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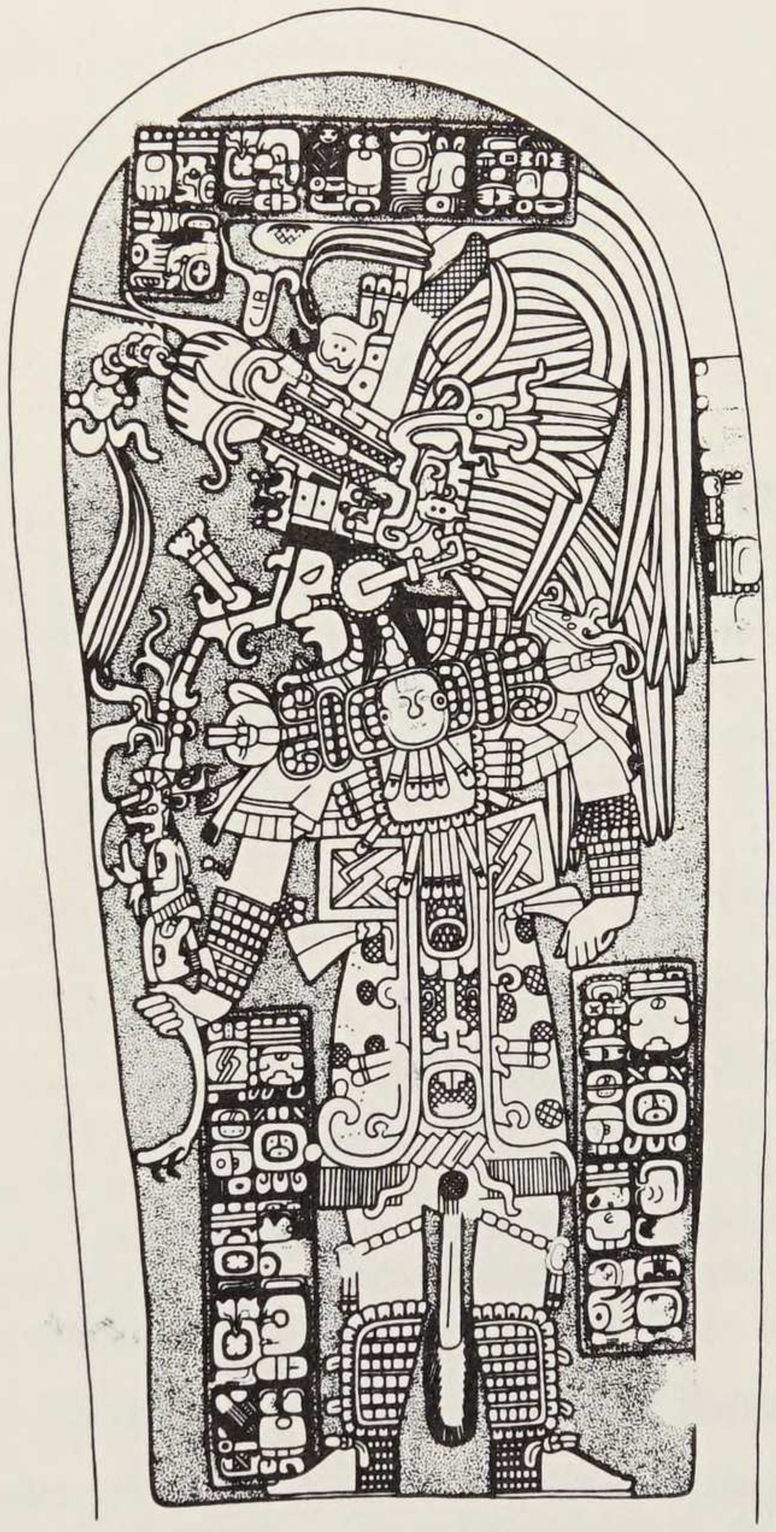
Word and Image in Maya Culture

WORD AND IMAGE IN MAYA CULTURE

Explorations in Language, Writing, and Representation

Edited by

William F. Hanks and Don S. Rice



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Introduction

DON S. RICE

Historical Contexts and Interpretive Themes

WILLIAM F. HANKS

Word and Image in a Semiotic Perspective

1

Historical Contexts and Interpretive Themes

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From Veracruz, Mexico, to Chiapas and the Yucatan peninsula, throughout all of Belize and much of Guatemala, the aboriginal inhabitants speak a series of related languages known as Mayan. The continuous distribution of these languages and the gradual variations between them have led to an inescapable conclusion that Mayan speakers have inhabited this area for a long time. Archaeological, ethnohistoric, and ethnographic data support this assumption, suggesting a continuity of occupation from at least 2000 B.C. to the present day. These data also reflect the indigenous development of a complex civilization during the first three millennia of that occupation, a civilization which suffered what is generally considered to have been a radical "collapse"—at best a dramatic disjunction in governmental form and at worst a drastic population demise—in much of the southern reaches of the Maya lowlands during the ninth century A.D. The impressive success or longevity of Maya society in a lowland tropical forest setting and its seemingly sudden disappearance in the south, but its resiliency in the north, have long prompted questions about the nature of aboriginal Maya politics, economy, ideology, sociology, demographics, and ecology.

There has been much speculation about the origin and character of Maya civilization ever since the first Spanish encounters with archaeological ruins. There are several classes of data which prompt such speculation. Most dramatic, and primary in the eyes of the earliest explorers, is the existence of "centers" of monumental architecture spaced throughout the tropical forests of the Maya lowlands. These are complexes of architecture interpreted by archaeologists as consisting of temples, palaces, and formal plazas (the perimeters of which are defined by the major architectural features), ball courts, and adjacent structures. The magnitude and volume of these constructions, with implications for the amount of labor, planning, and management necessary for their manufacture, suggest the presence of rulers with considerable powers of persuasion or coercive force. In turn, these centers are presumed to have included the residences of elite groups as well as housed the organization they controlled. Architectural embellishments, such as mosaics and painted or sculpted interiors or exterior facades, often depicted anthropomorphic forms variously thought to be individual members of a resident ruling class or their gods.

Centers also provided several other types of information pertinent to the understanding of Maya societal structure and history. Large monolithic monuments called stelae are ubiquitous in Maya sites, and are most often situated singly or in rows in front of major buildings or along the perimeters of plazas. Many such monuments were sculpted with images and hieroglyphic texts, but a large number are plain, or uncarved, and are assumed to have been painted.

The archaeological excavation of some classes of architecture, or the looting of those structures by profiteers in search of antiquities to sell, have often revealed sumptuous burials in which centrally located skeletons are accompanied by the imperishable remains of personal adornments, offerings of manufactures from nonlocal raw materials, or ornate local manufactures of stone and ceramic, and these are occasionally surrounded by complete or partial skeletons of other individuals. Occasionally the tombs have sculpted or painted walls or contain sculpted, incised, or painted artifacts that portray narrative scenes and/or texts.

One particularly important class of such artifacts is mortuary vessels, apparently commissioned by the deceased, or perhaps the relatives of the deceased, specifically to be interred with the individual in his or her tomb. The artistic content of many of these has been interpreted as constituting personal histories and/or mythic legends concerning the Underworld (Coe 1973, 1982).

As suggested, accompanying or adorning much of the art are hieroglyphic texts, which represent another major category of information. The main sources of

Maya texts include carved inscriptions on stone monuments, architecture, portable sculpture, and artifacts and painted texts on murals, ceramics, and in books or codices of fig-bark paper upon whose plastered surfaces were placed pictorial representations and/or glyphs. There are no known codices from the Classic period (ca. A.D. 550–900) and only three uncontestedly authentic Postclassic examples remain—the Dresden, Madrid, and Paris—from the thousands that the Maya were known to have had at the time of the arrival of the Spaniards. The Spaniards destroyed the majority of that corpus, and although the post-Conquest Maya continued to produce documents recording aspects of the native tradition, these were relatively limited in number.

Thus, the kinds of materials and data which can be brought to bear on the problem of defining and understanding the Maya civilization are architectural, artistic, and glyphic, with architecture often being the context for the art and glyphs. Unfortunately, all have suffered the depredations of time and looting. Carved monuments were occasionally defaced during the prehispanic period; but worse, many have lost their sculptural integrity as a result of weathering or have been either stolen or cut apart for sale. In addition, we have no idea of the painted information which might have been portrayed upon uncarved or plain stelae. Portable art recovered from tombs and excavations of structures, particularly pictorial ceramics, is the prime focus of looting operations, and these illegal activities destroy the mortuary and architectural contexts. Scientific recovery of such information is costly, time consuming, and limited, and it is a difficult fact that the bulk of known pictorial mortuary vessels is in the hands of private collectors, divested of important provenience. Post-Conquest Indian documents in the form of texts and letters are likewise few and equally disembodied from context and motivation.

By virtue of the substance, form, and preservation of these classes of data, their interpretation has been archaeological, art historical, and/or epigraphic in nature. Lacking, however, is complete or undisputed textual confirmation or a historical continuity which allows for comfortable recourse to ethnohistoric or ethnographic analogues, and much of the early argument about the structure of Maya society and the dynamics and processes of Maya history tended to be argument by persuasion, with the force of that persuasion changing with the constituents of the data, the theoretical perspective in vogue, and the perseverance and visibility of the persuader.

For example, one of the most visible and most influential of the early theorists who speculated on the nature of the Maya civilization was J. Eric S. Thompson (Becker 1979; Hammond 1977). Although Thompson was certainly not the only productive investigator or synthesizer of his time, his interpretations (1966) of Maya art and archaeology strongly influenced academics and interested laypersons alike during a generation of Maya studies from the 1930s through the early 1960s.

This was a period of extensive exploration in the Maya lowlands and an era of familiarization during which the manifestations of Maya civilization were located, mapped, and recorded. Many Maya sites were investigated, but there was a "center" bias in that the maps of these vicinities, and the work therein, focused on the monumental architecture and sculpture, much to the exclusion of smaller peripheral structures and without secure knowledge of the true scope and range of architectural variability and distribution.

Thompson long considered the known large sites to be "ceremonial centers," built by a peasant population for a class of priests (1927; 1931; see Becker [1979] for a discussion of Thompson's role in the intellectual history of models of Maya sociopolitical organization). In turn, the symbolic representations on buildings, stelae, and artifacts were interpreted by him to be the portraits of gods and scenes of the Maya cosmos. Associated hieroglyphic writing was thought to be largely an ideographic system, and the earliest and most dramatic successes of this period were in the decipherment of symbols for numbers and time periods (Thompson 1950, 1962). Thompson believed that the majority of texts were basically chronological, reflecting the Maya preoccupation with time and the astronomical reckoning of the units of time.

As many before us have documented more fully, with the late 1950s there began a rather dramatic shift in the thinking of archaeologists about the nature of Maya society and a departure from the Thompsonian view of the Maya as priests and peasants (see Becker [1979] for a comprehensive review of this transition). The change was due to a number of disparate influences, which included breakthroughs in the analysis of glyphs and sculpted narrative scenes and trends in the goals and methods of American archaeology.

Into the 1950s the conventional wisdom held that the inscriptions on artifacts, codices, and monuments recorded calendrical and esoteric knowledge or references. At least two analyses pursued in the latter part of the decade dramatically altered these thoughts, however. In 1958 Heinrich Berlin identified "emblem glyphs" which named individual centers, although it remains uncertain whether an emblem glyph is actually referring to the center as an entity, as opposed to its territory, the ruler, or ruling group or lineage. And Tatiana Proskouriakoff provided a basis for identification of the latter personages and social groups through her analyses of hieroglyphs and associated sculpture from the sites of Piedras Negras, Guatemala, and

Yaxchilan, Mexico (1960, 1963, 1964). Her interpretations of the texts, chronologies, and corresponding sculpted images suggested that specific glyphs were associated with specific events in an individual's life, suggesting that many monuments may have been markers for rulers, and together provide records of dynastic histories.

As Marshall Becker (1979) has nicely demonstrated, the historical insights offered by Berlin, Proskouriakoff, and their followers were absorbed by Maya archaeologists in a milieu of paradigmatic change in the field of archaeology, a shift toward more explicitly anthropological and processual inquiry. In the field, increasing emphasis was placed on settlement pattern surveys, which in a sense overcame a center bias and focused on the overall size, structure, and variability in Maya settlement. The rationales for such surveys and the resultant reconstructions of high and variable population densities provoked increased emphasis on environmental analysis, subsistence reconstruction, and analysis of the manifestations of economic behavior. Research goals shifted toward attempts to understand the processes of population growth and nucleation, societal development, and subsistence intensification. The effects of this trend on the thinking of Mayanists are reflected in a number of edited archaeological syntheses of Maya history, settlement, and subsistence (Adams 1977; Ashmore 1981; Chase and Rice 1985; Culbert 1973; Harrison and Turner 1978; Pohl 1985; Sabloff and Andrews 1986).

In the course of these informed efforts, Thompson's two-class model of Maya society gave way to models of settlement hierarchies, with implications for complex political and social structures. The Maya priests or lords came to be viewed, rather, as ruling elites making rational and calculated decisions based on economic considerations, their power more often measured in calories, alliances, and exotic goods than in knowledge of seasons, cycles, and prophecy. The term "ceremonial center," if not explicitly disparaged, has been implicitly dropped for more neutral and secular constructs.

These more recent reconstructions of Maya history and organization have tended to focus on societal infrastructure (Steward 1955), with less attention or importance given to the role of ideology in understanding the dynamics of continuity or change. There has been, therefore, a tendency to build such models from the bottom up, focusing consequentially, if not consecutively, on the productive landscape, colonization, settlement growth, center foundation and elaboration, and so on. A parallel tendency, inherent in all prehistoric archaeology, is to focus primarily on data which are consistently available throughout the entire occupation sequence. In the Maya case these are largely on the environment, the architecture, and the raw materials of artifacts and the technologies and forms of their production.

With the marked increase in number and accomplishments of art historical and epigraphic analyses in the past decade, however, the Maya are emerging as a society with history as well as a historical society. These new data suggest to many Mayanists that recent archaeological reconstructions of Maya society, while not necessarily inaccurate, remain incomplete and out of context. Although there are legitimate elements of such models they are restrictive in that they do not include the system of beliefs that mediated all of the decisions and activities that have been interpreted or hypothesized through material culture studies. A touchstone of understanding for an anthropology of a Maya history is Maya world view and Maya culture as well as twentieth-century Western science.

As John Henderson has stated: "In the Maya ethos, the world cannot be defined in the cold terms of natural environment. . . . Artificially divorced from its position in the universe, without context, the physical world is bereft of any real meaning" (1981:72). This point was not lost on the Spanish when they burned the Maya codices in the sixteenth century because "they contained nothing in which there were not to be seen superstition and the lies of the devil" (Landa 1978). Nor is the point lost on the art historians, epigraphers, and archaeologists who are trying to deal with the corpus of Maya texts and graphic depictions. Therein, nothing is given apart from the symbols of the cosmos and the supernatural. So it was in real life; and to understand the sociopolitical development of the ancient Maya is to understand the total universe articulated by that governmental structure. The data relevant to such an analysis and understanding are only now being brought together in any systematic fashion.

Recent and ongoing researches at the centers of Bonampak, Caracol, Cerros, Copan, Palenque, Quirigua, Rio Azul, and Tikal, among others, have either emphasized art historical and epigraphic analyses or integrated these with large-scale archaeological investigations, and the results have been largely twofold. The decipherment of Maya glyphs is proceeding at a startling pace, as is the interpretation of attendant images (see Kelley [1976] and Schele [1982] for extensive discussions of the decipherment of Maya hieroglyphic texts). And although the conclusions are not necessarily consensual, confirmation of the linguistic basis for the hieroglyphic system has multiplied the analytical tools available for piecing together the structure and substance of the texts (Justeson and Campbell 1984; Schele 1982).

Interpretive success in the ongoing evaluation of texts and images is manifest in the rapidly evolving picture of Maya elites, the subjects, commissioners, and

consumers of these royal arts. Two recent traveling exhibitions, appearing in published form as *Maya: Treasures of an Ancient Civilization* (Clancy et al. 1985) and *The Blood of Kings: A New Interpretation of Maya Art* (Schele and Miller 1986), have dramatized this accumulation of new data to laypeople and professionals alike. In particular, the catalogue for the Blood of Kings show has moved interpretation of Maya writing, art, and artifacts into a new era of synthesis and a new level of introspective criticism.

The view given therein is of a closed class of lordly Maya elites at whose center is a divine king, or a king whose apotheosis is a matter of universal importance. The texts and iconography reflect an aristocratic preoccupation with divine justification of right to rule and ritual performance of duty. The unifying theme and metaphor for the condition of kingship, and the relationship of king to subjects, is that of lineage blood, the sacred generative substance which both literally and figuratively flows to nurture and perpetuate the kingship, the society, and the cosmos. The reconstructed political geography of the Maya thus has local, territorial, and cosmological dimensions, with the king constantly engaged in the contestation of those boundaries.

Like any constructive attempt at synthesis, *The Blood of Kings* raises as many questions as it seeks to resolve, and published critiques have focused less on the definition and substance of the subject matter than on the methodological assumptions and theoretical premises of the reconstructions (Graham 1986; Klein, in press). What are the relationships between language and text, on the one hand, and between rhetoric and representation, on the other, and are these self-revelatory? In a dynamic social history, what is the genesis of the customs and preoccupations of the Classic period elite and how are they articulated with the realities of societal production and reproduction? What is the content and structure of the larger discourse between elites and the rest of society, of which the permanent rulership arts are but one part? What are the deeper aspatial and atemporal generative structures, relations, or meanings that define "Maya" and give meaning to Maya history within the broader Mesoamerican culture area?

"There is no single Mayan world view . . . [and] beliefs vary from region to region and undoubtedly they have changed through time" (Henderson 1981:73). Yet, in evidence that is available, the Maya symbol system is particularly coherent. In this sphere, Maya groups share many elements and most major themes. And in this realm, more than in any other, the Maya resemble other Mesoamerican peoples.

The Maya have long been identified as sharing basic traits of the Mesoamerican culture area (Kirchoff 1952), but Gary Gossen has recently articulated five themes or symbolic clusters which have spatial and temporal persistence in Mesoamerican thought, principles which "are essentially metaphysical premises [that] underlie an extraordinary surface diversity in the expression of native Mesoamerican verbal and iconographic ideas" (1986:ix, 5–6):

> 1. "The abiding theme of cyclical time as a sacred entity."
> 2. "A consistent delimitation of sky, earth, and underworld in the spatial layout of the cosmos, with mediation among these realms as a key intellectual, political, and religious activity."
> 3. "Supernatural combat and secular conflict as creative and life-sustaining forces."
> 4. "The principle of complementary dualism has the potential to lead to a revised paradigm for thinking about syncretism in Mesoamerica."
> 5. "The extraordinary power of spoken and written language as a symbolic entity in itself, beyond its neutral role as medium for routine communication."

As the title of this book indicates, explicit treatment of the last of these principles is central to our enterprise and, together with an understanding of conventions and themes of representation, is critical to an evaluation of Maya culture. The investigations that make up this volume were motivated by issues which lie at the heart of the critiques of *The Blood of Kings* and contribute to an ongoing evaluation of the framework outlined by Gossen. What are the generative structures which underlie Mayan history and how are they to be revealed and interpreted? Given that symbolic structures are affected by the "flow of social process," and change at different rates and on different levels, how do historical action and symbolic structure become "isomorphic praxis and logic" as a unified strategy for coping with the natural and social environments (Bricker 1981; Hunt 1977)?

