for intercalating days, otherwise the *haab* would run ahead of the seasons, a quarter day each year, each time the earth goes around the sun. How was this intercalated? The second question relates to the four glyphs which you identify as four month positions. The only one which is tied into the actual month glyph is *Cumku*, whereas the other three are tied into the patron gods of those three months. I think it's debatable whether that's a fair way to do things.

M. Cohodas: I don't have any special ideas on how it might have been intercalated. Lots of writers around the beginning of the century were postulating their own methods. Bowditch, in a paper on these three panels which is in the Peabody Museum, went over all of them, suggesting possibly one day every four years, possibly 13 days every 52 years and possibly 25 days every 104 years. I have no idea of which is possible. Second, on the month list I definitely agree that I'm grasping at straws in the identification of those four glyphs. Yet those glyphs are so unusual and not repeated elsewhere that I can't think of anything better. The fact remains that they are used on the Cross panel in symbolic positions, not as part of inscriptions, so I think we can expect changes to have been made. I'm saying they're all unusual and none of them are strictly identifiable as what I'm saying they are. But this is something they are all partially related to, and it ties them into a system. If we could identify each of those glyphs; if they were common enough and occurred elsewhere to say what they are, that would be fine. But we can't. They're all unusual glyphs. I'm trying to figure out what system connects them, what they might have been, and in the way I explained it, and why they might have done it.

Coe: I have a question as to the identification of God C with the sun. He seems to be, from all the things we know about the Maya

skies, probably the most firmly identified as the north star, *Xaman Ek*. How the north star and the sun become identical is a bit confusing.

M. Cohodas: The way I do this, I think the sun was as he was in Mexico, four gods of the different directions, in four different manifestations or more, and that as the Sun God of the North he was God C. God C is one who is especially closely tied to the sun, because they're almost interchangeable, in many glyphic forms and symbolic forms. Even Thompson goes into this, especially the monkey as a symbol of the sun and patron of the arts. They are both patrons of the arts, etc. And the God C face, with the strange outlined mouth and the nose, is probably a distortion of a profile half of the *Ahau* sun sign.

A. Miller: And you don't think he's the north star?

M. Cohodas: Oh, he could very well be the north star. As a manifestation of the sun of the north he could be associated with a number of things associated with the north. What better thing to fasten on for a god of the north than the north star?

A. Miller: I think the Maya could have distinguished between the sun as one celestial object and the north star as the other.

M. Cohodas: I disagree on principle, because I think the sun was more than an object in the sky. He was the basis of their religion.

Schele: How can you account for the repetition of the exact iconography in the tomb?

M. Cohodas: I think there might be a change. This is very hypothetical. In the triad glyph, which Merle will discuss, the cross form is replaced by a *Cimi* percentage sign. Lévi-Strauss said that in two more or less parallel myths, if in one there is a small change, it usually means the opposite. What if the sarcophagus panel could represent the south in terms of death, whereas the other three are west, north and east, and the *Cimi* would be the south?

Schele: And yet the *Xaman Ek* appears in profound position on the cross of the lid, emerging from behind the figure.

M. Cohodas: I think that is a profile version of the Sun God in his transformations. He occurs on

the three panels, too. What I'm using is mainly Thompson's identification of the eye marks.

Schele: Did you check the sky signs in the border? Did you check the *Xaman Ek* there against that appearing on the cross? They're identical.

M. Cohodas: No. This just occurred to me, and I don't have the picture with me. As a funerary monument, it seems to me that the tomb as a whole is a prayer for rebirth in some ways, with the figures growing out of the earth, the plants behind him on the side, the portrait heads, one of which I think has been likened to a Maize God, the Nine Lords of the Night who cause rebirth, and the Underworld. I think some of the iconography on the triple panels is a prayer for rebirth, agriculturally, which would account for the parallelism.

Schele: I think the figures are historical. There is a basic disagreement between history and mythology.

