

X. COMMENTARY ON: CALENDRICS AND WRITING

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Hanns Prem in "Calendrics and Writing" has considered the phenomenon of writing and its characterization in theoretical terms. I am in thorough agreement with his excellent exposition, and I will not attempt to expand upon his treatment and the new insights he has given us of early writing and calendrics in Mesoamerica. Rather, I shall briefly review some of the evidence for early writing and calendrics, mainly indicating again my agreement and acceptance of his conclusions, and merely commenting upon certain aspects of the problems that have been of interest to me in my research. I will then conclude with remarks on origins and consequences.

Central Mexico. We are agreed that as yet there are no certain examples of writing from the PreClassic of Central Mexico which are acceptable to all students. I share Dr. Prem's great skepticism with respect to the Tlatilco cylinder seals published by Kelley (1966) and Franco (1959) and which, in one case at least, they both accept as writing. The markings of the two seals are radically divergent; and if they were writing, they would have to be assigned to two different, and presumably co-existing, scripts. The seal with lineal markings bears no resemblance, as Kelley notes, to any known Mesoamerican script and would probably, as Kelley suggests, represent the most advanced script ever developed in the New World. Although not commented upon by Kelley, the markings of this seal closely resemble various Oriental scripts ranging from Burma and China to the rim of the Mediterranean. If the signs of this seal were writing, and the seal were accepted as authentic, we would almost surely be dealing with an instance of Trans-Pacific contact during the PreClassic.

The other Tlatilco seal bears good Mesoamerican designs, but the impression is one of decorative function, and there is no proof of writing. A more satisfactory case therefore must be presented before the notion of writing can be accepted.

Most of our excavations into the Central Mexican PreClassic have not been conducted in localities where the retrieval of specimens of writings would be likely. Possibly if we had more extensive excavations at Cuicuilco we would be more likely to have uncovered traces of early writing. Nevertheless, the quite extensive excavations at Teotihuacan suggest that the apparent absence of advanced hieroglyphic writing earlier is in fact a genuine absence. The various examples cited by Caso and others of writing at Teotihuacan are not convincing as to the existence of an advanced hieroglyphic system at that great

metropolis. Although the possibilities are to be considered, I cannot regard the explanations advanced, such as the "avoidance of public display of writing," as entirely satisfactory solutions to this problem. Rather, I think the answer is to be found in Kubler's view that the mural art likely served a purpose or function performed by narrative picture-writing elsewhere. I would suppose that this provided a portion of the intellectual heritage of Central Mexican Post Classic writing although much of its repertory of signs is to be derived from elsewhere.

If we knew more about Guicuilco, I would not be surprised by the presence of the 260-day sacred round, the 365-day vague year, and an early narrative picture-writing of very simple design.

Oaxaca. Passing on to Oaxaca, there is nothing I would add to Prem's excellent and careful analysis. The idea of a Oaxacan origin for the Mesoamerican calendar goes back to Seler. I would agree with Prem, however, that this seems unlikely despite the fact that the inscriptions of Monte Alban I may indeed represent the earliest examples of writing now uncovered in Mesoamerica.

Southern Mesoamerica. South of Monte Alban our PreClassic examples of writing do not occur in quantity at any single site and are therefore rather more difficult to deal with. Prem makes a very useful suggestion to catalogue these examples under the heading of Intermediate and some such neutral terminology is very desirable. I would suggest that it would also be useful to select neutral terms for the sub-categories under the Intermediate designation, namely "Olmec" and Mayoid. Prem indicates the questionable nature of the "Olmec" category and I think an alternative non-ethnic term would best serve our purposes. The term Olmec has been so divergently used in the past that we are only now coming to a better order in this matter with efforts as those of Bernal with his ideas of Metropolitan Olmec, Colonial Olmec, and Olmecoid. Possibly the term "Early Isthmian" might be considered as an alternative to "Olmec" to describe these writings.