The chapters offered here grew out of two symposia organized by the editors. In November 1983, a symposium entitled "Artifacts and Symbols of Maya Culture: Structure, Order, and History" was organized and chaired by me at the annual meeting of the American Anthropological Association in Chicago. Participants were invited to investigate the symbolic designs which gave order to the practical experience and customary practices of the pre-Hispanic Maya; and their presentations explored the methods by which that cultural order was encoded in a broad range of materials.

Shortly thereafter, in April 1984, a symposium was held at the University of Chicago on "The Language of Writing in the Mayan Region," sponsored by that university's Center for Latin American Studies and chaired by me and William Hanks. Here, participants discussed the origins, form, content, and cultural implications of Maya writing. To the degree that the various presentations examined symbolic meaning as com-

munication and a frame of action in specific contexts and the dynamic transformations of these symbols and structures in Maya history, these symposia overlapped in themes and substance.

This volume combines expanded versions of a number of these presentations, and several additional invited papers, to treat Maya architecture, art, artifacts, language, and writing from the perspectives of information, communication, cultural structures, and history. The collection is organized into two parts: (1) Origins and Linguistic Principles of Maya Writing and (2) Representational Conventions of Maya Iconography. The first includes two sections which explore the linguistic, compositional, and stylistic bases and structures of pre- and post-Hispanic written texts. The second focuses on the media and organization of extra-linguistic systems of representation, including architecture, art, artifacts, settlement patterns, and ritual practice and the structural and historical relationships among these.

These latter papers also fall logically into two groups. Those in the first section investigate the relation between glyphic writing and iconography as distinct but interacting kinds of expression, typically combined in Maya works and developed together over the same stretch of time. Many adduce evidence from written texts to corroborate symbolic interpretations, and all address themes directly relevant to the subject matter of glyphic, alphabetic, and symbolic discourse.

The chapters in the second section of Part II are explicit discussions of the themes introduced by papers in the first section as well as in Part I: the status and history of Maya elites, signs of kingship and rule, the structure of Maya cosmology, and Maya cosmological and ritual discourse. Although they analyze different data from different perspectives, these papers implicitly, but effectively, demonstrate the translation of linguistic and textual conventions to various media, and they imply both continuity and transformation of structural principles and cultural order through time.

The total, then, deals with substantive issues and analytic strategies, and we hope explicitly reflects the fruitful integration of academic disciplines.

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2

Word and Image in a Semiotic Perspective

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This volume explores the structural and historical relations among Maya writing, iconography, and symbolic representation. It includes studies of the linguistic and compositional principles of written discourse, the iconographic conventions of material art forms, and the symbolic conventions linking these to cosmology and the institutional contexts of Maya kingship. Collectively the papers span the development of Maya culture from pre-Classic to modern times, but each one focuses on historically specific productions, and several trace the development of symbolic forms through time. Papers in the first part fall into two sections. The first focuses on the grammatical and discourse bases of scribal practice in pre- and post-Conquest written texts; the second explores compositional and stylistic conventions of glyphic and post-Conquest alphabetic discourse. The papers in the second section of Part I provide linguistic and textual contexts for those of Part II. In Part II the first section focuses on the relation between linguistic and iconographic systems; the second brings together studies of iconography, ritual and elements of material culture.[1]

The first and third words in the title of this volume indicate its dual focus on language and symbolic forms in Maya culture. "Word" stands not for the isolated lexical item, but the linguistic system of which it is a part, and "image" not for the isolated motif, but for the symbolic system in which it is constituted. The volume is motivated by a conviction that an interdisciplinary approach to Maya cultural history provides the best basis for understanding the specificities of this area as well as the general principles that relate it to other cultures at other times. Papers were brought together in the hope of gaining new perspectives on Maya representational traditions as a unified development, including spoken language, written form, iconography, ritual practice, material culture, and architecture, along with their changing institutional contexts. Our aim is to better understand the interrelations among different codes, symbolic works, and discourse practices, without attempting to reduce them to reflections of one another or of some external causal force. The individual papers do not derive from any single agenda or perspective on the Maya, nor from a single approach to the analysis of symbols; and their authors include linguists, anthropologists, and art historians. This variety poses special challenges to readers, but it is a natural corollary of our interdisciplinary commitments. Whether we have uncovered any new grounds for synthesis beyond the specific contributions of individual papers is a judgment only readers can make. In this introduction, I will try to outline a framework in which the papers, especially those of Part I, can be viewed in relation to one another and to the broader background of Maya cultural history.[2]

OPENING DISTINCTIONS

Three Parts of a Sign

In order to formulate clearly the relation between the various forms that constitute the Maya corpus of glyphs, iconography, and symbolic representations, it is minimally necessary to place these forms within a broader semiotic context. In particular, it is necessary

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[1] In preparing this essay I have benefited from conversations with a number of scholars, especially authors of papers in the volume. James Collins, Floyd Lounsbury, and Terence Turner made very helpful critical comments on an earlier draft, and I thank them. I am solely responsible for remaining flaws.

[2] The purpose of this essay is to provide a context for the papers in the volume and point out some research directions suggested by them. Not an epigrapher myself, I am relying on the primary work of other scholars, as reflected in the citations. The hope is that by attempting to synthesize a set of issues, one can throw open some new questions, even when proceeding on limited knowledge.

to distinguish between three aspects of a sign, the *vehicle* or sign form itself, the *designatum* or general signification of the form as part of a larger repertoire, and the *denotatum* or particular import of the sign in a given instance.[3] For example, the study of Maya epigraphy as represented in this volume consists of the analysis of glyphic forms (sign vehicles) associated with phonetic sequences, words, calendric units, and other concepts (general designata) and related to the specific discourse contexts in which the forms occur. This discourse level is the one at which denotata are identified. By segmenting the glyphic corpus into glyphs, glyph groups, columns, and rows, the epigrapher makes a series of judgments regarding the boundaries and individuation of formal vehicles. Similarly, the recognition of a partial syllabary and spelling rules for glyphs (see Justeson, this volume) amounts to assigning conventional designata to specific glyphic forms.[4] As is clear in the literature and in papers by Hofling, Lounsbury, and MacLeod in this volume, glyph forms paired with general designata enter into discourse contexts in which they function as elements in larger constructions—referring to particular times, places, events, and individuals. That is, the glyphs denote as well as designate.

In addition to the vehicle form, designation, and denotation of a sign, there is a fourth component which links it to a broader social process of interpretation. Peirce (1955:99) and Morris (1971:19) called this the "interpretant," by which they meant both the person(s) who understand(s) a sign and the other signs in which this understanding is represented. In both cases, interpretation implies a process of meaning construction in which an individual sign corresponds to a series of other ones to which it is partly equivalent and partly distinct. For instance, the image of a seated ruler on a monument at Piedras Negras is interpreted in the accompanying glyphic inscriptions, where the individual's accession to the throne and subsequent reign is described. Similarly, the Maya Books of Chilam Balam recount the deeds of native nobles and priests, as well as the early friars, describing their modes of address and symbolic behavior. Such reports are *interpretations* in the semiotic sense. Like other signs, they are selective and imply evaluations of that which they describe.

The same holds for the interpretations a non-native analyst derives from symbolic forms; namely, they imply sets of partial equivalents based on selective aspects of the signs under study. For instance, a glyphic text can be interpreted in terms of spoken language and rendered in alphabetic writing, as most of the papers in Part I illustrate. Hopkins (1987) distinguished among three classes of glyphic interpretation: (1) *interpretations* proper, where the signification of a sign is clear, but not linkable to any specific words nor analyzable in terms of linguistic constituency; (2) *paraphrases* which specify the meaning of a glyphic construction along with its grammatical structure, but still not linkable to a particular linguistic expression, (3) *readings* proper in which the glyph is linked to a specific phonological representation, grammatically and semantically analyzable. From a linguistic perspective, *readings* are the strongest form of understanding (since they link up with the grammar at several levels simultaneously); but as Hopkins pointed out, they are possible only in those cases in which the glyph construction is phonetically grounded. In practice, most interpretation involves inferences at various levels of remove from Mayan languages. This is an inevitable consequence of the fact that the glyphic script is not uniformly phonetic, but a "mixed system" (see Minimal Units, below). Nonlinguistic representational forms, such as pictographic or architectural embodiments, can be *interpreted*, but not *paraphrased* or *read* in Hopkins's terms. Native cultural codes such as language, the calendar, cosmological systems, and ritual practice nonetheless provide powerful interpretive systems, as the papers in Part II show.

Modes of Representation

The relation between a sign vehicle and its designatum is not a direct one, but is mediated by social convention. Glyphs, icons, and ritual symbols are recognizable as such because they are associated in Maya culture with identifiable meanings—an emblem glyph standing for a specific place, the reptilian symbols of rule on pottery (see Rice, this volume) or the significance of bread offerings in Maya ritual practice (see Love, this volume). In each case, an understanding of the representational form requires putting it in relation to a larger sociocultural system, an institutional context in which the sign and its meaning are *constituted by convention*. From the outside perspective of an analyst seeking to understand words and images in Maya culture, the link between the forms and their significations is therefore relatively arbitrary, as opposed to necessary or natural. One corollary of this is that two or more different occurrences of a form can be treated as instances of the same unit. That is, it is possible to distinguish the sign *token* in its individual manifestation from the *type* as a general invariant category.

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[3] These three are derived from Peirce (1955) and Morris (1971). Other ways of decomposing are possible.

[4] Compare Fox and Justeson (1984) and Justeson (1984) for cases of polyvalence in Maya glyphs, where the correspondence of glyphic to spoken form is one to many rather than unique.

For instance, a conventional icon such as the Chac "rain god" depicted in the Dresden Codex can recur with variations in a series of cases, yet still be constantly associated with Chac at the type level.

Not all conventional signs are related to their denotata in the same way, a fact reflected in the terms *icon* and *glyph*. In the case of *icons* (as an analytic category), the representational form is linked to its object by resemblance or similarity. For example, the depictions on the walls at Bonampak are interpretable as relatively "realistic" portrayals of groups of actual Maya actors. Similarly, the accession scenes at Palenque are iconic representations of historical events. Bassie (1987) suggested that the smaller and larger figures flanking the world tree on the tablet of the Temple of the Cross actually represent Chan Bahlum at younger (smaller) and older (larger) stages of his life (cf. Schele and Miller 1986:115). If this is accurate, it implies that the size of figures can be iconically related to age of the person denoted and that spatial array can iconically represent temporal succession. Many glyphs, however, particularly the phonetically interpreted ones, bear no resemblance to what they stand for. Rather, the linkage is merely a matter of *symbolic* convention, in the absence of which there would be no tie whatsoever. Glyph T59 corresponds to the linguistic form *ti* (Justeson 1984:320), for instance, but not because of any resemblance between glyph and sound. The arbitrariness of signs is most obvious in the case of symbolic ones. Another category commonly distinguished is that of *indices*, which are related to their denotata by contiguity rather than resemblance or mere tradition. The "emblem" glyphs that epigraphers have associated with different sites, such as Copan and Tikal, are primarily indexical: the glyphs themselves may designate the names of founding lineages, the locations, or some other concepts, but the fact that each emblem occurs primarily in inscriptions at its respective site is what links it to the place. This is an indexical relation, because it is a fact of contiguity, not resemblance or mere convention. In distinguishing iconic, indexical, and symbolic modes, it is important to recall that the three are usually blended in representational forms. To the extent that an icon is a selective portrayal formed according to traditional canons of representation, it is symbolic in the analytic sense. Similarly, the fact that the emblematic function of certain glyphs is indexical does not preclude these same glyphs from being symbolic or iconic, insofar as they conform to local standards or resemble their objects.

Systems

Each of the papers in Part I of this volume demonstrates that the signs of Maya discourse are systematically interrelated rather than being idiosyncratic, one-time productions. Epigraphers have established that the glyphs are indeed a language with a syntax, a semantics, and a pragmatics. The syntax consists in the relations among different glyphs—that is, their oppositions and combinations. For example, the conventions herein described by Justeson, Bricker, Hofling, and Lounsbury all build on the fact that glyphs combine according to specific principles, so that sequences of them can be isolated and analyzed in terms of a constituent structure. Conversely, given a syntactic frame, it is possible to show that specific glyphs in it can be exchanged for other glyphs, resulting in distinct, but still authentic "sentences." This implies that there are sets of syntactically equivalent substitutes, which is just what would be expected on the hypothesis that it is a *writing system with categories*; individual signs have category values that determine their distributions. The semantics of the glyphs consists in the rules and procedures for associating written forms with their designata at the level of both individual ones and syntactic compositions. Pragmatics in this context refers to the conventions of use according to which individual token level texts denote or index particular actors, objects, and events. By speaking of the glyphs as a language, we mean that they make up a system with all three kinds of organization. One of the challenges facing Mayanists is to formulate explicitly the principles of glyphic discourse as well as those of the iconographic corpus, so that the relation between the two can be clarified.

In his analysis of the inscriptions of the hieroglyphic text of the Temple of the Cross at Palenque, Lounsbury (1980:102ff) demonstrated the fruitfulness of syntactic analysis in interpretation. This text contains several structurally parallel phrases describing chronological relations between two events according to the general formula: Distance Number — Prior Event (1) — Posterior Event (2). In this template, the distance number element expresses the interval of time elapsed between event 1 and event 2. At least one of the two is also linked to the broader time frame of the text, so that the entire construction can be assigned a unique historical date (or period). Further, each one of the event descriptions is itself complex, containing (maximally) a verbal element followed by a subject and a date. The full template therefore consists of: DN — [Vb1 · Subj1 · Date1] — [Vb2 · Subj2 · Date2]. This relatively simple segmentation shows that the glyphs have constituent structure, since each of the event descriptions is internally complex and functions as a single unit in relation to the Distance Number. Lounsbury went on to show that this construction is the maximal one and that in the text various reduced versions of it occur in which one or another element is omitted. For instance, the date marker in event 1 or 2 is missing in several

cases, which had caused severe problems of interpretation for previous epigraphers. Lounsbury was able to show that the omitted information could be *reconstructed* on the basis of the template plus a knowledge of the syntax of spoken Mayan languages. His paper in this volume is an analogous demonstration of the role of syntax in epigraphy, showing that superficially dissimilar glyph sequences are actually alternative names for a single ruler in the inscriptions at Copan. Starting from the syntactic equivalence of the name phrases, along with their common temporal frame and their proximity to emblem glyphs, he infers their common relation to a single denotatum (the ruler); that is, he reconstructs their coreference.

FORMATS AND FUNCTIONS OF REPRESENTATION

Channel

The corpus of glyphs, alphabetic texts, iconography, and ritual signs treated in this volume displays a variety of distinct channels, each of which has its own format. Glyphic texts, for instance, are usually laid out in columns and rows as in the following, in which each cell would contain a glyph (Morley and Brainerd 1983:522):

	A	B	C	D	Etc.
1	A1	B1	C1	D1	
2	A2	B2	C2	D2	
3	A3	B3	C3	D3	
4	A4	B4	C4	D4	
Etc.					

Normally, texts are to be read in the order A1, B1, A2, B2, A3, B3, A4, B4, C1, D1, C2, D2, and so forth. In the case of glyphs containing recognizable faces (human, zoomorphic), they face to the reader's left (the opposite direction from the order in which they are read).[5]

[5]It would be inaccurate to say simply that the figures face left without specifying that it is the viewer's left, since in those cases of iconography where the graphic face is connected to a body, what is left for a viewer may be right from the perspective of the figure itself. Given that right and left, like up and down, have further corollaries in Maya culture, orientation should be treated precisely in interpretation. As Sharer (Morley and Brainerd 1983:522) points out, a section of the Paris Codex contradicts the general rule, in that the glyphs with faces face to the viewer's right, not left. This same section of text is read in the inverse order of the normal one, namely, from right to left. Thus, the iconic orientation of the individual glyphs is indexically related to the overall reading order, since a change in the one signals a change in the other.

Another instance of variation in linear order is in the inscriptions of Temple II at Copan (Floyd G. Lounsbury, personal communication). According to Schele and Miller (1986:123–24), "The upper temple is penetrated by four corridors that enter from each of the cardinal directions converging in a cruciform plan. Carved into the corridor walls on either side of the four entry points are two texts of twenty-four glyphs each. Each pair of texts is drawn so that one half of the pair reads in normal left to right orientation, and the other in mirror image, or right to left. Schele and Miller conclude from this that the text was intended to be read from the perspective of an observer placed in a vantage point actually blocked by a wall, from which they infer a supernatural audience. Similarly, the twenty figures carved on the bench in the center of this same structure face inward, with Yax-Pac in the center, the figures to the right of him facing left (normal orientation) and the figures to the left facing right (toward him), the inverse of the normal orientation."

Similarly, alphabetic texts are read left to right and top to bottom, although the paired column format of glyphs gives way in romanized script to lines that continue across the page (or column if drawings are included; see photos of Chilam Balam of Chumayel in Edmonson 1986). Although iconic portrayals not linked to language may nonetheless display determinate orientations, such as two nobles facing one another or a god figure gazing to his right, there is an important difference between these and the glyphs: whereas written text is inherently sequential, just as is spoken language, pictorial forms are not necessarily interpreted sequentially (although they might be). If one attempted to read a page of the Dresden Codex from right to left and bottom to top, it would be impossible to arrive at a tenable interpretation. Just as one neither speaks nor writes backwards, neither can one meaningfully understand an utterance starting at the end and working toward the beginning. (The facts that games can be constructed in which one does this, that speakers both plan and reformulate utterances in talk and that readers reread, are true, but does not invalidate the basic point that linguistic form, as Saussure observed, is inherently linear). However, in the scenes depicted on the lintels and stelae of Yaxchilan (Schele and Miller 1986:209) or Bonampak (Mathews 1980), there are human figures in various relations to one another, recognizable without any necessity of scanning the images from left to right or top to bottom. Pictorial forms make simultaneous wholes, whereas linguistically based writing reflects the linearity of speech. Arthur Miller's paper in this volume takes up the distinction between linearity and nonlinearity, arguing that it correlates with the relative context dependency of images as opposed to the conventionality of language.

Function

Apart from the distinctions between iconic, indexical, and symbolic modes, there are further functional distinctions that apply to signs and that can help clar-

ify both the differences and the continuities among media. In linguistic description it is customary to distinguish the *propositional* use of language to identify and make statements about referents, as opposed to such communicative functions as *address*, *persuasion*, and *directivity* (focusing on an addressee); *expressivity*, whose primary focus is the speaker's attitude or set toward the message; *phatic*, whose focus is on the contact between interlocutors; and *metalinguistic*, which describes or refers to the language itself. Finally, the *poetic* function is based on highlighting the representational form itself for aesthetic purposes. An especially clear case of this is verse parallelism, in which adjacent lines in discourse are partly equivalent, as in "we are beneath your foot, we are beneath your hand." The basis of parallelism may be syntactic (identical word order, constituencies, phrasings), semantic (identical designata, denotata), or both.[6] The point of such functional distinctions is that language contributes to overall communication through different kinds of meaning, implying different ways of individuating signs. Speech is by definition multifunctional in that it combines these various functions and many others as well.[7]

The same point pertains to Maya literature and representational forms. For instance, the successive advances of Berlin, Proskouriakoff, Kelley, Lounsbury, and recent epigraphy have demonstrated convincingly that at least some parts of the inscriptional corpus describe actual historical events, such as successions to the throne, warfare, and ceremonial practices. Parts of the texts of Chilam Balam, however, written after the Conquest in romanized script, record quotations of *persuasive and directive address* by priests and prophets to named audiences. Rather than being primarily *propositional*, such examples show language directed toward convincing and changing the conduct of its addressees. Many of the texts in the so-called Ritual of the Bacabs (Roys 1965) are intensely directive in force as well (see example in Hanks's paper, this volume). Similarly, in the Chilam Balam of Chumayel, the accounts of the May ceremonial cycle (a calendrical ceremony based on the 20 year *may* period) record clearly *metalinguistic* usage: place-names, such as Cuchucil, Macalum, and Panab Ha, are etymologized in descriptions of activities that took place there (Hanks 1988). The poetic function is central in much of Maya literature and is embodied in a number of stylistic principles discussed in papers by Lounsbury, Hanks, and MacLeod in this volume. As scholars continue to refine interpretations of both glyphic and romanized texts, as well as pictorial forms, it will be increasingly important to consider the range of possible communicative functions and to formulate explicit hypotheses regarding them and their combinations in the corpus. In a recent paper, Josserand (1987) proposed a distinction between *anterior* and *posterior* event indicators in the main text of the Tablet of the Cross at Palenque. Anterior event indicators are glyphs that index the segment of text in which they occur that refers to a time-line prior to that of events indexed by a posterior event indicator. Josserand argues that the former are relatively "backgrounded" and the latter relatively "foregrounded" in the overall discourse.[8] What is interesting about this hypothesis in the present context is that it amounts to a metalinguistic function, an example of how certain glyphs frame the interpretation of parts of a text.