M. Cohodas: I don't think there's that much of a disagreement. We're looking at different parts. The same motif can have agricultural symbolism and can be taken up dynastically as a lineage emblem, as Merle suggests. It doesn't mean the agricultural or ritual symbolism is wrong, or that the dynastic use is wrong. Something had to be used for dynastic emblems, and why not ritual symbols?

B. Cohodas: Does that mean the dynastic symbols would parallel their rituals, so that if someone wanted to be reborn they would parallel their rituals for rebirth?

M. Cohodas: Yes.

Coe: I go along with what you say about rebirth. The theme I think is behind funerary ceramics is that the lords don't die but are reborn, like the hero twins, as I make out to be the model for the death and apotheosis of the lords.

M. Cohodas: Hero twins are still the sons of the sun.

Coe: That's right.

M. Cohodas: And I think the sun is the paradigm for all ideas of death and rebirth, because it's the most obvious thing. It goes down at night and comes up in the morning. I'm zeroing in not so much on the hero twins but in a more general sense on the sun. The sun and maize, linked, die, are reborn in the underworld, and ascend at dawn. It seems to me the basis for the agricultural and dynastic symbolism. At Quirigua the same symbolism is used for dynastic purposes. On the zoomorph, the south head I think may be likened to the west head of

the Earth Monster, but that's obscure. The top is full of water symbols, which would be the water underworld theme, and the east is the open jaws with the ruler emerging, so the same rebirth idea can easily be dynastic.

Lounsbury: How can you make out that the hero twins are the sun and the moon? The sun I'll buy, but the moon I question, because it seems to me everywhere that I know about in Maya ideology the moon is our mother, or *chula* (?), holy mother, and so on. How can the holy mother be one of a pair of twin brothers?

Coe: The sun one is very clear, because the head for *Ahau* checks perfectly with what I call the young lord theme on Maya pottery. I'm absolutely certain that the young lord theme represents the hero twins. The moon is not as clear, as far as femaleness goes, because among the central Mexicans they seldom talk about the Moon Goddess. They talk about the Moon God *Tecciztecatl*, who is associated with the shell, so that there's room for both male and female interpretations. I admit, however, among the Maya, universally, there seems to be a female deity, but certainly in central Mexico it's not necessarily so.

M. Cohodas: Dr. Pasztory discussed this problem in a paper on the ball game. She compared the Popol Vuh to the myth of the fifth sun. In both cases the moon is male. She said two myths cannot be wrong in the same way, although Thompson has said the moon has to be female. If you look at the development of Mesoamerican religion historically, there were cults, there were fashions, there were spreads of ideas, and certainly in the ball game there is every reason for the moon to be male, to be a player. At Copan it's obviously male and could be a moon, especially if the other figure is obviously undergoing the transformations of the Sun God. So there could be good reasons, historically, culturally, whatever, for the moon sometimes to be seen as a male, part of a pair.

Lounsbury: I believe Thompson somewhere discussed who the other one of the brothers was. Didn't he suggest that comparatively the brothers should be the sun and Venus and that somewhere along the line some people may have reinterpreted it as sun and moon?

M. Cohodas: In his *Moon Goddess in Middle America*, wasn't it? He's approaching that problem in which he knows from his vast ethnog-

raphic knowledge that the moon is usually female, and he's trying to deal with the *Popol Vuh* and fifth sun myths of the moon being male. So he suggests if it's a male it's probably Venus.

Coe: If you go back to the *Popol Vuh*, the first set of brothers, whether they're twins or not, are 1 *Ahau* and 7 *Ahau*, and they're both slaughtered in the ball court, and of course I don't believe anybody could doubt there is an association between 1 *Ahau* and Venus as morning star. The 7 *Ahau* name is extremely interesting, and has long been commented on as being one *tzolkin* from 1 *Ahau*. I think it was Selser who felt that 7 *Ahau* or 7 *Hunahpu* was Venus as the evening star. Whether this is so or not, there definitely is a connection between the first set of brothers, that is the father and uncle of *Hunahpu* and *Xbalamque*, between the father and uncle and Venus. It's very explicit that the second set of brothers, that is the nephews of one and the sons of the other, are connected with the sun and the moon. I'm inclined to feel that one really can't be the sun and the other Venus, that is among one particular set of brothers. They're separated out, I think, much better in the *Popol Vuh* and more explicitly than they are in these late, myths that Thompson has collected from widely scattered sources.