The presence of a developed writing at PreClassic Chiapa de Corzo is quite well demonstrated in the discovery, in PreClassic mound fill, of a stela fragment with bar/dot number series and a potsherd bearing several rows of glyphs of a longer text arranged in at least two columns. The mound fill of Late PreClassic age (so assigned on the basis of the pottery present) allows the possibility of a Cycle 7 reading for the number series of the stela yielding a date of 34 B.C. in the GMT correlation. Although other stela fragments are known from Chiapa de Corzo, their carvings do not seem to represent writing.

The bar/dot number series of the Chiapa de Corzo stela provides one link with Southern Veracruz in the form of the Tuxtla Statuette and Stela C of Tres Zapotes. I believe it is safe to accept these pieces as of Late Pre-

Classic age although the question of their interpretation as Initial Series of Maya style and as contemporaneous dates in the Long Count still is not proved. Bar and dot number series, seemingly of Maya style, occur later at Cerro de las Mesas, and I believe both of these inscriptions should be regarded as of that tradition rather than Olmec. Other bar/dot notations, as the bed rock inscriptions at Tres Zapotes and the supposed tenth cycle notation on the Tuxtla cylinder seal, are more problematic, but are unlikely to be of greater age. The Tuxtla Statuette and Tres Zapotes texts occur long after classic Olmec times and are, I believe, surely indicative of alien cultural intrusion into the Veracruz region from the southeast. Squier, in his unpublished study of the Tres Zapotes sequence, discusses the very mixed nature of the cultural complex there from quite early in the history of the site.

Although the Olmec must surely have possessed calendrical knowledge, and I think probably of a relatively sophisticated sort, enough sculptures have been found to show that the carving of dates in the style of Maya stela inscriptions was not practiced in Olmec culture. Only on the unusual Monument 13 of La Venta are there three or four eroded reliefs which can be regarded as glyphs but interpretation of these is difficult. I would accept Monument 13 as indicating the presence of at least limited notations by the end of the La Venta period, if not earlier considering the excavational evidence for the repositioning of Monument 13. But more evidence is needed.

Of course various portable objects in Olmec or Olmecoid style bear various types of incised designs with repetitive motifs and symbols; here again, however, I must agree with Prem that these do not give the impression of a standardized writing system but rather are more derivative from narrative picture-writing.

Bar/dot number series and associated glyphs also derive from the Pre-Classic of the Pacific slope of Guatemala, and continuing into Salvador they form a northwest to southeast axis with the Southern Veracruz examples in the northwest and Chiapa de Corzo near the center of the axis. As I have indicated in an earlier paper, I think the origins of this bar/dot number series are nearer the southern end of the axis than the northern; but until more discoveries are made others will prefer alternative interpretations. The associated glyphs of the Pacific slope monuments are too badly eroded to do much with, but at Kaminaljuyu in the highlands there are probably several excavated monuments with inscriptions attributable with certainty to the Late PreClassic. Unfortunately, only on the so-called Stela 10 fragment is there a long series of glyphs recognizable, but again this text is badly damaged. A quite sophisticated writing system is evidenced, and Prem has commented upon this. Similarly, the recent discovery at Chalchuapa of a Late PreClassic monument with apparently a lengthy text supports the notion of a southeastern origin for advanced hieroglyphic writing rather than to the northwest as many commentators have preferred.

Turning now to the Maya lowlands, I would note that it is usually observed that there is little or no evidence of PreClassic stelae or writing. Nevertheless, these are important bits of evidence which strongly point to the existence of stelae as well as a sophisticated system of writing by Late PreClassic times. The inauguration of a Classic pattern of stela cum altar and bearing cyclical-ending dedications was probably a major factor in the destruction of PreClassic Peten stelae while the intensive and extensive activities of six centuries of succeeding Classic Maya civilization further obscure the traces of PreClassic monument practices, which like the Classic pattern was also probably a stela cum altar complex.