Referential Domains

Superficially dissimilar glyph constructions may be related by their common reference to a single denotatum, as in the name graphs of the ruler Lounsbury discusses.[9] Alternately though, they may be related as members of a single lexical domain, such as different kinship terms, calendric names (Hopkins 1987), accession expressions, emblem glyphs, or toponymns. Both coreference and common membership in a single "domain" can provide a basis for relating superficially different glyphs, just as the analogous factors in spoken language provide a basis for semantic relatedness among lexical items. As Lounsbury shows, coreference among glyph constructions can provide a fixed point relative to which inferences can be made regarding substitution sets. Similarly, Hopkins (1987) pointed out that hypotheses regarding comembership in a semantic domain can provide a context in which to make controlled, relatively precise readings. It is important to keep in mind that hypothetical semantic domains must be grounded in Maya culture in order to be revealing. Kinship, birth, and accession to rule, for instance, are labels for sets of interrelated concepts whose weighting and boundaries must be determined on independent grounds rather than assumed in advance.

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[6] See, for instance, James J. Fox (1987), Friedrich (1979), and T. Turner (1985).

[7] See, for instance, Jakobson (1960), Hymes (1974:chapter 1), Friedrich (1979), Gumperz (1982), Silverstein (1985).

[8] It is interesting to note that this function is commonly indicated by demonstrative particles such as "that" (background) and "this" (foreground) in spoken language. This illustrates that, although there may be no evidence of demonstratives (this, that, here, there, now, I, you, etc.) in the glyphs, some of the discourse functions marked by them can be taken over by specialized glyphs.

[9] Variant name graphs are distinct representations of a single phonetically readable name.

Variation

Mayanist scholars have recognized at least three different kinds of variation in the glyphic corpus, namely stylistic, geographic, and diachronic. *Stylistic variation*, in the clear cases, consists of variable features of text or image governed by the discourse context (genre category, expressive ends, immediate verse context) of the token. This is the basis of the substitution sets identified by Lounsbury, in the sense that the alternative name graphs of the eighth-century ruler of Copan are referentially equivalent but stylistically different. Verse analysis, as in the examples presented by Hanks in this volume, turns on a specific kind of variation internal to a single text—the variable pairing of parallel with nonparallel features across lines. Different genres may be regularly associated with different representational styles, as in the regimented parallelism of ritual performance (Hanks 1984; Love 1984), as opposed to the relatively straightforward descriptive style of much of the narrative in the books of Chilam Balam. Hofling's paper in this volume raises the issue of style relative to genre in the Dresden Codex and demonstrates that this text is tightly regimented (cf. Gossen 1985).

Geographic variation consists of differences in representational form correlated with differences in location or provenience of an artifact. The emblem glyphs, to the extent that their forms are site specific, provide a clear example of this. In the case of linguistically based inscriptions, geographical differences may be due to dialect differences of the scribes, as in well-known cases of Yucatec spellings in the codices compared with Chol spellings in the inscriptions at Palenque. Dialect variation has been a major focus of research by epigraphers in recent years (see papers in Justeson and Campbell 1984).

Diachronic variation is due to differences in the time frame in which an artifact was produced. In an interesting discussion of all three kinds of variation, Macri (1987) pointed out that how texts are grouped for analysis has implications for the kinds of variation likely to be encountered. A group of texts associated with a single ruler, codex, or building, for instance, commonly reflects less than 100 years' development, and may show limited stylistic variation. A group associated with a single archaeological site, such as Tikal, may reflect a much longer temporal span and consequently show more variation. Macri observed that variation of the three kinds may be evident in phonological, lexical, morphological, syntactic, and discourse levels of a text. Clearly, the three kinds of variation may be blended or in some cases coincide (e.g., a stylistic feature of artifacts from a single site or time). The important point is to recognize that they are distinct in principle.

UNITS AND LEVELS OF REPRESENTATION

Segmentation

One of the basic tasks of a symbolic analysis is to identify the units and levels of structure in the sign forms under study. In linguistics, this implies segmenting the speech stream or written document into its grammatical components, including units of sound, morphosyntactic units, like the word with inflections, and semantic ones, like a proposition or referring phrase. Poetic analysis yields further units such as the verse phrase, the line, and the construction, as in the five-line stanza or verse series. Despite the basic differences between pictorial and linguistic representations, the former no less than the latter may be susceptible of analysis into recurrent units.[10] Thus, devices such as cross-hatching, border design, body postures, and overall pictorial layout may be governed by conventions and enter into formal categories according to regular constructive principles. In general, to segment a sign form—to identify it as distinct from other forms—is to treat it as a token of some type. This usually implies that it occurs in other contexts as well, since a single type canonically corresponds to a set of tokens. To segment a text or image into component parts, therefore, relies on a distributional analysis in which the parts are shown to recur in other contexts, with or without contextual variations. That certain components may be unique to a single text or image does not alter the more general fact that segmentation requires evidence and the best evidence is distributional.[11]

Examples of the use of distributional facts in identifying signs are not hard to come by in Maya epigraphy. Berlin's work on emblem glyphs and Proskouriakoff's interpretations of the signs of rulers at Piedras Negras both employ distributional analysis of nonlinguistic glyphs. That is, by closely examining the contexts of occurrence of given signs, Berlin and Proskouriakoff were able to formulate specific hypotheses regarding the designata of the forms. Lounsbury (1980, 1984, this volume) has demonstrated the importance of controlled observations of glyphic distributions in written texts at Palenque, Copan, and in the Dresden and Paris codices. As he noted, distribution can place limits on semantic hypotheses regarding the designata of glyph types by showing that formally distinct glyphs (or glyph groups) occur in equivalent positions in larger structural units, such as phrases and clauses. The periodic recurrence of directional, color, and calendric terms

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[10] See, for instance, Munn (1966) for segmentation of visual categories with examples from Walbiri.

[11] This statement is intended to bear on the corpus of Maya inscriptions, hieroglyphic texts, iconography, and painting, for which interpretations must be reconstructed without commentary from its native producers.

in the codices is another distributional element of interpretive significance, as is the tendency for names of gods to co-occur with images of them (noted in Lounsbury 1984:175). The more general point is that the task of deciding what are the sign units in a written or pictographic corpus, and what they might designate, is an ongoing one that requires interlocking hypotheses about patterns of (co)occurrence.

Minimal units

One of the products of segmentation is an inventory of minimal units out of which constructions are composed. In alphabetic writing, these minimal forms correspond to graphemes, such as letters, diacritics, and punctuation marks. In his Maya grammar, Tozzer (1921) laid out the different orthographies used to write Yucatec Mayan language for instance, and Bricker's paper in this volume demonstrates that peculiarities of spelling in the colonial manuscripts had their source in the rules of glyphic spelling in evidence in the codices. The carry-over from glyphic into alphabetic script is a clear instance of historical continuity at the level of sign vehicles, despite a change in channel. Epigraphers distinguish approximately 800 individual glyphs in the entire hieroglyphic corpus (Morley and Brainerd 1983:521), about 108 of which are primarily phonetic in function and evidently correspond to syllables in a spoken language (Mathews 1984). These minimal forms are combined into glyph groups consisting of a larger, central *main sign* plus one or more smaller *affixes* around the periphery. Whereas individual glyphs are usually graphically complex, they are unitary from the perspective of the writing system, just as a letter like "t" may be divisible into vertical and horizontal strokes, but functions as a single unit in English orthography. The idea of minimal units is linked, therefore, not to the objective form of a sign vehicle, but to its place in a larger pattern.

Sequence and Constituency

Most of the texts Mayanists deal with are complex in that they contain a combination of minimal units in some structured arrangement, such as a syntactic phrase, sentence, or pictorial composition. Papers by Hofling, Lounsbury, Hanks, and MacLeod in this volume build directly on the syntactic structure of spoken Mayan as a means of analyzing written texts. Hofling shows that the concepts of topic, focus, and new vs. old information, which play an important role in connected discourse in modern Yucatecan languages, are also at work in the Dresden Codex. Previously unexplained variations in sequential order and apparent constituency of glyphs can be accounted for by recognizing the close relation between discourse patterning in the two channels (spoken and glyphic). Lounsbury's papers (1973, 1984) illustrate the necessity of analyzing the syntax of glyphic compositions. In this volume, he identifies substitution sets within a syntactic frame characteristic of name phrases on the stelae, altars, and architectural structures at Copan. Superficial variation is reducible to alternations between signs in paradigmatic sets, the equivalences providing what Lounsbury calls "a built-in 'Rosetta Stone.' " MacLeod's identification of glyph T588 with the verbal expression *tsic oc* 'count footsteps' incorporates a syntactic analysis. Hanks attempts to show that constuctive principles of Maya verbal style can be identified and used to explain discourse form in colonial documents in more precise terms than would be otherwise possible. Each of these studies builds on relations of sequence and constituency in discourse. Justeson and Bricker focus on the sound structure corresponding to glyphs and also address the order and grouping of graphic units relative to phonological units.

As described by Sharer (Morley and Brainerd 1983:521) and used in papers here, the basic rules of combining glyphs into glyph groups may be summarized as follows. A glyph group consists of a *main sign* plus affixes. Affixes include four kinds, defined by their position relative to the main sign: *prefix*, *superfix*, *subfix*, *postfix*. These terms presuppose the left-to-right and top-to-bottom orientation of glyph groups, mentioned above. In some cases, elements may be embedded within the main sign rather than around it, in which case they are *infixed*. The order in which the parts are read varies somewhat according to the precise positioning of affixes, scribal variation, and possibly other factors, but is typically prefix→superfix→main sign→subfix→postfix (Morley and Brainerd 1983:521).[12] Just as the order of glyph groups is determined by conventions, so are the elements within the group. Sharer (Morley and Brainerd 1983:537-9) summarizes glyph identifications that are relatively securely established in Maya epigraphy, and most of these have a syntactic substratum. He includes the outlines of a syllabary, categories of glyphs corresponding to verbs, nouns, adjectives, and particles (among the major syntactic categories in Mayan languages), and many individual glyphs

[12] John S. Justeson (personal communication) points out that various other orders of reading glyph groups are found in the glyphic corpus, and Floyd G. Lounsbury (personal communication) suggested that the superficial orders of reading result from two rules. These specify that, for any configuration of affixes, left precedes right and above precedes below (which recapitulates the order in which sequences of glyph groups are usually read.) Not having worked in epigraphy, I am unable to specify the rules or their applications any further.

for colors, calendrical units, deities, animals, personal names, and other objects.[13] The superficial order of glyphs appears to follow the verb-object-subject sequence familiar from Yucatec, although glyphic discourse is highly telegraphic in many cases.

Episodic Structure

One of the widely recognized features of Maya textual organization is its use of episodic structures, such as the repeating cycle and recurrent line or couplet. In some cases, this effect is achieved by way of poetic structuring of adjacent lines, as described in Hanks's paper; in other cases, there are no line-to-line parallels, but rather a cyclic repetition of certain forms. Cycles are one of the basic devices in the Maya calendar and play a crucial role in MacLeod's identification of the day count verb and Lounsbury's (1984:174ff) treatment of the *tzolkin* 'day count' in the Dresden and Paris codices.[14] Each of these analyses implies the presence of discourse units larger and at least partly independent of the phrasal and sentential structures defined in grammar. Such units can be used as a guide to segmentation of discourse, for which they provide intermediate boundaries and constructions larger than the sentence but smaller than the whole text. Lounsbury (1984a:174ff), for instance, was able to isolate within the four subdivisions of the *tzolkin* 'day count' the glyph complexes corresponding to a nine day period and then to show that each such period contained a variant of the 'house' glyph denoting that the god Chac was in his "house" at this conjuncture. The evidence for the interpretation is both distribution within the overall cycles of the count and also the accompanying picture of Chac within an enclosure, evidently representing in image form the same event described by the glyphic inscription. Taken together, the iconicity of the image, the syntax of the cycle, and the relation of contiguity between the two provide a basis for controlled hypotheses regarding the designations of the glyphs.

Verse constructions have also proved important in the interpretation of Maya texts—glyphic, alphabetic, and spoken alike. The literature on this topic is addressed in Hanks's paper treating colonial documents, showing that principles of verse parallelism account for couplets, triplets, and four-part series. Lounsbury (1980:107ff) used verse parallelism to link lines and phrases within them in the glyphic inscriptions at the Temple of the Cross at Palenque. In particular, he showed (1980:108) that the "sky event glyphs" in the inscriptions fit into the nested couplet structure:

Temporal phrase—Event 1—Protagonist	A
Temporal phrase—Event 2—Place—Protagonist	A′(b)
—Event 3—Place	(b′)

In this construction, the first two lines are syntactically parallel, with the exception of the inserted place glyph in the second one. The latter then becomes the basis for the third line, a reduced, but still parallel version of the middle part of the second. Given this overall structure (together with further knowledge of the corpus), Lounsbury argues that the positional equivalence of event glyphs reflects their denotational equivalence as signs referring to the "sky event" of the protagonist. Parallelism can therefore provide a context for hypotheses regarding denotation as well as information omitted but recoverable in context. Hendrickson's paper in this volume presents a broader segmentation of the narrative of the Popol Vuh into episodes and parts based on a single thematic development.

Work

It is an empirical question how many levels of structure intervene between the individual line in a discourse, however this is defined, and the work as a whole (that is, the opus) in which the line occurs. Verse constructions, cycles, and topic units may be directly joined in the work or may themselves fit into superordinate categories, like parts, sections, or other extended units. In the *tzolkin* 'day count' for instance, individual day glyphs fit into four series of sixty-five days apiece, each subdivided into five blocks of 9, 11, 20, 10, and 15 days each (in the order cited). In inscriptional texts, the monument or series of monuments on which they appear may delimit the inclusive work of which they are a part, just as a ceramic with glyphic writing may be a single work. In many cases though, it is difficult to decide the boundaries of a text, because its unitary separateness from the larger surround is in question. In the case of inscriptions on architectural structures (walls, lintels, stelae, façades), at what level of inclusion and by what criteria can a single stretch of glyphic text be segmented from the rest of the site and treated as a whole work? The Dresden Codex comprises seventy-four pages

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[13] Bricker (1987) outlined morphological distinctions from spoken Mayan (Yucatec and Cholan) maintained in the glyphs, including noun, verb, transitive vs. intransitive verbs, pronominal affixes, and positionals. She also observed that no firm evidence is currently available to indicate the presence of demonstrative frames in the glyphs. Hopkins (1987) observed that noun classifiers are absent in the classic glyphic corpus, and Hofling (1987) pointed out that voice distinctions (passive vs. active vs. antipassive) are not maintained in the glyphs, even when clearly expected on syntactic grounds.

[14] Other treatments of cyclicity in both glyphic and alphabetic texts can be found in Fought (1985) as well as Hanks (1987, 1988). Josserand (1987) proposed episodes and time frames as units of discourse structure in the inscriptions at Palenque.

devoted to a variety of themes, laid out in several distinct formats and produced by eight different scibes, according to Zimmermann (1956, cited in Morley and Brainerd 1983:517). It is fair to ask in what terms this codex is a single opus, as opposed to a collection of smaller or fragmentary ones that happen to be found in the same manuscript. The same question arises with force in the case of the books of Chilam Balam, which have been recopied several times and contain material obviously corresponding to several genres of discourse in different formats, some accompanied by illustrations, some not. What are the principles governing the combination of glyph text and iconographic images in works? If we take Arthur Miller's point in this volume that images and language-based texts are governed by distinct principles, then the ones that govern the combinations must be yet a third kind. How are the different parts of a work brought together? The numbered episodes of the Ritual of the Bacabs might each correspond to a unitary whole, with no overall framework beyond the serial numbers to relate them—no single "ritual of the bacabs" to vindicate Roys's title. These are difficult questions that merit more attention than they have received in the literature. They force an examination of not only the recurrent hierarchical groupings in discourse (cf. Woodbury 1985) but also the limits of the work as an aesthetic and semiotic object.[15]

The problem of what unifies a whole work raises the related question of discourse genres, because they determine how works are defined. Genre as an analytic category can be constituted in a variety of ways. From a formalist perspective, it is defined as a regular grouping of thematic, stylistic, and compositional elements. Different genres correspond to different groupings. For instance, Yucatec *reésar* 'prayer' focuses thematically on spirit referents, has a parallelistic style, and is constructed from defined sections with a beginning and an end (Hanks 1984; Love 1984). By contrast, a traditional narrative like the Yucatec story of the deer charm (Burns 1983) or the monkey story (McQuown 1979) is thematically distinct from prayer, tends not to be formulated in any single style, and shows distinct beginning and ending devices and internal composition. From a historical perspective, however, the categories of genre follow from the specific conventions and ideals by which authors compose discourse and audiences receive it. Rather then being inherent in the work (word or image) itself, genres would consist of the ways in which actors relate to the work through their expectations, interpretive approaches, and expressive strategies. Maya prayer, for instance, would be defined primarily in terms of the cultural values associated with the category, its social distributions (who performs it, when, where, why), and performance styles according to which it is shaped over the course of situated productions.

An overall description of Maya representational conventions must combine formal and historical perspectives, rather than choosing between them. In the textual corpus, formal and diachronic dimensions *are* combined and it is only by way of analysis that they can be distinguished at all. A text like the Dresden Codex or the Chilam Balam of Chumayel has internal thematic, stylistic, and compositional features, but it also has a history over which it was produced by certain actors for certain purposes, distributed through a social context, and fitted into a native interpretive tradition in which it was invested with significance (not necessarily in that order). Such elements of "context" may appear to fall beyond the bounds of visual or linguistic form as such, but the appearance is misleading. The units and levels of structure in a written text, from orthography through the work as a whole, are themselves the product of a diachronic process. They may reflect spatially or temporally local innovations, as a number of the papers in this volume show. Continuity is an equally diachronic fact, insofar as it consists in the recurrence of given semiotic elements over successive instantiations. Textual artifacts are not isolated objects, furthermore, but bear various kinds of *intertextual* relations to one another and to the larger discourse of which they are a part (see next section).

These facts indicate that the systems characterized by symbolic and linguistic analysis are not objects that can be "dated" merely by assigning then to some present time of production. The "contemporary present" of the representational form is what the Prague School linguists called a "dynamic synchrony," or a changing present, not a sheer simultaneity. These considerations tend to break down the commonsense boundary between the individual inscription or image and the historical context in which it was produced. Rather than "surrounding" or "including" the text, "context" interpenetrates it. By the same logic, we cannot describe "Maya history" as an "objective record" that exists apart from the representational forms in which it is embedded. These forms do not just reflect history, but constitute it as well. In a word, the papers in this volume give further evidence that symbolic form and historical process are mutually constituting dimensions of a single articulation.