M. Cohodas: The Maya, I think, were great at making associations by finding things that are related to each other. For example, the moon figure possibly in the *Popol Vuh* is *Xbalamque* (jaguar, *balam*); the *x*-can be female. If you think of the jaguar as the night sky, etc., what are the two main things in the night sky? Venus and the moon, and the moon is like a night sun, and you could say the same thing about Venus. They had to make connections between the moon as the light of the night and the sun as the light of the day. In the same way that for some purposes they wanted to make them opposite, for some purposes they could have wanted to make them parallel.

Coe: The unfortunate thing about *Xbalamque* is that we don't have any names for this guy in other Maya languages, that is, from the ethnohistoric sources, whereas we do have *Hun-hunahpu* appearing in a number of very early ethnohistoric sources from other groups outside of the Quiché in the Maya highlands, and even in the Baja Verapaz, that Las Casas re-

ported. He was a widespread deity under that name, and also as probably *Hunhau*, the lord of hell, who is recorded for Yucatan. If we had other languages in which *Xbalamque* was reported, we'd know more what the name meant. "Little-" or "lady-jaguar" doesn't speak much to me.

Lounsbury: I balk at the interpretation of "lady jaguar deer". First of all, as you say, this is a highland name. Now there's a mythology about the meaning of *ah* and *ix*. *ix* is not necessarily a female marker; it's a diminutive, in general; *ah* is not necessarily a male marker; it's an agent. For example, in Quiché and Kakchiquel, both at earlier times and today, *ah* is agent of any verb whether male or female. A female *curandera* is still an *ah*, whatever it is, and a female who is crazy is *ah-mox*, and so forth. Now, the *x* on the beginning of that could well be a diminutive — it doesn't have to be female; and *balam*, that's probably clear enough, but what could be the *que*? Do you take this as deer?

Coe: That's what Edmonson translates it as.

Lounsbury: It has the proper phonology for that in the highland languages.

Coe: I have no explanation for this.

M. Cohodas: I'd like to go back to *Hun-hunahpu*. 1 *Ahau* has been discussed so much in relation to Venus and the heliacal rising, but its relation to the Maize God has been ignored. It's the birth date of the Maize God in highland Mexico; as Kelley said, there is a 1 *Ahau* over the Maize God head on the panel of the Foliated Cross, and that song I summarized from Sahagun, the eighth year ceremony, supposedly the completion of the solar-Venus cycle. The eighth year has to do with Venus, but eight is also sacred among the Maya as the number of the maize, and this so-called Venus ceremony has to do with rejuvenation of the maize. All the song is about the birth, the conception of the maize. Here's a perfect example of how you can see things in two different ways; the maize can be the sun, or he can be a parallel to the sun.

Lounsbury: That I'll buy, because this is something I've worried above before, and I've come to the same conclusion on this.

M. Cohodas: That's what I mean about seeing the same thing in opposite or parallel ways, depending on your intent. In the same way the sun can be the maize, he can be the son of the maize. The Moon Goddess goes through so many ages she can be her own mother and her own daughter and her own grandmother, etc., the same as the sun. It

all depends on how you want to see them, and I think a lot of it is based on what I'm suggesting is a cycle for the ages of the sun and the moon in terms of the seasons of the year. The sun becoming old on the vernal equinox and reborn on the autum-

nal equinox; the moon becoming old on the summer solstice and being reborn on the winter solstice. I think much of the problem of seeing things in two different ways has to do with the calendric basis, the yearly cycle.