I think a case can probably be made that the most significant example of PreClassic Lowland Maya writing now known to us is preserved on the great jade flare excavated from Tomb 2 at Pomona in British Honduras. Although the tomb has been attributed to the Early Classic, there can be no reason to doubt the greater antiquity of the flare, which, as one of the largest jade flares ever discovered, in itself would declare its probable heirloom status. The incised hieroglyphic text, however, is pretty clearly of Late PreClassic age. Although a portable object, the character of the script is clearly very early Lowland Maya with ties to the Leyden Plate locally, and hence the Tikal vicinity, and, less intimately, to the Kaminaljuyu Stela 10 writing further afield and which it may only slightly antedate. The placement of numerical coefficients below the associated glyphs indicates this practice more abundantly seen in the early writing of Monte Alban was probably the original pattern and one which probably antedated the invention of Initial Series notation in Long Count chronology.

Other examples of PreClassic Lowland Maya writing are also found on several portable jades -- such as the pectoral very fully described by Coe (1966)-- but many of these pieces are without provenience and so do not constitute as firm a foundation for interpretation, in my opinion, as does the Pomona flare. If authentic, the great simplicity or primitiveness of their scripts can be attributed either to temporal or spatial distance from the scribes of the Pomona flare.

Origins. If the reliefs of Monument 13 at La Venta are to be considered at least as old as the end of the La Venta period, or about 600 B.C., a not implausible interpretation accepting the antiquity of Monte Alban I writing, I think it is reasonable to suggest the probability of early glyphic notation in the form of simple narrative picture-writing even earlier in Olmec civilization. Whether this means an Olmec invention of earliest narrative notation is not certain, but certainly this is a good interim hypothesis.

Advanced hieroglyphic writing I think more likely occurred first among the early Maya, but I would not insist upon this view in terms of present hard evidence available.

Long Count chronology, reflecting the most sophisticated approach to time reckoning in ancient Mesoamerica, was probably a later development and likely was part of the context of the sophisticated writing systems evidenced by Kaminaljuyu Stela 10, the Pomona flare, and perhaps the Chalchuapa stela. Whether this occurred as late as 8.6.1.9.0 4 Ahau 8 Cumku (AD 160), hypothesized by Satterthwaite (1959) as the inaugural date of the Long Count, I am not certain, although I do think the Satterthwaite epoch is the best that can be determined using the arithmetic approach. Furthermore, the fact that this date is very close to certain early dates of the Dresden Codex, which I would follow Thompson in regarding as probably actually historical, makes the Satterthwaite hypothesis attractive. The Satterthwaite hypothesis is not invalidated by regarding the Cycle 7 dates of Tres Zapotes, Chiapa de Corzo, and elsewhere as Initial Series notations, but would require that they be non-dedicatory or non-contemporaneous as of carving. The archaeological context of these monuments is not sufficiently constraining as to deny such an interpretation. The astonishing number of numerical classifiers now known for Maya dialects possibly suggests the intellectual context for the creation of Long Count chronology.

Implications of early writing and calendars. Although a frequent hallmark of civilization, the absence of writing in ancient Peru clearly demonstrates that it is not an essential ingredient, and indeed that it is not even necessary for the existence of elaborate administrative bureaucracies. This fact is also dramatically shown in the confines of Mesoamerica itself where sophisticated writing systems and numerical notations co-existed with much more primitive devices. Efficiency, however, was a concept seldom appreciated in the ancient Mesoamerican world where methods and means were judged by other scales of values (Cf. bar/dot notation side by side with simple additive numerical notations).

Nevertheless, if the non-essential nature of writing is recognized this does not mean that in the case of Mesoamerican cultural development it did not play an important role. Profound intellectual development may not result in much without food surplus, but in the emergence of civilization I would think they play a far more important role; food surplus producing economies are far more common and feasible than civilizations seem to be. We should look to the realm of intellectual developments, which is more difficult to identify and meaningfully comprehend than are matters of trade networks and similar economic or technological features which often are regarded as causal or primary factors. The intellectual capabilities of many human societies are not reflected in the material expressions of their cultures. The exact moments of the emergence of civilization will predate the material symbolism of mythic justification, and it may be that the intellectual resources necessary to spiritually sustain a civilization precede at times the development of economic surpluses to feed an expanding population, to sustain great commerce, and similar economic or technological developments.