It is not always possible to give an account of all of these dimensions for lack of evidence; but in viewing artifacts, it is important to keep in mind that both formal and emergent properties contribute to the work as a cultural production. In treating the glyphic and

[15] See Turner's (1985:52–55, 97–105) discussion of symbolic structure in mythic discourse and the logic of syntagmatic and paradigmatic relations in a single Kayapo (Brazil) myth.

early romanized corpus, each of the dimensions plays a role. To describe a text as "calendrical," "historical," "mythological," or "ritual," for instance, implies a specific range of themes portrayed in it. Attention to poetic or prose style can contribute to genre categories an account of the sign vehicles by which they are realized. The constructive units in the composition of a text, such as glyph groups, cycles, combinations of glyphic and iconographic channels, and beginning and ending devices, are all potentially distinctive features of genres. Beyond these features lie questions such as who composed the text and from what perspective and for what audience; whether it was for the purpose of subsequent oral readings and, if so, under what social circumstances; for what kinds of action the discourse was a vehicle—in brief, how it fits into a larger historical development.

Although none of the papers in this volume addresses the problem of genre directly, many treat historical transformations in representational form relative to theme, style, and composition. In Part I, Hanks and MacLeod explore innovations and continuities over time in the composition of written discourse. In Part II, Stross traces the crayfish icon through time and space; Cohodas, the emergence of an individual style in ceramic texts. Freidel and Schele examine dedication and termination rituals as an ongoing process of continuity for establishing royal lineages. Schlak, Virginia Miller, and Prudence Rice demonstrate continuities of theme, style, or composition over time, linking architecture and iconography, iconography and astronomy, and iconography, kingship, and the agricultural cycle. The link between representational forms and calendrically governed ceremonies, as treated in papers by Stone and Taube, illustrates another way of relating theme, style, and composition to history, since temporal succession is itself the theme. Love takes the Yucatec ritual bread as a vehicle of signification and traces its portrayal in pre-Conquest, colonial, and modern ritual productions.

CONTINUITY AND DISCONTINUITY

Intertextuality

The idea of representational genres implies that works and their component parts are interrelated. Two works may be linked to one another by concrete shared features, such as shared reference to some object or event, mutual reference to one another, elaboration (whereby one work amplifies another or complements it), or contradiction of one by the other. Any two works that belong to the same genre are, to that extent, intertextually related. For example, the so-called Books of Chilam Balam are generically diverse in theme, style, and composition, and differ significantly from one another. This notwithstanding, the intertextual continuities between different books are strong enough to suggest that they represent a single complex genre (Barrera Vásquez and Rendón 1948). Similarly, the written "chronicles," land surveys, and letters produced by Maya nobles in early colonial Yucatan display a variety of common features linking them to each other. One such feature is the tendency for individual texts to appear in a series, such as the seven nearly identical letters to the Spanish crown in 1567 (Hanks 1986), the two clearly related but distinct surveys of Yaxkukul (Barrera Vásquez 1984), and the three Sotuta documents dated September 1600 (Roys 1939). Serial production in these texts appears to derive from two modes of collective action by the Maya nobility. Mutually reinforcing renditions of a single "text" are a vehicle for display of consensus among principals (multiple signatories, witnesses), whereas discrepant versions may advance competing or even contradictory perspectives (Hanks 1987:69).

Intertextuality in many cases links different works in a single generic category, formulated within a single code. It may also link works in different codes, across different semiotic channels, such as written discourse and pictorial representation, material form (ceramic, architectural) with glyphic, written, or pictographic inscriptions, and the production and layout of ritual offerings with the spoken performance by which they are presented. At least three kinds of intersystemic relations can be distinguished in the corpus of Maya artifacts: interpretation, derivation, and contiguity.

A work produced in one system can be said to *interpret* a work in another, insofar as it describes the signification of this other work or of its parts. For instance, a glyphic inscription or text may interpret an image or sculpture by describing the event portrayed in the nonglyphic form (although, see A. Miller, this volume). This is the case in the combination of glyph and image in the *tzolkin* 'day count' of the Dresden Codex, where the god Chac is shown enclosed in a container and the adjacent text describes Chac in his house (Lounsbury 1984). Coe's (1982) use of the Popol Vuh narrative from Quiche (see Hendrickson, this volume) to interpret the pictographic images on Classic Maya funerary ceramics is another example of intersystemic interpretation. Similarly, the numerous specific relations between glyphic and alphabetic discourse fit into an interpretive relation insofar as the alphabetic texts provide a basis for interpreting the glyphic. Landa's famous "alphabet" of glyphs is an example of not wholly successful cross-systemic interpretation (see Morley and Brainerd 1983:533f).

The clearest cases of interpretation arise in discourse contexts in which elements from two or more systems

co-occur in a single complex work. In such cases, the relation is one of *contiguity* as well as interpretation. The glyphic and iconic components of the Dresden Codex are an example of this, as are the combinations of images with explanatory commentary in the Books of Chilam Balam (Edmonson 1986). Such combined texts can give invaluable evidence of the significance of image or written components, as Mayanist scholars have recognized. Proskouriakoff's observation that the glyphs at Piedras Negras were distributed around the image of a seated individual and that this combined form of monument was grouped with other monuments bearing different motifs illustrates a chain of contiguity across glyphic, iconographic, and architectural codes. The fruitfulness of such a distributional analysis is well demonstrated by Proskouriakoff's inference that each monument group represents the life of a single ruler (1960, cited in Morley and Brainerd 1983:527). Bassie (1987) made a number of proposals for interpreting the relation between glyphic text and images in Maya art at Yaxchilan and Palenque, a specific sort of distributional analysis. She illustrated the following devices for linking the two modes of representation: (1) glyphic verbs may match actions illustrated, as in the hand-scattering events on Yaxchilan stela 1; (2) the individual pictured in an image may be the subject of a verb whose glyphic representation actually crosses over the body, or text relevant to the actor may frame him; (3) individuals may be labeled by their name glyphs on their body or directly above their heads; (4) images of individuals may face toward the direction to which a viewer's attention is guided. These are cases in which contiguous sign vehicles in a single composition may take as their object the interpretation of other aspects of the same composition. To use Gumperz's (1982) term, iconographic and glyphic texts may contain their own "contextualization cues."

One system of representation may be *derived* from another, insofar as it is designed on the basis of it and preserves some of its distinctive units. For example, the progressive demonstrations by epigraphers that some glyphs have a basis in Mayan language structure show that the glyphic code is partly derived from the spoken language (particularly Yucatecan and Cholan). Despite the difference of channel and the obvious differences between glyphic and phonological segments, the former preserve the syllabic structure of the language, because differences among syllabic units can be reconstructed from the glyphs (see Justeson and Bricker, this volume). Beyond sound structure the morphosyntactic foundation of much glyphic discourse is explicit in the papers by Hofling, Lounsbury, and MacLeod in this volume, showing that phrasing and constituency in glyphic texts preserves the corresponding units from the spoken language. On the other hand, certain iconic aspects of glyphic writing are evidently derived from conventions of Maya iconography, such as the use of face-figures with leftward and rightward orientation and the recognizable similarities between iconographic versions of gods like Chac and their name glyphs. A derivational relation between two systems does not imply that the derived one is traceable in all its details to the base one. Rather, it has organizational properties of its own, such as the spacing, punctuation, left-to-right and top-to-bottom orientation of alphabetic writing, as opposed to the linear speech stream of spoken language from which it is derived. The key fact is that the second system preserves some units from the first so that correspondences can be securely identified. It is expected that beyond these, a derived system tends to develop its own features not traceable to the more basic one.

Derived systems can differ in terms of how closely they are linked to a common base. For instance, the correspondence between Maya hieroglyphs and spoken language is less immediate than the one between alphabetic writing and spoken language. The reason for this is that Maya hieroglyphs are not strictly syllabic, but partly pictographic, making it impossible in places to securely associate signs with specific verbal forms. Furthermore, the glyphs fail to distinguish certain syllable types distinguished in alphabetic writing (although they both fail to show vowel pitch and length and other distinctive parameters of spoken Mayan). Another dimension of difference is the levels at which two derived systems correspond to a common base. Alphabetic writing corresponds mostly to phonological segments of the spoken language, whereas glyphic writing is partly syllabic (1 glyph: 1 syllable) and logographic (1 glyph: 1 word or morpheme). Building on work by Knorozov (1967), Kelley (1976), and others, Mathews (1984) worked out a partial syllabary of Maya glyphs. Lounsbury (1973) demonstrated the combination of syllabic and logographic signs in the compound prefix designating *ahau* 'ruler'. However, the literature also indicates that various features present in the spoken languages are *not represented in the glyphs*, including vowel length, pitch and quality (five vowels of Yucatec reduced to three), glottalized vs. plain consonants and vowels, voice markers (passive, active, antipassive), conjunctions, plural marking, demonstratives, and noun classifiers.

In this volume, Justeson's paper starts with a synopsis of phoneticism in Maya hieroglyphs and then develops a set of precise correspondence rules relating the phonology of the spoken languages (Yucatec and Chol) to the glyphic transcription. Bricker also investigates the phonology of writing, starting with colonial sources written in romanized script and then comparing these with established glyphic spellings. She shows

that both graphic systems followed a common set of spelling rules for consonant and vowel insertion and consonant deletion. This illustrates the more general point that two distinct systems in different channels can share a set of formation rules, despite their other differences. Bricker's interpretation sheds new light on both the glyphic and colonial sources, while demonstrating powerful continuity between pre- and post-Conquest writing. MacLeod's paper builds on earlier work (MacLeod 1984), which examined correspondences between glyph components and the morphological structures of Yucatecan and Cholan verb complexes. In this volume, she adduces evidence of specific links between written texts, alphabetic and glyphic, and the cyclic units of the Maya calendar. The difference can be seen as one of the levels of correspondence, from phrase structure to connected discourse. Hofling shows that topical units in the Dresden Codex correspond to their analogues in spoken language, which then provides a suitable frame in which to understand morphosyntactic patterns in the glyphs.

Historical Significance of Representational Forms

Intertextuality is not only a synchronic relation between codes viewed as contemporaneous systems but also a diachronic one between forms viewed in terms of their historical signification and contexts of production. The works examined in this volume denote events and individuals, as well as their durations and sequential relations relative to one another. The almanacs treated by Hofling; the day count by MacLeod, the king whose names Lounsbury explores; the letters, surveys, and accords described by Hanks; and the Popol Vuh examined by Hendrickson all designate historical individuals, events, or reckonings. Similarly, papers by Freidel and Schele, Closs, Ashmore, and Rice all treat semiotic forms in relation to their historical significations. In addition to the thematic focus of each representational work, there is the separate and equally important issue of the historical specificity of its production. Who produced a given work; where, when, why, how was it produced; and how was it distributed, interpreted, and used as a vehicle of situated action in Maya society? One of the areas in which these papers advance our understanding is in their combined use of pre-Conquest materials with post-Conquest ones, pointing toward an as yet unwritten history of Maya discourse practices. Such a history will not lie outside the textual, pictorial, and architectural forms, serving as their institutional "context" or "cause." Rather, it will be immanent in the forms and consist in the practices and events through which they were produced.

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Part I

Origins and Linguistic Principles of Maya Writing

Grammatical Bases of Scribal Traditions
Principles of Style and Composition

Grammatical Bases of Scribal Traditions

JOHN S. JUSTESON
The Representational Conventions
of Mayan Hieroglyphic Writing

VICTORIA R. BRICKER
The Last Gasp of Maya Hieroglyphic Writing
in the Books of Chilam Balam
of Chumayel and Chan Kan

CHARLES A. HOFLING
The Morphosyntactic Basis of Discourse Structure
in Glyphic Text in the Dresden Codex

3

The Representational Conventions of Mayan Hieroglyphic Writing

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This paper reconstructs spelling rules used by ancient Maya scribes to represent their languages and suggests features of these languages as major sources of the rules. These formulations are based on recent progress in the linguistic analysis of Mayan hieroglyphic writing, especially phonetic decipherment, and on ancestral Mayan grammatical features reconstructed by comparative research on modern Mayan languages. Proposals not my own are credited to others.

THE ISSUE OF PHONETICISM

After the breakdown of nineteenth-century attempts at phonetic decipherment, almost all professional epigraphers believed that Maya signs were exclusively logographic or ideographic and that hieroglyphic texts only weakly reflected the grammars of the languages represented. Today, however, the existence of simple phonetic signs is almost universally accepted.

There are many ways of delimiting the approximate meaning of signs, such as regular syntactic contexts, correlations between particular glyphic compounds and elements of accompanying pictorial art, or in some cases depictive transparency. However, these methods do not provide a secure base for decipherment; there is quite a semantic latitude in almost all such cases, and in a language with so simple a root structure as Mayan the chance for agreement of an incorrect phonetic hypothesis with an appropriate meaning is quite high. Only the most specific meanings (e.g., counts of five or seven days, represented only by the suffix *-b'-iš* in Mayan languages) provide a solid basis for phonetic reading. Accordingly, the foundation of phonetic decipherment of Mayan hieroglyphs, as in the classical decipherments of the Near East, was in proper names; these are phonetically specific, so that in a given language, all spellings for a given name represent a single phonetic form. In Mayan, the names in question were the day and especially month names; these secure the phonetic forms of many of the most common logograms and simple phonetic signs (Table 3-1). In addition, there are a few Yucatec-Spanish biliteral transcriptions, of day and month names as well as of a few phrases, along with a complete phonetic transcription in hieroglyphs of the names of the letters of the Spanish alphabet.

Effective modern phonetic decipherment using these sources began with Knorozov (1952), whose results were soon revised and extended by himself and David Kelley. Subsequent expansion in widely accepted readings of simple phonetic signs came mainly from Floyd Lounsbury and, independently, from James A. Fox and me; comparison in 1977 showed general agreement among our results. More recently, Lyle Campbell and

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Note: Transcriptions of Mayan linguistic forms use standard Mayan linguistic symbols rather than any of the (generally unsystematic) adaptations of Spanish-based colonial orthographies. Cases that may cause confusion for those used to a Spanish-based system are that *k, k'* correspond to colonial ⟨c⟩, ⟨k⟩; *h* vs *x* vs *s* correspond to English ⟨h⟩ vs Spanish ⟨j⟩ vs English ⟨sh⟩ (colonial Spanish ⟨x⟩). Vowel length is explicitly marked, as is tone in Terminal Classic Yucatecan and Postclassic Yucatec forms; when this information is not known, the form is preceded by #.

Transliterations of hieroglyphic signs and sign sequences mostly follow the Albany conventions. Phonetic transliterations are in bold type, using lower case for simple phonetic values and capitals for logographic values. Semantic transliterations are in Roman capitals. Successive signs are joined in transliteration by bold hyphens, fused signs by a colon. Unpronounced portions of phonetic sign values and sign value sequences are parenthesized (this includes all phonetic complements in full). A departure from the Albany conventions, for typographical convenience, is that semantic determiners are in square brackets, joined to the remainder of the spelling by bold dashes, rather than being superscript.

Table 3-1. Names of months in Lowland Mayan languages and their hieroglyphic spellings, along with external comparisons.

glyphic	Cholan	Yucatecan	Kanjobal/Pocom	other
color signs: WHITE, BLACK, RED, GREEN				
BLACK-[**HA'B**]	*sihom*		Kan. black *sihom*	Ch'en
GREEN-[**HA'B**]	green	green	Kan. green *sihom*	Yax
WHITE-[**HA'B**]	white	white	Kan. white *sihom*, Poc. white	Zac: Tz. white *hab'*
RED-[**HA'B**]	red		Kan. red *sihom*	Ceh
BLACK-**K'AT**, BLACK-**K'AT-(ta$_i$)**	⟨icat⟩ *ik' k'at*		black ⟨kat⟩	Uo
RED-**K'AT**, RED-**K'AT-(ta$_i$)**	⟨chacĉat⟩ *čak k'at*		black ⟨kat⟩	Zip
color sign: YELLOW, for *k'an*				
K'AN:HAL-VB	-⟨canhalib⟩ *k'an xal-ib'* yellow shuttle		Poc. ⟨kanhalam⟩ *k'an xalab'* †	Pop
K'AN:a-s(i$_2$)-I	⟨ccanazi⟩		Poc. ⟨kanazi⟩	Kayab
K'AN K'IN, **K'AN+K'IN-[VB]**‡		⟨kankin⟩ *k'an k'ín·n* yellow time (harvest)	Kankin	
YAŠ K'IN, **YAŠ K'IN-(ni)**	⟨iaxquin⟩‡‡ *yaš k'in* green time (spring)	⟨yax kin⟩ *ya^{9}š k'ín·n* green time (spring)	Kan. ⟨yaxacil⟩	Yaxkin: Tz. ⟨yax kin⟩, Ixil ⟨yaxki⟩

The Yucatecan spellings **YAŠ K'IN** and **K'AN K'IN** also yield **K'IN** for 'sun, day, time, season'.

ni

YAŠ K'IN, YAŠ K'IN-(ni) as above. Additional month name examples (glottalization on *#ɬikin* unknown):

T756-**(ni)**, T756-**(ki-ni)**	⟨chichin⟩ (< *#ɬikin* ?)		⟨tziquin⟩ *#ɬikin*	Xul: pan-Mayan *#ɬikin*
HAWK, HAWK-**(ni)**, **mu$_i$-wa-ni**	⟨muan⟩ (< **muhan*)	⟨muan⟩		Muan
UN-VW, UN-(ni)-VW,	⟨uniu⟩ *uniw* < **o·ne·w*		Kan. ⟨oneu⟩ *onew*	Kankin

(u$_{16}$)-UN-(ni)-VW, u$_{16}$-ni-w(a) (or **UN-VW, UN-(ni)-VW, (u$_{16}$)-UN-(ni)-VW, u$_{16}$-ni-w(a)**)

wa/VB

wa in spellings above of *#muwan* and arguably in *uniw*, where an original VW value seems likely; VB in *k'an xal-Vb'* above. Also **wa** in spelling *a·xa·w, a·xw-al* (day name and title). Additional month name examples:

ka-ɬe-w(a)	⟨cazeu⟩ *kaɬew*		Poc. ⟨cazeu⟩	Zec
[K'AN:a]-VB		⟨kayab⟩		Kayab

the latter a nontraditional, Yucatecan spelling found in the codices and at Naranjo;
its retained, traditional main sign **K'AN:a** here is effectively logographic for the month name, or for its root *k'à·y*.

ka

transliterated by Landa as ⟨ca⟩; used in *kaɬew*, above, and in

ɬe-k(a)		⟨tzec⟩, ⟨zec⟩ *#ɬek*		Zec
(ma)-MAK$_i$-(ka), **ma$_i$-k(a)**	⟨chantemac⟩ *čante? mak*, lit. '4 Mac'	⟨mac⟩ *mak*	Poc. ⟨chantemac⟩, Kan. ⟨mac⟩	Mac: Tz. *mak*, Ixil ⟨chentemac⟩
WHITE-[HA?B]-**(ka)**	⟨zac⟩ *sak*	⟨zac⟩ *sak*	Poc. ⟨zac⟩	Zac

ɬe

occurs in inscriptions in spellings of Cholan *#kaɬew*, in codices (and rarely in inscriptions) in spellings of Yucatec(an?) *#ɬek*.

Note: Month names presented are those whose signs appear in more than one month name. Cholan names after Thompson (1950) and Fox and Justeson (1982a); the Cholan names were borrowed into Kek'chi and Pocom, the latter via Kek'chi (Justeson and Campbell 1981). † Pocomam and Western Pocomchi final *b'* is phonetically [?m̥], hence the final orthographic ⟨m⟩; the word is a loan a Western Mayan language, neither *xal* 'to weave' nor *xal-ab'* 'shuttle' being found in Eastern Mayan. ‡ The suffixed VW sign is the almost invariable suffix of the traditional Cholan spelling **UN-VW** for this month name (Ch. *uniw*). ‡‡ The manuscript gives ⟨ianguca⟩, long recognized as a copying error.

Thom Smith-Stark each independently replicated several of these readings; Victoria Bricker's readings (see especially Bricker 1986) show substantial agreement, although few if any of her more novel readings have received much acceptance.

Most of the readings and linguistic reconstructions used here are widely accepted; the remainder are recent results that are not widely known, which I have accepted or in some cases proposed, and that I expect to become generally accepted when the pertinent evidence is more widely known. However, even many of the results that are widely known among researchers in Maya epigraphy or Mayan historical linguistics have not yet been presented in written form, even in unpublished manuscripts. Recent results are therefore credited by giving their authors' initials in square brackets. For results discovered in cooperative research, / joins the initials of the discoverers; for those evidently discovered independently at about the same time, a semicolon separates the discoverers' initials. Abbreviations are as follows: HB Heinrich Berlin; VB Victoria Bricker; LC Lyle Campbell; JF James Fox; CH C. Andrew Hofling; SH Stephen Houston; JJ John Justeson; TK Terrence Kaufman; YK Yuri Knorozov; FL Floyd Lounsbury; PM Peter Mathews; TP Tatiana Proskouriakoff; DS David Stuart; LS Linda Schele; JT J. Eric S. Thompson.

CULTURAL AND LINGUISTIC BACKGROUND

Hieroglyphic writing emerged in southern Mesoamerica ca. 1100–600 B.C., in the era of state formation, apparently from Olmec-style iconography and in ritual/iconographic context (Prem 1971:126–27; Proskouriakoff 1971:147–48; Justeson et al. 1985:34–37; Justeson 1985a). It always maintained close ties with pictorial art.

Two script traditions developed. A Oaxacan tradition, leading from ancient Zapotec to later Central Mexican scripts, remained relentlessly logographic; simple phonetic spelling is affirmed in only one or two phonetic complements in Aztec writing from ca. A.D. 1500 (Dibble 1971; Nicholson 1973:4–7). This textual tradition "devolved" into a captioning adjunct to a richer iconographic system for recording information pertaining to elite activities and prerogatives (Whittaker 1977).

Maya writing was a member of the Southeastern Mesoamerican script group, within which two main branches are discerned. Mayan was part of the same branch as the "Greater Izapan" script, if the two were in fact distinct; this early script was probably used for Mixean and Mayan languages. The other branch was that of the Preclassic script of Southern Veracruz, Tabasco, and Chiapa de Corzo, used probably for Zoquean languages (Justeson et al. 1985:38–44; Justeson and Mathews 1985). The sharing of the script reflected cultural, not linguistic, affinities.

Documented phonological and lexical innovations show that only Cholan-Tzeltalan and Yucatecan languages were represented in Lowland Maya texts (Fox and Justeson 1982b). Yucatecan speakers apparently adopted hieroglyphic writing from Cholan-Tzeltalan scribes (Fox and Justeson 1982b; Campbell 1984:10–11) before ca. A.D. 100 (Justeson et al. 1988). Literacy was interlingual: the Yucatecan and Cholan scripts shared a common sign inventory and representational conventions, and differences between the subgroups were seemingly avoided in hieroglyphic spelling (Fox and Justeson 1982b). The close ties of their written languages reflect intense social interaction between these distantly related Mayan subgroups (Kaufman 1974:85, 1976; Fox 1978:92–100; Kaufman and Norman 1984:78, 79) via participation in Lowland Maya civilization ca. 400 B.C.–A.D. 1500, with influence registered in most domains of material culture; extensive linguistic borrowings (Sapper 1897; Gates 1920; Kaufman and Norman 1984:145–46; Justeson et al. 1985:9–20), like the script itself, passed largely from Cholan-Tzeltalan into Yucatecan (Justeson et al. 1985; Campbell 1984:7).

Probably no other Mayan linguistic group ever used hieroglyphic writing (Justeson and Campbell 1981); distributionally, the largely unread early texts near regions now occupied by other Mayan groups are best attributed to Mixean or Cholan-Tzeltalan (Justeson and Campbell 1981; Campbell 1978; Fox and Justeson 1982b; Justeson et al. 1985:67), not to "Highland Mayan."

SIGN FORM AND SPATIAL ORGANIZATION

Signs in all Mesoamerican scripts were heavily pictorial. Most fell into two formal classes—roughly square *main signs* and more elongated signs (so-called affixes, usually not representing linguistic affixes)—based on their proportions and, among the Maya, on their compositional roles in the formation of rectangular *glyph blocks*.

In Maya writing, elongated signs were presented in either vertical or horizontal orientation about a main sign. A glyph block having more than one sign could be subdivided into a horizontal or vertical array of *graphic constituents* (i.e., roughly rectangular groups of signs); horizontally arrayed constituents were read from left to right, vertically arrayed constituents from top to bottom. Each constituent of more than one sign could also be subdivided into its own horizontally or vertically arrayed constituents, with the same rule for reading order (Berlin 1962:33–34; Justeson 1979, 1985b). Anomalies of sign order within the glyph block occur regularly in a few signs or compounds, usually for functional reasons (Justeson 1979, 1985b); sign repetition

reading order (Berlin 1962:33–34; Justeson 1979, 1985b). Anomalies of sign order within the glyph block occur regularly in a few signs or compounds, usually for functional reasons (Justeson 1979, 1985b); sign repetition sometimes served compositional rather than representational purposes (Beyer 1926; Thompson 1950:41–42; Mathews and Justeson 1984:224–25). Signs or their criterial characteristics could also be infixed within a nondiagnostic area of another sign, typically into the forehead or eye of signs depicting heads; this usage goes back to Olmec iconography.

Glyph blocks were arrayed in a variety of linear patterns, also read from top to bottom and left to right. When several columns were adjacent, they were paired, a given column pair being read row by row; the first pair, or its upper portion, was frequently executed as a single column occupying the horizontal space of two columns.

CORRELATIONS BETWEEN GRAPHIC AND LINGUISTIC FEATURES

Iconically transparent signs represented lexemes more often than did iconically opaque signs (cf. Justeson 1978:267–68); depictive art was apparently a continuing source for new logograms, but conventionalization seemingly affected signs including simple phonetic usage more strongly than those that were strictly logographic.

Typically preposed elongated signs are normally inverted when postposed, and conversely, without affecting sign values; this corresponds to a rotation of these signs about the main sign (Beyer 1934a,b). Main signs rendered different values when inverted (cf. Berlin 1964 and T533 **AHAW** vs T534 **la**), but values were unaffected by left/right reversal of orientation. These visual effects parallel regularities in the processing of visual information that are reflected in many writing systems.[1]

The linguistic referent of glyph blocks was variable. Normally it was an immediate syntactic constituent of a sentence, such as an inflected verb or a noun phrase; more rarely, it consisted of multiple syntactic constituents, usually executed as graphic constituents. In late times at peripheral sites, especially Chichen Itza, lengthy spellings of some words spanned two glyph blocks, sometimes with the division at a syllable boundary that was not a morpheme boundary. Within a glyph block, syntactic constituents were executed as graphic constituents if the sign sequence admitted this visual organization.

LINGUISTIC REFERENTS OF INDIVIDUAL SIGNS

Mayan signs can be classified via their canonical values as phonetic, semantic, or logographic, a logographic value encompassing both a phonetic and a semantic value. By text frequency, most signs were logographic, though phonetic use increased over time. Few signs had semantic value only, the clearest examples being the cartouche and pedestal signs that mark certain signs as day names; the former is a common heritage of all Mesoamerican writing systems, the latter specific to the Mayan/Izapan subgroup. Some logograms were used *at times* with only semantic value, as in the spelling **ma-**[YEAR] for *ma·y* '20 (of years)' and, in my view, in the spelling YEAR-YEAR (not **ku-k(u)**) for the period of 400 years. The uses of many logograms were generalized phonetically; some came to be used with *simple* (i.e., nonlogographic) *phonetic* values. Apart from one sign—a form of T60 that probably represents phonetic *h* (Justeson 1978:341; Fox and Justeson 1984:60–61) or, perhaps more likely, a semantic determinative—simple phonetic signs were for *V* and *CV* syllables.

Mesoamerican logograms were initially lexical, representing words and roots. Some compound words were spelled by unitary signs; for example, a "pyramid" sign represented a compound whose second element was *na·h* 'house' [PM] (cf. *mul* + *na·h* 'pyramid' and *k'u·h* + *na·h* 'temple'). At first, derivational and inflectional affixes were probably not represented, and distinct allomorphs of roots never had separate logograms; for example, T528 **HAB**$_2$ represented both *ha?b'* and *(y)a?b'* 'year'. A single logogram could serve for inflected and uninflected forms of a root, and for derived forms differing semantically only in ways implied by the syntactic functions of the derivational affix. A different logogram may have been used when a derivational affix created a genuine lexical difference but apparently not when Cholan lacked the affix.

During the Late Preclassic (ca. 300 B.C.–A.D. 250), signs for grammatical affixes were developed; derivational affixes, which can distinguish referential meanings, probably began coming into use earlier than inflectional affixes, which do not (Justeson et al. 1988). At least where Cholan and Yucatecan differed, as in completive aspect markers, a single logogram may have represented different allomorphs of the same morpheme (or functionally different morphemes used with

[1] Stephens (1980) has shown that writing systems tend to have nondistinctive sign variants differing by rotation around the vertical axis whenever they have sign variants differing by rotation around the horizontal axis (Mayan has both) and to distinguish signs differing in rotation around the horizontal axis if they distinguish signs differing in rotation around the vertical axis (Mayan distinguishes the latter only). Stephens posited the phenomenon because of regularities in the psychological processing of visual information—for example, children come to distinguish visual forms that differ only by rotation about a horizontal axis before they distinguish forms differing only by rotation about a vertical axis.

1984:61–62); alternatively, Bricker (1986) interprets our **I** as phonetic **ya**, in which case the use of the sign in spelling these allomorphs would be simply phonetic. No other allomorphy shared by Cholan and Yucatecan is found on grammatical morphemes identified in hieroglyphic texts.

LOGOGRAPHIC PHONETICISM (REBUS)

A logogram for one morpheme often served also as a logogram for homophonous morphemes. In assessing homophony, the "weak consonants" ʔ, *h*, and *y* were treated as equivalent to each other and to ∅, and vowel length was not distinguished (Table 3-2); judging from the early, logographic use of what would become the **či** sign for 'Day Deer' via CT **čihx* 'deer', final *x* may not have been distinguished from final ʔ, *h*, *y*. Rarely, *w* was not distinguished from the other weak consonants or ∅. Final *š* may not have been distinguished from *h* if Norman is correct in suggesting a reading *iš* for a sign T126 elsewhere representing *i(h)* (Fox and Justeson 1984:54–62). Some logograms, using these same phonetic equivalences, indicated the phonetic form or semantic range of another logogram; for example, [**BAK'**]-KATUN represents a period of 400 (**b'ahk'*) years by a sign representing a hand grasping what is definitely in some cases a cylindrical object (**b'ak'*), [**7**]–GAME represents Yucatec *yù·k* 'brocket deer' by the sign for Yucatec *wuk* '7', and evidently [FIRE]–TAPIR and [FIRE]-**(ti)**-TAPIR is for Cholan *tihl* 'tapir', where the FIRE sign may be based upon Cholan, Yucatecan *til* 'to burn'.

Glottalization distinctions were normally maintained in rebus spellings. A plausible but inconclusive exception is a sign possibly for *lahk'* 'companion' via *lak* 'plate, shallow bowl' in a compound word *lak'in* < **la(H)C + k'i·n* 'east' (Justeson 1982b). If valid, the case involves syllable-final position; failure to observe basic phonological distinctions is generally found in this position, if at all, in other scripts (Justeson and Stephens 1980,1985).[2]

Vowel height distinctions (*i/e*, *u/o*, *ə/a*) were not maintained in rebus spelling; for example, a conventionalized sign for *ohl* 'heart' (< pM **ošl*; Norman 1979) was evidently used for *ul* 'arrive' [JJ] in Glyph D of the Lunar Series; in one early instance, on Bejucal Stela 2, it is replaced by a pair of legs.

[2] Macri and Furbee (1985) have argued that the distinction between plain and ejective stops was not maintained, citing cases of *ka/k'a* interchange; the epigraphic analysis, however, is seriously flawed, and does not constitute evidence for the pattern.

GRAMMATICAL SOURCES OF REBUS CONVENTIONS

These conventions for assessing homophony can be derived almost completely from the failure of early Mesoamerican scripts to distinguish grammatical variations in word forms—in particular, via those unrepresented affixes that altered the form of the root by mutation or infixation rather than being preposed or postposed. Root-initial ʔ and [JF] *h* (< pM **h*, but not *h* < pM **x*) are replaced upon prefixation of pronouns by *w* ~ ∅ (1st or 2nd person) or *y* ~ ∅ (3rd person); *h* and vowel length [TK/WN] were infixed for various purposes.[3] A single logogram represented the simple root and the variants modified by infixing and/or mutation. Since modification by infixation made *CVC* roots homophonous with unrelated *CV·C* and *CVhC* roots or stems, the latter were potentially representable by rebus with the CVC logograms. Thus, unrelated roots differing in initial *h*, *y*, ʔ, or *w*, in vowel length, or in presence or absence of a preconsonantal *h* (but not *x*), were equatable orthographically under rebus (cf. the failure of Egyptian hieroglyphs to distinguish vowels, thought to have served grammatical functions as infixes to roots). Furthermore, most Lowland Mayan morphemes were monosyllabic, and most by far of these were *CVC*, *CV·C*, or *CVhC* morphemes; the frequency of these shapes as canonical root-morpheme structures would presumably have analogically reinforced the orthographic equivalence among *CVC*, *CV·C*, and *CVhC* roots and stems. There is no evidence that any such an analogy extended to other monosyllabic morpheme shapes, limited in Lowland Mayan languages to *CVʔC* and *CVxC*. *CVxC* roots are rather rare, and no glyphic spellings for any of them are presently known. *CVʔC* roots are more common, but few are identified in glyphic texts, and those that are do not normally serve for rebus representation of the other monosyllables.[4]

Via sound change, interlingual literacy can account for the remaining reduction rules (the rebus equiva-

[3] Bricker has shown that the Yucatecan grammatical infix ʔ is restricted to the Yucatec-Lacandon subgroup, corresponding to the nonfinal Mopan-Itza suffix *-b'-* (it thus derives by metathesis of nonfinal postconsonantal *-ʔ-* in *-ʔ-aC* < **-b'-aC* suffixes). As such it is a late change, occurring in Postclassic times, and thus cannot have been relevant to the (Preclassic) origin of the rebus spelling conventions.

[4] In Late Classic scribal play, signs for **kan* 'four', **ka·n* 'snake', and **kaʔn* 'sky' are occasionally substituted for one another. However, examples involving 'sky' are concentrated in or restricted to Cholan sites; in proto-Cholan, 'sky' was **ka·n* due to the Preclassic shift of *VʔC* to *V·C*. I presently have no evidence for genuine cases of *CVʔC* forms regularly used by rebus for *CVC*, *CV·C*, or *CVhC*. A genuine but unique case is the use of a sign motivated by *yaʔh* 'painful' for *ax=* 'agentive'.

Table 3-2a. Pairs of words, differing in syllable nucleus, that are spelled by the same sign.

CVC	CV·C	CVhC	CVxC	CV?C
ak			ahk	
ax=	a·x			ya?x
b'ak'		b'ahk'		
kan	ka·n			(ka?n)
mal		mahl		
	ih-ta·n	tahn		
tun	tu·n			

Table 3-2b. CV signs in the phonetic spellings used in representing different types of syllable nuclei agreeing in vowel quality and word-final consonants (for vowel signs, final ?, and perhaps *h*).

Sign	–C#	CV	CV·	CVh	CV?
ba	kab'	b'ahb'			
be/bi	šib'	-b-iš	b'e·h		
i		iki·n	i·bač		
ka	ma(·)k	kakaw	čika·x		ka?n
ki	pik	kisin	iki·n		
ku	b'ulu·k	kuč	ku·ɬ		
k'a	k'ahk'	k'am		k'ahk'	
k'u	k'u?k'		k'u·h	k'u?k'	
la	mahl	-l-ax	la·k'in		
lu	xul		b'ulu·k	uluhm	
ma	ma·m	ma?	ma·m	mahl	
mu	uluhm		mu·t	muhk	
na	k'an	naka?n	na·h		sí·na?n
o	mo(·)?	oto·t	o·š	ohm	
pa	tu·p		pa·č	pahkab'	
po	pohp		po·m	pohp	
si$_2$	p'ihs	kisin	sí·na?n		
ta$_i$	k'at	ta	ta·x	tahn	
te$_3$		tek'	te·?		
ti	oto·t	ti		tihl	
tu		t-u-	tu·n		

lence of final *-h* and *-x*, of *o* with *u*, and of *e* with *i*). After the Cholan and Cholan-Tzeltalan sound changes had been completed, rebus spellings based on forms rendered homophonous in Cholan could motivate Cholan rebus spellings; such spellings would be interpreted within Yucatecan as reduction rules. While the Cholan changes were still in progress, Cholan forms would have variable pronunciations and could themselves motivate rebus spellings; linguistically conservative interpretations of such spellings would also be tantamount to reduction rules.

A morpheme already represented by its own logogram was rarely represented by rebus via homophonous logograms—perhaps never when its meaning was also the depictive referent of its logogram; such signs are interchangeable, however, in simple phonetic usage (Mathews and Justeson 1984:225–27). Another possible inhibiting factor was the orthographic primacy of Cholan-Tzeltalan linguistic forms, presumably a "substrate" effect of the Cholan-Tzeltalan origin of Yucatecan hieroglyphic writing. This can be illustrated in the day names, the most ancient representational subsystem in the script (Fox and Justeson 1982a): the script had separate signs for the words 'yellow' (Ch., Yu. **k'an*) and 'Day Iguana' (Ch. **k'anan*, Yu. **k'an*), and never substituted the sign for one in use for the other; the Cholan names but (perhaps) not the Yucatecan were orthographically distinct from each other. Conversely, the script used a single sign for 'earth' (early Ch. **čab'*, Yu. *kab'*) and 'Day Earthquake' (Ch. **čab'*, Yu. *kab'-an*; cf. Chontal *čab'an* 'earthquake'), which were originally homophonous in Cholan but not in Yucatecan. Finally, the script always used separate signs for 'Day Wind' (early CT, Yu. **i?k'*), 'black' (Ch. **ik'* < proto-Cholan-Tzeltalan **ihk'*, Yu. **ehk'*), and 'star' (Ch., Yu. **e·k'*). None of these would have been homophonous orthographically in Cholan-Tzeltalan before the change of *V?C* > *V·C* sometime during the Late Preclassic, whereas the latter two are homophonous orthographically in Yucatecan.[5]

GRAMMATICAL AND OTHER SOURCES OF REBUS USAGE

Rebus conventions provided the basis for developing signs to represent morphemes homophonous with others not normally written in the script. Thus *u·h* 'bead(s), necklace' was apparently never represented, but T1, T3, T11, T230 and T232—all signs depicting beads—were used for the very frequent 3rd person pronoun *u-* [VB; JJ]. Rebus principles were used to generate novel, even unique signs for artistic effect; for example, a sign securely identified by Houston as representing *ax=* 'agentive' depicts a man in intense pain, grasping his head, a usage evidently based upon *ya?h* 'painful, to be in pain'. Several signs for a given value (polyphony) often resulted. Because of the iconic transparency of these signs, polyphony was not as burdensome in Mayan as it was in more abstract scripts, and generated greater visually apparent stylistic variability.