I do not know what the great ideas were that produced Mesoamerican civilization in the first instance, and I doubt that these ideas will ever be expounded on more than a simplistic and hazy basis by modern archaeologists. But even simplistic exposition will be closer to the heart of the emergence of civilization than will be complete and detailed understandings, which are of course very desirable, of economic capabilities and practices.

In the realm of cosmogony, religion, and world-view are most likely to be found the great ideas of Mesoamerican civilization; and while I do not propose the identification of any of these, writing and the calendar would provide one of the means, possibly not the most important, in the spiritual conversion of the participants. Narrative art, probably later to originate writing, was surely a principal means.

The art of divination is basic to Mesoamerican civilization and is a very pervasive aspect of it. There is little doubt of its extreme antiquity which must reach back to the very emergence of Mesoamerican civilization. The faculty to predict certain types of events is always wonderful to the uninitiated who thereby easily become the devotee. Astrology was one form of Mesoamerican divination, and celestial prognostication is certainly one of the most impressive feats that can be performed by specialists in the primitive world.

The extent to which peoples with no spectacular material culture but developed interests in celestial phenomena are capable of observing and defining pragmatically certain patterns of celestial behavior is frequently not appreciated. Students of Maya astronomy have generally supposed that the formula of the Dresden eclipse table was in use during Classic Maya times, and the table in fact uses a Classic age era. Satterthwaite's studies of moon age deviations and lunation-zero shifts have led to the implication of successful solar eclipse prediction during the PreClassic (Satterthwaite 1948, 1951). The fear of the cataclysmic consequences of lunar and solar eclipse was universal in Mesoamerica; and the early appreciation by specialists that solar eclipse dangers occur only about a dozen easily definable times during the year would have been valuable information. Combined with a few successful eclipse predictions by early formulae, the ability must have been formidable.

The cyclical organization of events which structured Mesoamerican thought is the intellectual handmaiden of Mesoamerican divination; and it provides an ideal orientation and background to successful manipulation of celestial phenomena. Maya calendrical calculations are often difficult and perplexing to modern students, but I am confident that matters involving the manipulation of hundreds of thousands of units were not such complex problems to ancient Maya mentality and the specialists who worked in these arcane spheres. That calculations which by our lay standards are deemed complex were restricted to Late Classic and PostClassic Maya civilization is I believe extremely unlikely.

I also strongly endorse Heizer's theme of the role of the shaman or early priest in weather control activities and its relation to agriculture and its importance to the tropical farmer. I also insist that almost any kind of simple calendar and record keeping devices combined with approximate knowledge of the length of the tropical year (very easily ascertained) would have provided adequate tools to early practitioners of weather predicting. Parenthetically, I would further note that it does not matter whether the magician or sacred doctor was in the service of secular lords or fellow members of the confraternity of theological princes. Nor in this respect does it matter what was the content of the sacred charter of great ideas that he served, although his activities detected would provide a clue to simplistic decipherment of a portion of the contents of that charter.

Although I have not chosen to discuss the value and use of writing and calendrics in other spheres where the growth or crystallization of civilization would be stimulated, I do not mean to limit it to the role in the transmission and service of the great ideas which are the germ of civilization.

And here, in conclusion, it is appropriate to also remark upon the medium of writing as well as its burden. Just as in his very significant paper of fifteen years ago in which Willey identified the crucial importance of ideology in the first crystallization of Nuclear American civilization, he also touched upon the significance of the medium when he saw in the wide distribution of Olmec and Chavin styles the factor of ideology. Thus, it is not only the development of the great ideas that is essential to the emergence of civilization, but a successful medium is also required. The medium need not necessarily serve to accurately transmit the content of the ideas, and whose details are immaterial, but certainly the medium must be sufficiently communicative on an emotional level to provoke an appropriate response. Fervor may in effect become synonymous with intellectual comprehension and therefore of corresponding significance in the emergence of civilization.

Writing, numeration, calendrics all have their emotion evocative dimensions. Writing, in its earliest stages, is closest to the expressive emotion conveying qualities of the art styles of the culture. Some modern writing systems preserve this dimension to a high degree, such as Chinese calligraphy. And Maya and other early Mesoamerican writings are other examples.

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