Grammatical affixes in general were derived by these rebus principles; rarely corresponding to directly depictable entities, all but the monoconsonantal affixes were orthographically equivalent to monosyllabic root shapes under the rebus reduction rules. Because iconically complex signs were limited essentially to hands manipulating objects, morphemes regularly representable in iconically transparent ways were mainly for concrete nouns or activities related directly to them. Thus, iconically transparent depictions of the act of taking a prisoner were not used in the script; a sign depicting the head of a snake (*ka·n*) was used instead for the roughly homophonous root *kan* 'to capture (game)' (Fox and Justeson 1982b; Houston 1984; Norman 1984), and a sign for *b'a·k* 'bone' was used for the roughly homophonous *#b'ak(i)* 'captive' (D. Stuart 1985).

SOURCES OF SIMPLE PHONETIC SIGN USE

Simple phonetic sign use appears to have arisen by generalization from the use of the same signs as grammatical logograms for derivational affixes and perhaps particles. Most early phonetic usage was of single signs as phonetic complements to logograms whose reading was not straightforward, usually due to polyvalence. Potential examples before ca. A.D. 416 are interpretable as logographic determinatives rather than phonetic complements, as in the earliest **wa** [FL] (also **AW** [LC/JJ]) complements to **AHAW**$_2$ [FL]; this ambiguity also characterizes suffixed signs for most derivational suffixes, since the logograms to which they were appended could be interpreted as representing both the root and the derived stem, as in spellings of the period *winik-Vl* (later Yucatec *winal*) as T520 or T520–**IL**. Ambiguity of this sort may have provided a basis for phonological generalization of the grammatical usage.

Phonological generalization of a sign's use followed the positional bias of its logographic source, inducing an overall positional preference for suffixing of phonetic complements; prefixed complements occur in signs such as **ma**, previously used by rebus for the

[5] Later, pCT **ihk'* > pCh **ik'* and pre-CT **i?k'* > pCT **i·k'* > pCh **ik'*. Also later, after Yucatecan had acquired hieroglyphic writing and after pre-Cholan began undergoing the shift of **e·* > *i·*, there would have been rebus bases for additional equivalences that were not available during the formation of the logographic base of the Preclassic script.

preposed numeral classifier *#may* [JJ], an adjective for 'great' [FL] based on Mixe-Zoque *məh* [JJ], and perhaps, as later, for the particle *ma?* 'no; not'. Once the system of phonetic spelling had begun, phonetic signs with no grammatical source followed the majority pattern.

Purely phonetic use of sequent signs as the full spelling of a word is first documented in **ka-ȼe-w(a)**, and as a phonetic complement in **UNIW- (ni-wa)**, for the month names *#kaȼew* and *uniw* (< *o·ne·w*) [FL; JF/JJ; cf. Kelley 1962:284–85]. As etymologically unanalyzable forms that may have appeared to contain a suffix, given typical Mayan root structures (cf. Sumerian spellings of foreign names), such forms were amenable to the use of signs for phonetically similar derivational affixes—the likely origin of complement usage generally.

Phonetic values of other signs were derived by rebus phoneticism. Almost all phonetic signs represented simple *(C)V* syllables canonically, with other values derivable by regular orthographic rules. CV(·)G logograms were treated under rebus as having CV values canonically; thus, signs depicting the referents of *CV(·)G* morphemes often represented *CV* syllables phonetically. Sometimes the depictive sign was originally a logogram for the depicted entity; for example, **na**$_2$ represented the syllable *na* [FL] only after it had long been used as a semantic determinative introducing names of women [TP; HB]—where relationship statements survive, they are usually taken as the mothers (*na·?*) of rulers [FL/PM/LS]—or perhaps as a female title [FL]. However, not all depictive signs representing simple open syllables had prior logographic usage for the depictive referent. Some signs had previous logographic usage for phonologically appropriate forms, but not for the form depicted by the logogram, as in **ba** from **BAH**, depicting a gopher *b'a·h* but evidently used as a general verb of motion [VB; LC]; others may never have had truly logographic use—for example, **ka**$_3$, depicting a fish (*ka·y*).

The phonological rules of rebus phoneticism may have helped foster the development of simple phonetic sign usage in Mayan. By making available a broader range of grammatical logograms, they made a broader sign class susceptible to simple phonetic usage. The CV signs were more susceptible than the (C)VC grammatical signs to nonfinal use in phonetic sign sequences, given Mayan word structure and syllable boundaries (cf. Justeson and Stephens 1980), and their use in these positions was promoted since grammatical generalization was seldom viable there. Thus, nonfinal **ka** is based on *kay* 'fish' and **ni** on **ne·h* 'tail' in the spellings of the unanalyzable month names *#kaȼew* and *uniw*, not on grammatical signs. Signs for *VC* morphemes soon generalized to phonetic CV values, and conversely.

PHONOLOGICAL CONVENTIONS FOR NONREBUS PHONETIC SPELLING

Canonical Forms

1. Simple phonetic signs were canonical for *V* and *CV* shapes. CVC signs were almost always for roots or for *-C-VC* compound affixes. **TAN** was simply phonetic in **á**$_7$**-tán** for Yucatecan **atan* 'wife' and in **ma-tán-(na)** if for *maht(-)a·n* [VB] as I suspect; however, **á**$_7$**-tán** (= **IH-TAN**) was a historical spelling for *atan* < **itan* ~ **ihtan* 'man's sister' [JF/JJ], analyzable (folk-?)etymologically as *ih-tan* (Fox 1978:244–45, 1985; Fox and Justeson 1984:72–73, 1986:9) and **ma-TAN-(na)** is perhaps more likely to be for *màb'-t-á?n* 'examined (traps for game)' (Lounsbury 1984:180–81).

Conventions 2–5 follow from conventions of rebus phoneticism, presumably via the phonetic generalization of logographic usage.

Vowel representation

2. Words containing long vowels were spelled as if the vowels were short; because *a·* became *a(·)* and *ă* became *ă* or *ə* conditionally [LC;JF;TK] in Lowland Mayan languages, *a* and *ə* are spelled equivalently.

3. Corresponding mid and high vowels are not consistently distinguished from one another. A few signs represent both *Ci* and *Ce*, or *Cu* and *Co*; others, including all V signs, show no such conflation; for most signs, we do not yet know. Campbell (1984:14) suggests that the conflation arose via a Cholan sound change, in which some long mid vowels were raised (Kaufman and Norman 1984:87); supporting evidence comes from a correlation of CV signs showing the conflation with CV·C sequences undergoing the change and known to have been written in the script (Justeson 1982a).

Consonant Representation

4. Glottalization was normally distinguished in the script. Rarely, in root-final position, scribes may have used *CV* signs for final *C'*, as in **i-ki** seemingly for *ik'* (or *é·k'*) 'black' (Fox and Justeson 1984b:40–41).

5. A root containing *h*, *y*, or *?* was normally spelled as though it did not; *w* was represented explicitly in simple phonetic spellings. I have previously proposed, in effect because both *CVx* and *CVh* are sources for CV phonetic signs and because *CVx* roots are perhaps used by rebus for *CV?*, *CVh*, or *CVy*, that the distinction between *h* and *x* is not made in the script. However, in recent years I have concluded that this distinction *is* marked in simple phonetic spellings: *-Cah* word endings are spelled by C**a** signs whereas *-Cax* word endings are usually spelled using T181/683b **AH**$_2$/**há**$_2$ (or,

better now, **AX$_2$/xá$_2$**), whether the phonetic spelling is a phonetic complement to a logogram or a fully phonetic spelling of the word.[6] Phonetic spellings of *CVh* forms are rare; clear and frequent examples include at least **na$_1$**, **na$_3$**, and **na$_4$** for *na·h* 'house', never with **há$_2$** suffixed, and **be** for *b'e·h* 'road', never with a suffix interpretable as for *hV*. Phonetic spellings of *CVx* forms include **ta-h(á$_2$)** and **TAH-(há$_2$)** for *ta·x* 'pinetorch', **čika-h(á$_2$)** for Yucatecan *čika·x* (< pM **kaqa·x* [JJ]) 'palo mulatto', **KAH$_i$-(há$_2$)** for Lowland Mayan *ka·x* 'country, province' [FL], evidently **(wa)**-CORN ~ **(wa)**-CORN-**(há$_2$)** for *wa·x* 'tortilla(s), cornbread', and T93-**há$_2$** ~ T93-**há$_2$**-[**TE?**] seemingly for a root ⟨chah⟩ in Landa's ⟨chahal te⟩ (see Love 1986, 1987), whose orthographic ⟨h⟩ corresponds to *x*; Love takes it to be based upon *č'ah* 'to drip' or *č'a·h* 'drop(s)' (of incense), which did historically have *x* rather than *h*. An exception is the codical compound T66:23, pretty surely read *hi?nax* 'seed (in general)' [YK; see Lounsbury (1984:177)] and consistently spelled SEED-**(na)**. It may be relevant that this is evidently the only pertinent example ending in *-ăx*.[7] No words with intervocalic *h* have been recognized in glyphic spellings, but three words with intervocalic *x* are recognized, *a·xa·w* 'lord, ruler', *ta·x-al* (< *ta·x* 'pinetorch'), and *ka·x·al* 'provincial ruler' [PM; DS] (< *ka·x* 'country, province'); in all cases, the *x* is represented in phonetic spellings, though in spelling *ka·x-al* the sign functions in part as a complement to the root-final *x*, whereas in at least some spellings of *a·xa·w* it is probably better analyzed as a fully phonetic spelling. I presume that *x* was represented and that *h* was not represented after vowels other than *a*, but there is almost no evidence concerning these cases. Since recognizing this *h*/*x* distinction, I have not found evidence for a sign representing *x* adjacent to vowels other than *a*; final *h* is not represented in spellings of the word *b'e·h* 'road'.

Suffixed vowel signs serve, optionally, as phonetic complements to *CV?* roots; the usage is not securely attested for roots having the vowel *a*. Kelley (1976:80) has suggested that these are synharmonic complements representing the final ?, and he notes that such a practice would agree with colonial spellings in European script (e.g., ⟨haa⟩ for *ha?* 'water'). Kelley's view is widely accepted. However, since ? is otherwise not distinguished from zero in Mayan orthography, these roots are orthographically of the form *CV*, as are *CVh* (but not *CVx*) roots, so that an overt phonetic complement marking them is suspicious. Further, the motivation for the suggested convention is the phonetic rearticulation of the vowel after ?, but the vowel is not spelled in such cases preconsonantally (e.g., in **si$_2$-na$_3$-n(a)** for *siná?n*, phonetic [*siná?an*], 'scorpion'). Fox and Justeson (1984:n14), therefore, account for these examples as phonetic complements simply to the vowel of orthographically *CV* roots. The usual contexts of these suffixes are (1) as a main sign complementing an elongated logogram and (2) as a complement to a simple phonetic CV sign when the latter serves to represent an orthographically *CV* root; note that CV phonetic signs do not complement logograms for orthographically *CV* roots. As it happens, the few *CVh* words whose final portion is spelled phonetically are *Cah*, so we are not yet able to tell whether *CVh* forms were subject to the usage.

6. Weak consonants ignored, consonant clusters occur primarily in root + root compounds. They also occur when a consonant-initial grammatical suffix is added to a root, but this is rarely found in texts since most suffixes were vowel-initial; most consonant-initial suffixes known to be represented in the script were etymologically vowel-initial, with loss of the vowel when another vowel-initial suffix having the same vowel followed.

6a. Phonetic spellings of roots or words normally included nonweak final consonants. There are inconclusive indications that syllable-final *-l*, lost or weakened in some Lowland Mayan languages, may be unrepresented in some words; if so, it is consistently spelled in or consistently omitted from any given word. A C_1VC_1 root is often spelled by a single C_1V sign in iconographic context, where the spelling serves as if it were a depicted entity rather than a spelled word (Justeson 1985a).

6b. Nonweak root-final consonants before consonant-initial suffixes are spelled according to convention 7, governing final consonants on naked roots. The final consonant of the first root in a compound was also usually spelled as in 7, but sometimes it was omitted (e.g., **k'u-k'(u)** for *k'u?k'* 'quetzal vs **k'u mo-(o)** and **k'u MO-(o)** for *k'uk'=mo?* 'Quetzal Macaw' [FL], and **ka-ka-w(a)** for *kakaw* [FL] vs **ka-ka-MOL** for *kakaw=mol* 'pile of cacao' [JJ]).

7. Otherwise, root- and word-final consonants were spelled phonetically by a CV sign whose C was the final consonant being spelled. Generally, its linguistically fictitious V was the same in all spellings of a given word. By analogy with other syllabic scripts, selection of this V was probably based on the word's phonetic shape or on its association with a particular vowel in a characteristic grammatical suffix; in fact, it seems to corre-

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[6] The restriction to cases involving the vowel *a* is an artifact of the recognition of these spellings; the same sign, **AH$_2$/há$_2$**, is used synharmonically in all of them, whereas signs for other *xV* sequences have not been recognized.

[7] The word descends from < pM **hi·ŋa·x* [TK/JF], in which the vowel was long; however, long vowels shortened in the second syllable of two-syllable roots and compounds in Yucatec-Lacandon, providing the first syllable was heavy (Justeson 1986).

spond closely to the final consonant and "basic" vowel of the root.[8]

7a. Generally, V in the CV sign for syllable-closing consonants was *synharmonic* (i.e., the same as the basic root vowel); but when a dental or alveolar stop (*t* or *n*) or alveolar affricate (*č*; but not, perplexingly, the dental *ȼ*) followed *o* or *u* the vowel was normally *i* (Fox and Justeson 1984:111). Although there is insufficient evidence concerning other consonants, the vowel *a* may have been favored over synharmonic usage when a labial consonant (*p*, *b'*, *w*, but not *m*) followed *i*, *e*, *o*, or *u*. These conditions, which may be generalized from common affix patterns, also capture the spelling of preconsonantal root-final consonants. However, a small number of anomalies, such as the contrasting vowel selection in **k'u-č(i)** for *k'ú(·)č* 'buzzard' vs **ku-č(u)** and **ku-ȼ(u)**, respectively, for *kuč* 'carry (on the back)' and *kù·ȼ* 'turkey', suggest that these norms need refinement or elaboration. Special phonological and grammatical conditions appear to have affected vowel selection in regular ways.

All known spellings of C_1VC_1 roots were synharmonic. *TuT* roots would otherwise be expected to be spelled T**u**-T**(i)**, but **č(u_3)-č(u_3)** spells *#čuč* 'loom' [FL; JF/JJ] (Fox and Justeson 1984:64–65).

7b. Grammatically, typical suffixing on verbs may have affected their spellings. The citation form of intransitive verb roots is 3rd person completive, marked by an *-i(h)* suffix; in spelling such roots, C**i** signs are favored for syllable-closing consonants, as in Cholan ENTER-**(či)** for *oč* and Yucatecan ENTER-**(ki)** for *ok* 'enter', while transitive verb roots are synharmonic. Conversely, *ə* (< **ă*) derived a transitive verb stem 'to make/use N' from a noun root N; spellings of the nouns make use of C**a** instead of (or alongside) synharmonic CV, as in **AH-Ȼ'IB-(ba)** [JJ;PM] for *ax=ȼ'ihb'* 'scribe' (cf. Cholan *ȼihb'-* 'write' < *ȼihb'* 'stripe' [TK].

7c. Phonological and grammatical context jointly determine vowel selection when a root-final consonant precedes a vowel-initial grammatical suffix, the V of the CV sign for the root-final consonant being the initial vowel of the suffix. In transitive verb stems, the passivizer *-ax* thereby leads to the spelling of the preceding verb root with a C**a** sign, whereas the synharmonic active voice suffix *-V_1* led to synharmonic spelling of the active stem of transitive roots [CH; WN]. This anticipatory rule seems to have applied in most cases of suffixes to roots whose final consonant was spelled phonetically, whether as a complement to a logogram or in a fully phonetic writing; rarely, it was used across word boundaries.

[8] In disyllabic roots whose shape suggests the presence of an affix—*#muwan* 'hawk'; month Hawk' and *la·xu·n* '10'—the vowel of the apparent root is the basic vowel; otherwise, the final vowel is basic. However, the former type is rare, and the two examples noted are the only ones taking phonetic complements, so the otherwise unusual vowel selection may be due to special factors. For example, *muwan* is a month name, an extremely high-frequency word class. Such words may have developed their patterns of usage earlier than others, and been heavily influenced in their choice of complement by others in their class; in the month names, final *-n* is otherwise always spelled with **ni**, hence the selection of the same sign for *muwan* (Justeson and Mathews, 1989).

SPELLING VARIATION

A given word might have many different spellings, reflecting logographic vs simple phonetic usage, the number of signs in phonetic complements, and the use of alternative signs with similar values.

Variation is rarely found between synharmonic and other spellings of syllable-final consonants. The most frequent context is in spellings for root-final consonants followed by vowel-initial grammatical suffixes, where the vowel of either the root or, much more often, the suffix may determine the selection (e.g., **mu-k(u)-AH$_2$** vs usual **mu-k(a)-AH$_2$**; both examples represent *mu(h)k-ax* 'he was buried' (Mathews 1977; cf. Norman 1984).

Conjecturally, normal rule governance may have been superceded when leading to use of a polyvalent sign. For example (Fox and Justeson 1984:23), the Yucatecan word *pà·č* 'back' would be expected to be spelled **pa-č(a)**, as indeed it usually is in the Madrid Codex, but the **ča** sign was often used also as **k'a**; there are alternative spellings for *pà·č* as **pa-č(i)** on adjacent pages of the manuscript.

ORTHOGRAPHICALLY DEVIANT SPELLINGS

Apparent deviations from these conventions occur in traditional spellings, derivable by rule from prior or non-native forms rather than from a current native form. Ancient traditional spellings probably descend to Mayan writing from the ancestral Southeastern script (Justeson and Mathews 1985); their Mixe-Zoquean and Mayan readings are unknown. Fox and Justeson (1982b) analyze month name spellings, which usually accord with the month names reconstructible for Cholan or Cholan-Tzeltalan (Kelley 1962, 1976; Justeson and Campbell 1981; Fox and Justeson 1982a,b; Campbell 1984:10), as an entire complex of traditional Cholan spellings retained upon the adoption of the script by Yucatecan scribes. Sometimes Yucatecan scribes added signs to traditional Cholan spellings, reflecting the phonetics of the Yucatecan form (Fox and Justeson 1984:40–41, fig. 23) or misunderstanding of the etymological basis of the Yucatecan form, or required final signs were omitted from it, suggesting that the etymo-

logical basis for the traditional spelling was unknown. Again, month names stand out as a complex susceptible to these defective spellings.

Another complex of spellings exhibiting final sign omission, inconsistent or antilinguistic sign order, and confusion among formally similar signs is defined by its source—the Madrid Codex, a late (ca. A.D. 1450) hieroglyphic manuscript renowned for these effects. Because its vocabulary is Yucatecan and the manuscript is part of a Yucatecan manuscript tradition, the parallels with defective spellings of traditional compounds suggest to me that the manuscript was written in Yucatecan by a foreign (probably Chontal) scribe; I hazard that it was acquired at Cozumel Island. Indeed, the anomalies seem to occur most radically and frequently for Yucatecan words not orthographically similar to their Cholan equivalents. Alternatively, Kelley (1976:15–16) suggests that the scribe may have been dyslexic.

RELATION TO COLONIAL ORTHOGRAPHY

The spellings of final *h*, *x* and, if Kelley's analysis is correct, of final ʔ are basically as in the orthography of the Motul dictionary and other colonial sources of Yucatec texts in Spanish script: *h* was simply omitted, *x* was spelled ⟨h⟩, and ʔ was spelled by doubling the vowel letter. In the latter case at least, the relation of the hieroglyphic to colonial spellings is somewhat problematic; in colonial spellings, the doubling occurs both medially and finally, and is motivated medially in that $CV_iʔC$ is phonetically [$CV_iʔV_iC$]; the final spellings are understandable as an extension of this usage. However, there is nothing in hieroglyphic spellings corresponding to the motivated, medial context, whereas the phonetically unmotivated final context is frequently so written. Bricker (this volume) analyzes double writing of consonants in colonial texts as reflecting a continuation of hieroglyphic principles: the first closes the spelling of a morpheme, as in the use of a logogram for the root; the next spells the opening of a syllable. As in the writing of ʔ and even more so of *x*, the resemblance is close—Bricker makes a good case for a relationship with hieroglyphic orthography—and the pattern is widespread in logosyllabic writing especially; however, nonhistorical explanations for the colonial spelling are feasible, since competition between morphemic and syllabic principles seemingly leads to similar patterns in other alphabetic scripts.

CONCLUSIONS

Mayan spelling conventions and the contexts of their application have many parallels in logographic and syllabic scripts of the Old World (Knorozov 1958:289; Justeson 1978; Justeson and Stephens 1980). Developmental trends, only touched on here, also parallel those of Old World scripts and in some respects provide data not readily available elsewhere. Perhaps the most important contribution that Mayan hieroglyphic writing makes to the comparative study of early script formation is due to a considerable body of knowledge concerning the languages being represented in the script, based on evidence independent of the script itself; this permits closer analysis of the role of language structure on the emergence of increasing linguistic representation than is feasible in other scripts with equal or better documentation on the major developments in representational conventions.

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4

The Last Gasp of Maya Hieroglyphic Writing in the Books of Chilam Balam of Chumayel and Chan Kan*

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The post-Conquest Yucatecan manuscripts known as the Books of Chilam Balam of Chumayel and Chan Kan (Gordon 1913; Hires 1981) contain some unusual spelling conventions with implications for understanding the nature of the Precolumbian Maya hieroglyphic writing system. Although these manuscripts are written in the Latin alphabet, they employ three conventions—vowel insertion, consonant insertion, and consonant deletion—that are characteristic of several Old World logosyllabic scripts (Justeson and Stephens 1980). Only the first of these syllabic principles has previously been documented for the Maya script (Knorozov 1967). The fact that the second and third as well as the first were used by Maya scribes not long after the Spanish Conquest suggests that they, too, were features of the Precolumbian hieroglyphic script.

CONSONANT INSERTION

Scholars now generally agree that the Precolumbian Maya had a mixed writing system with elements of both logographic and syllabic word formation. Some signs are logograms—they represent whole morphemes or words, as is the case with T544 (*kin* 'sun, day') in Figure 4-1*a*. Other signs are phonetic—they represent sounds instead of whole words, as is the case with T116 (*ne*) in Figure 4-1*c*.

Logograms may occur alone as in Figure 4-1*a*, or with one or more phonetic complements, as in Figure 4-1*b–d*. In Figure 4-1*d*, the two phonetic signs, *ne* and *wa*, represent the second syllable of *onew* (*new*) (Fox and Justeson 1980).

The Maya script also contains evidence of syllabic writing, where each sign represents a syllable of the form, CV (C = consonant; V = vowel). Knorozov (1967) has shown that the vowel in the final syllable of such collocations is not pronounced. Figure 4-2*a* provides a syllabic spelling of *pacal* (as *pa-ca-l* [*a*]), the name of a ruler of Palenque. Figure 4-2*b* represents the epithet, *kak u pacal* 'fire is his shield', the name of a ruler of Chichen Itza, as *ka-ku-pa-ca-l* (*a*) (Kelley 1968). It demonstrates that syllables do not always respect morpheme boundaries.

The examples in Figures 4-1 and 4-2 imply that it is possible to make a clear distinction between logographic and syllabic principles in the Maya script. Figure 4-1 illustrates the use of logograms with and without phonetic complements. Figure 4-2 illustrates "pure" syllabic writing.

There are, however, a few collocations in the Maya script which do not fit neatly into one of these categories. The collocations themselves, not just the script, exemplify a mixture of logographic and syllabic writing principles. Two examples of such "logosyllabic" collocations are illustrated in Figure 4-3. Because I will be subsequently relating them to some spelling peculiarities in a colonial Yucatecan document, I will read them in Yucatec, rather than Chol.

Figure 4-3*a* contains two logograms and two phonetic elements. The first logogram is a variant of the third person pronominal prefix *u-*. The second is the day sign *kin* that we have already seen in Figure 4-1. It is followed by two phonetic elements, T116 (*ne*) and T188 (*le*). Read together they represent the CVC cluster *nel*. What is the relationship of *kin* to *nel*? Is T116 (*ne*) complementing *kin*, indicating that the second consonant of the logogram is /n/, or does it represent the first syllable of *nel* (*ne-l* [*e*])? I believe that the correct answer is *both*—that we have here a combination of logographic *and* syllabic principles of writing in a single collocation. I believe, furthermore, that the whole expression would have been read as *u-kin-el* 'the day'. It occurs between the two parts of a Calendar Round permutation on the north jamb of Structure 1 at Kabah, and it refers to "the day" 2 Chuen on the 3rd of Muan.

*A shorter, less comprehensive version of this chapter is scheduled to appear in a special issue of *Anthropological Linguistics*, edited by Brian Stross.

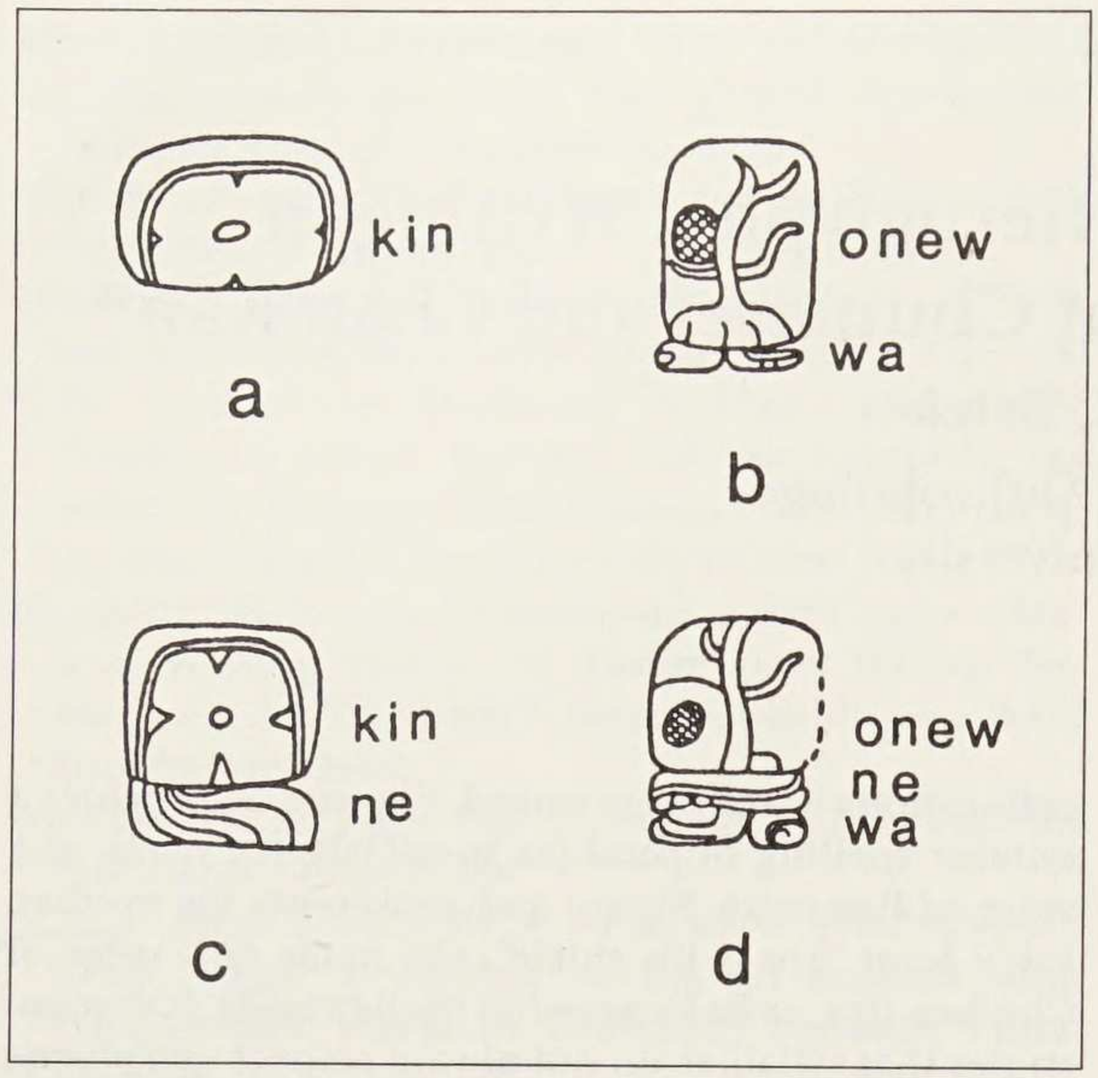


Figure 4-1. Logographic collocations. (a) Quir. O, El; (b) Pal. Sun, H2; (c) Quir. I, A4b; (d) Seib. H. S., Kla. (from *Maya Hieroglyphic Writing: An Introduction*, by J. Eric S. Thompson, figs. 18 *23*, *27*, and 26 *54*, *56*. Copyright 1960, 1971, University of Oklahoma Press).

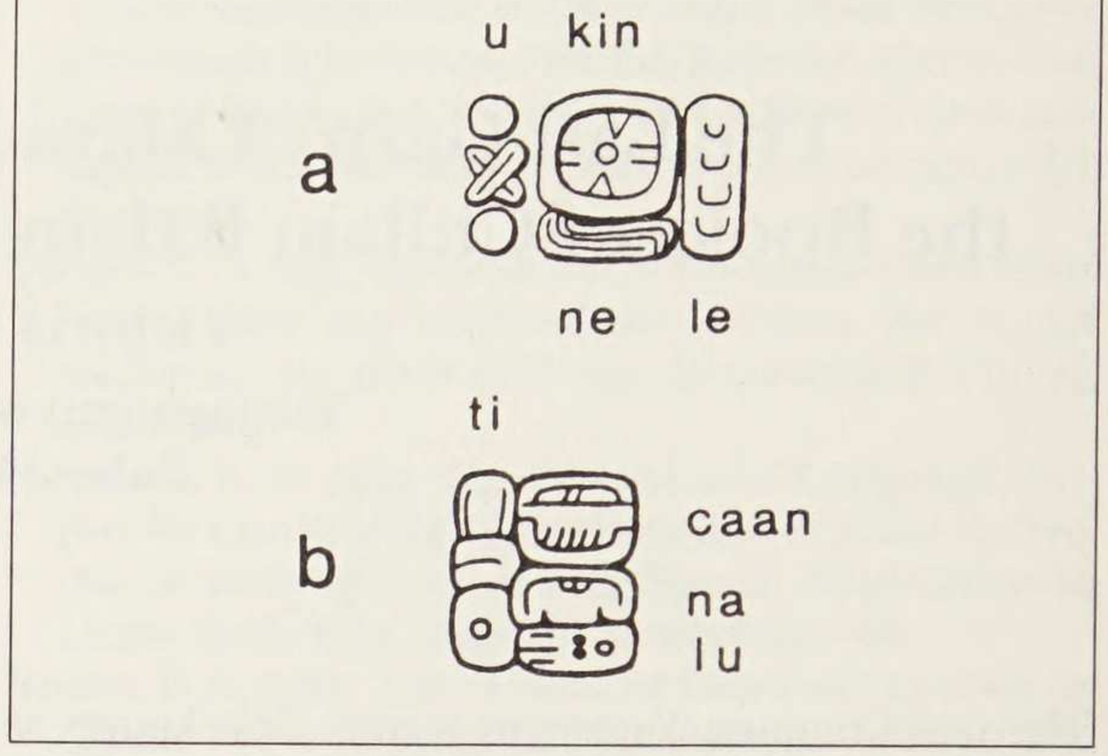


Figure 4-3. "Logosyllabic" collocations with consonant insertion. (a) Kabah, Str. 1, north jamb, B (Proskouriakoff and Thompson 1947:fig. 1g); (b) Yax. L. 1, F1 (Graham and von Euw 1977:13).

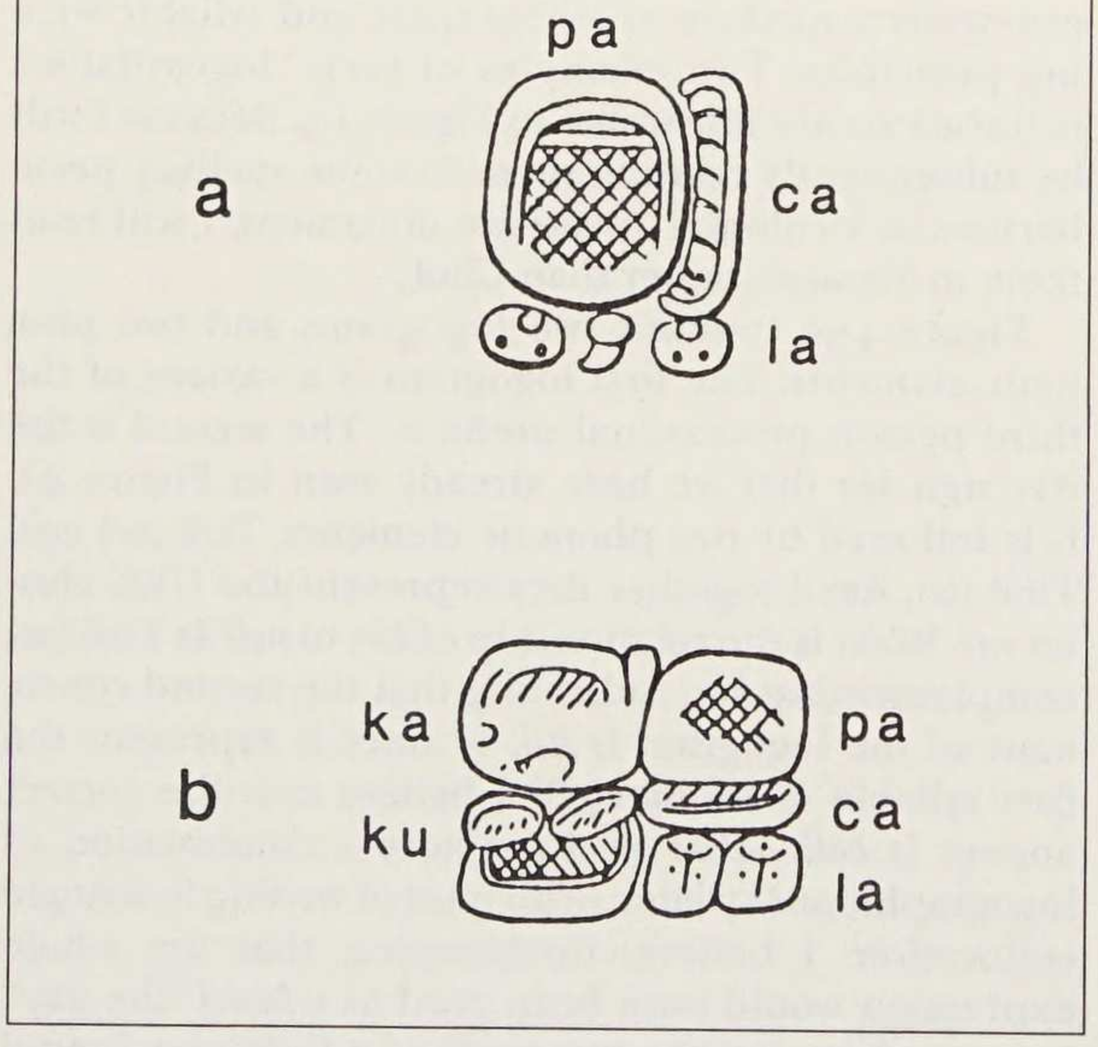


Figure 4-2. Syllabic collocations. (a) Pal. House C, eaves (Maudslay 1889–1902, vol. 4, pl. 24); (b) Chichen Itza, Monjas, L. 2A, B1 (Graham 1977:269).

Figure 4-3*b* also consists of two logograms followed by two phonetic elements. The first logogram represents the preposition *ti* in Classical Yucatec. The second logogram represents the noun *caan* 'sky' in the same language. It is followed by two phonetic elements, T23 (*na*) and T82 (*lu*), which form the CVC cluster *nal*. Here, again, we must ask whether the first phonetic element is complementing the final consonant of *caan*, or whether it represents the first syllable of *nal* (*na-l* [*u*]). Once again, I think that the answer is *both*. I believe that the whole expression would have been read as *ti caan-al* 'above' in Classical Yucatec.

These two examples differ from the other examples we have considered in several respects. They seem to employ both logographic and syllabic principles of writing, such that the first phonetic element functions both as a phonetic complement and as a syllable. Another difference, which has very interesting implications for understanding some spelling peculiarities in the Book of Chilam Balam of Chumayel, is that it represents a CVC root plus a VC grammatical suffix by two CVC clusters:

$$\text{CVC-VC} \rightarrow \text{CVC-CVC}$$

A dummy consonant, in both cases /n/, has been inserted between the CVC root and the VC suffix, making it possible to render *kin-el* as *kin-nel* and *caan-al* as *caan-nal*. The final consonant of the logogram is repeated so that the word in question can be reanalyzed as consisting of two CVC clusters, rather than as CVC followed by VC.

The principle of consonant insertion described here occurs in other logosyllabic scripts, notably Sumerian; it is one of several possible spelling conventions for representing grammatical suffixes in mixed writing systems (Justeson and Stephens 1980:6–8). Furthermore, the Maya script is not limited to the examples of consonant insertion shown in Figure 4-3. I have identified more than a dozen examples based on the same principle, and I am sure that once other epigraphers learn how to recognize them, they will find even more.

In my own case, I was alerted to the possible use of consonant insertion in the Maya script by some aberrant spellings of words in the Book of Chilam Balam of Chumayel. At issue are 148 words written with doubled consonants that have no phonetic source or grammatical functions in Classical Yucatec. Doubled consonants are sprinkled throughout the manuscript, but especially heavy concentrations of them occur on pages 15–18 (twenty-two examples) and 88–97 (twenty-seven examples). The first group of pages contains a passage correlating the Precolumbian Long Count dating system with the Christian calendar (Edmonson 1976), which bears a date of 1556, and a record of the Spanish Conquest of Yucatan between 1513 and 1541. The subjects dealt with on these pages suggest that they were written not long after the Conquest, when the traditional calendar and script were still in use.

The correlation text on page 15 contains a rebus, *2n hele* (= *can hele*), that consists of the symbolic form of a number followed by *-n* (Edmonson 1976:714). The word for "2" was *ca* in Classical Yucatec, and the phonetic suffix transformed it into *can*, the word for "4" in that language (Pío Pérez 1866–77:37, 42). The rebus principle used in this example may have been borrowed from the hieroglyphic script and could be evidence of the adaptation of Precolumbian writing conventions to the Latin alphabet.

Only the plain consonants, *b*, *c*, *h*, *l*, *m*, *n*, *s*, *t*, *w* (written as *u*), *x*, and *y*, are doubled in the Chumayel manuscript. In a number of cases, they represent the final consonant of CVC or CVCVC morphemes that are followed by inflectional suffixes of the form VC. Thus, for example, the words, *ahau-ob* 'rulers' and *u-mul-il* 'its mound', were written as *ahau uob* and *u mul lil*, respectively, on page 16 (Figure 4-4, lines 2,7). The gaps between the "u's" and the "l's" imply that the consonants were doubled so that the inflectional suffixes could be represented as CVC syllables. The logosyllabic collocation in Figure 4-1 achieves the same result by representing the *-el* suffix in *kin-el* syllabically as *ne-l(e)* or *nel* and the *-al* suffix in *caanal* syllabically as *na-l(u)* or *nal*. Thus the sixteenth-century scribe may have been following logosyllabic rules for word division when he wrote *ahauob* as *ahau uob* and *mulil* as *mul lil*. He also represented *u-buul-ob* as *u buul lob* (p. 1), *chac-ob* as *chac cob* (pp. 3, 96), *hun-ac* as *hun nac* (pp. 4, 75, 78, 79, 80, 94, 96), *uay-om* as *uay yom* (p. 9), *u-mun-al* as *u mun nal* (p. 12). *yax-al* as *yax-xaal* (p. 13), *em-al* as *em mal* (p. 18), *tan-il-ob* as *ta nil lob* (p. 18), *uinic-il* as *uinic cil* (p. 28), *chac-ix* as *chac cix* (pp. 28, 44), *u-sot-ic* as *u soot tic* (p. 30), *luk-uc-ob* as *lu kuc cob* (p. 37), *ahau-il* as *ahau uil* (p. 47), *hun-il* as *hun nil* (p. 61), *tzuc-ul* as *tzuc cul* (pp. 78, 80), *ɔul-ob* as *ɔul lob* (pp. 85, 87), *u-tah-ob* as *u tah hob* (p. 92), *hun-ab* as *hun nab* (p. 94), *chac-il* as *chac cil* (p. 95), *ɔut-il* as *ɔut til* (p. 95), *u-han-al* as *u han nal* (p. 95), *caan-il* as *caan nil* (p. 96), *ah-men-il* as *ah men nil* (p. 96), *cab-ob* as *cab bob* (p. 97), *u-xicin-ob* as *u xicin nob* (p. 103), *ah-om* as *ah hom* (p. 106), *u-than-ob* as *u than nob* (p. 107), and *kin-ob* as *kin nob* (p. 107).

The Book of Chilam Balam of Chumayel (Gordon 1913) also contains evidence of the use of doubled consonants to convert vowel suffixes into CV syllables. A word like *chac-e*, which consists of a CVC root and an enclitic vowel, could have been written syllabically as *cha ce* or logosyllabically as *chac ce*. The latter convention was employed on page 96 of that manuscript. Other examples of the logosyllabic treatment of vowel suffixes appear on pages 12 (*mun ni*), 35 (*yoc ce*), 36 (*u booc ce* and *muyal le*), 39 (*yol li*), 41 (*yit te* and *lac ci*), 65 (*tzimen ne*), 66 (*tun ne*), 70 (*u buc ce* and *u boc ce*), 71 (*muc ce*), 88 (*than ni*), 90 (*cah hi*), and 96 (*yan ni*). Figure 4-5 suggests that the Precolumbian scribe made use of *both* options for writing the title, *bate* 'warrior', spelling it syllabically as *ba-te* in some contexts and logosyllabically as *bat-te* in others (Closs 1984).

Thus the doubled consonants in the Chumayel can serve as clues to the nature of the hieroglyphic script. The script employed both logographic and syllabic principles of writing, often in the same word, that were apparently adapted to the Latin alphabet that replaced it. The spelling inconsistencies in the Chumayel and other colonial manuscripts, noted by Roys (1933:11) but not interpreted by him, reflect the fact that the Maya were accustomed to a mixed writing system that permitted words to be represented in several different ways.

VOWEL INSERTION

The spelling conventions employed by both Precolumbian and Colonial Maya scribes ignored long vowels, tones, and infixed consonants (/ʔ/, /h/). In Classical Yucatec, this meant that CVC, CV̀VC, CV́VC, and CV́ʔVC roots and stems were normally written as CVC. The Chumayel is an important exception to this generalization. First, it often represents CV́ʔVC roots and stems as CVVC: *baal* 'thing', *baalche* 'animal', *booi* or *booy* 'shadow, shade', *buul* 'beans', *caan* 'sky', *ceel* 'cold', *ciil* 'sweetness', *cuuc* 'squirrel', *chaan* 'observe', *chiib* 'be bitten', *chuuch* 'milk, nurse', *cħaab* 'be taken', *cħeen* 'well', *ɔaab* 'be given', *ɔooc* 'finish', *ɔuuɔ* 'suck', *haab* 'year', *haan* 'son-in-law', *haas* 'banana', *hool* 'five, head', *kaal* 'be

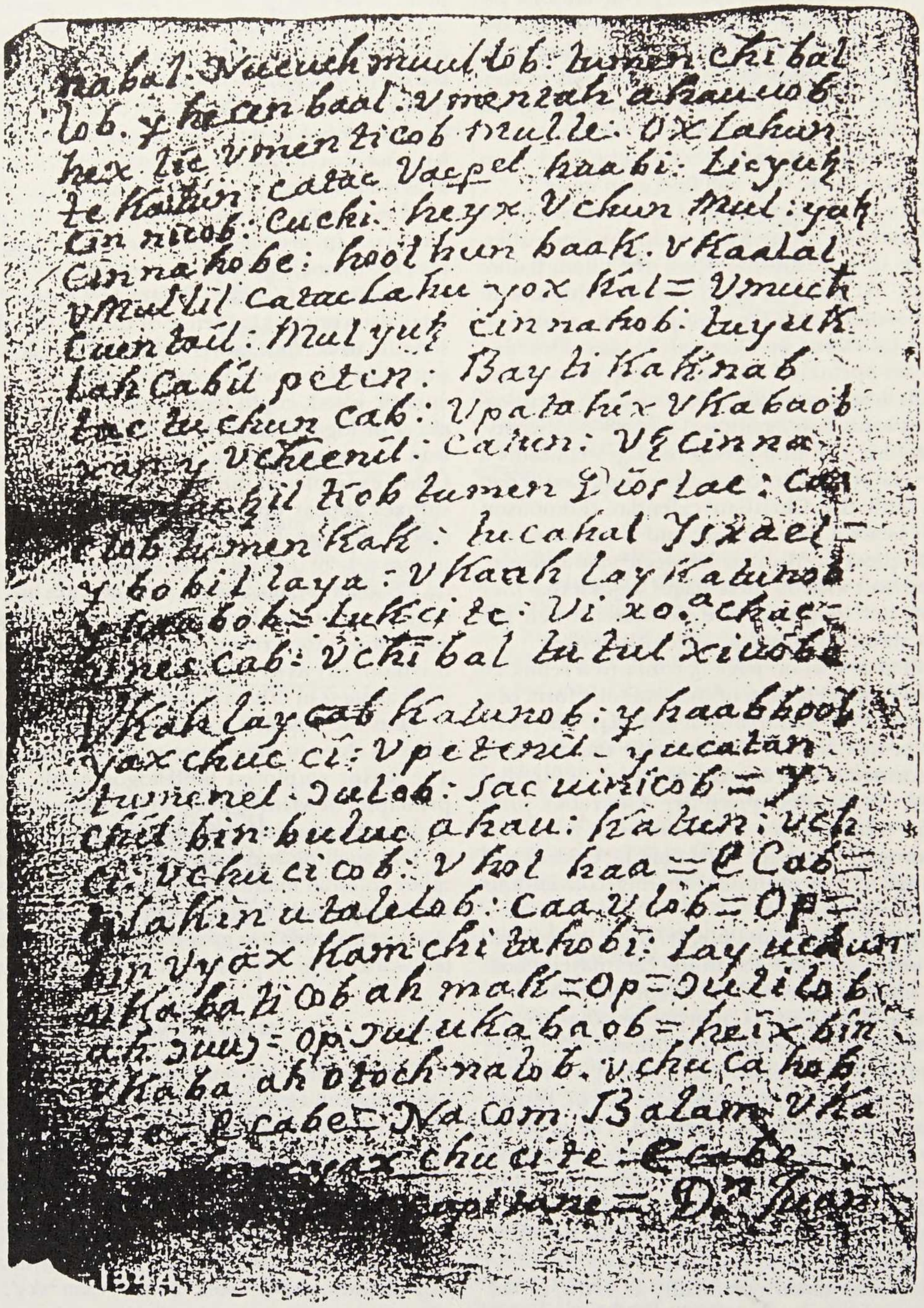


Figure 4-4. Page 16 of The Book of Chilam Balam of Chumayel (Gordon 1913).

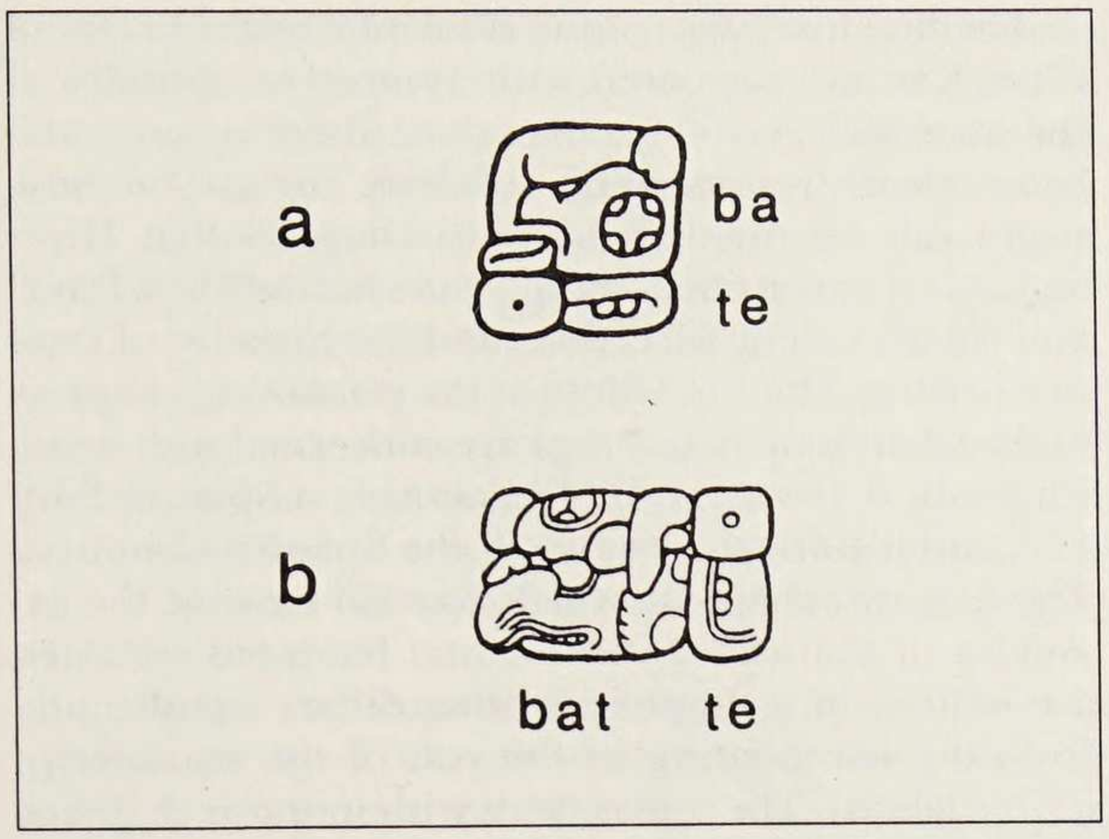


Figure 4-5. Consonant insertion in a CVCV stem. (a) Yax. H. S. 2, Step VIII, G3 (Graham 1982:162); (b) Yax. Str. 44, N. W. doorway, upper step, D1b (Graham 1982:171).

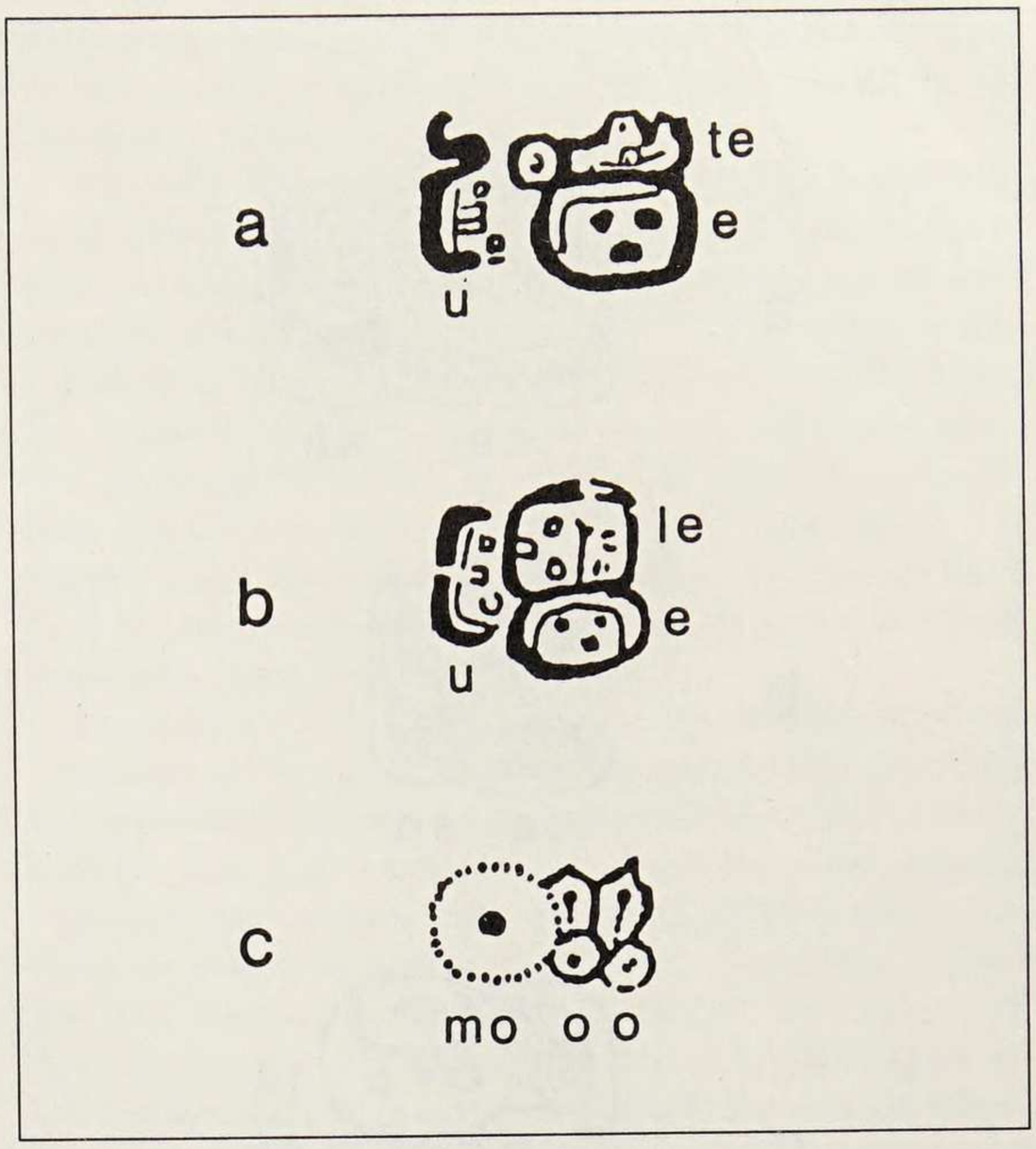


Figure 4-6. Vowel insertion in CV? roots. (a) M.42c; (b) M.91a; (c) D.16c (Villacorta C. and Villacorta 1976:42, 308, 406).

closed, covered, imprisoned', *luum* 'land', *moo*(?) 'macaw', *naat* 'know, understand', (?)*oolal* 'reason, cause', *paat* 'wait for, expect', *poot* 'perforate', *taan* 'lime, chalk', *toon* 'we, us', *tuuc* 'angle, corner', (?)*uuk* 'be drunk', (?)*uuy* 'feel, hear', *uaat* 'stand', *uiih* 'hunger', *xaan* 'palm', *yaab* 'year', and *yaax* 'green'. Second, several roots and stems known from Modern Yucatec to have vowel length and low tone were sometimes written as CVVC in the Chumayel: *baac* 'bone', *booc* 'odor, smell', *caal*, 'throat', *cooɔ* 'roll', *cheem* 'boat', *chiich* 'grandmother', *ɔaan* 'soak', *ɔuul* 'foreigner, master', *maax* 'chilli, monkey', *muul* 'hill', *suum* 'rope', and *uaah* 'tortilla'. Third, roots and stems with long vowels and high tone in Modern Yucatec were also sometimes written as CVVC in that manuscript: (?)*aalcab* 'run', *baax* 'play', *booch* 'shawl, shade, parasol', *buuc* 'clothes, roof', *caat* 'wide-mouthed jar', *ceeh* 'deer', *chaac* 'rain', *chaal* 'solder', *ɔiic* 'left(hand)', (?)*eek* 'black', *kaak* 'fire', *kaan* 'yellow', *luub* 'league', *maan* 'pass by', (?)*ool* 'heart', (?)*oopp* 'custard apple', *poop* 'mat', *ppooc* 'hat', *taab* 'tumpline', and *tooc* 'burn'. And fourth, grammatical suffixes of the form -V?VC in Modern Yucatec were sometimes represented as -VVC in the Chumayel: *-aan* 'present participle', *-been* 'ible/-able', *-oob* '3rd person plural', and *-oon* '1st person plural'.

The remaining examples of CVVC roots and stems and -VVC suffixes in the Chumayel with lexical equivalents in Modern Yucatec do not have a phonetic explanation. They correspond to roots of the form CV?, CVh, and CVy and to suffixes of the form -VC. It is probably significant that all the roots in question, *bah* 'gopher' (written as *baa*), *bey* 'thus' (written as *bee*), *cah* 'town' (written as *caa*), *ci?* 'sweet, tasty' (written as *cii*), *che?* 'wood' (written as *chee*), *chi?* 'mouth' (written as *chii*), *cha?* 'give' (written as *chaa*), *ʔi?* 'hawk' (written as *ii*), *ha?* 'water' (written as *haa*), *ho?* 'Merida' (written as *hoo*), *le?* 'leaf' (written as *lee*), *na?* 'mother' (written as *naa*), *nah* 'house' (written as *naa*), *te?* 'tree, wood' (written as *tee*), and *tzo?* 'turkey cock' (written as *tzoo*), end in the "weak" consonants, /?/, /h/, or /y/. Figure 4-6 suggests that the Maya scribe responsible for doubling the vowels in these examples had extended the principle of vowel insertion from the Precolumbian script to the Latin alphabet. The nouns, *te?* 'tree, wood' and *le?* 'leaf', were written as *tee* and *lee* in both systems. The *mooo* spelling of *mo* 'macaw' (=*mo?* in Modern Yucatec) in Figure 4-6*c* employs the same principle of vowel insertion. Thus the aberrant spellings of words ending in /?/, /h/, and /y/ in the Chumayel may have been motivated by Precolumbian scribal conventions.

Three -VC suffixes are occasionally written as -VVC in the Chumayel: the intransitive optative suffix, *-ac* (written as *-aac*), the transitive perfective suffix, *-ah* (written as *-aah*), and the nominal suffix, *-al* (written as *-aal*). The Precolumbian script contains some evidence that vowels were inserted before -VC suffixes to facilitate syllabification. This is certainly the motivation for writing *chuc-ah* as *chu-ca-ah*, *muc-ah* as *mu-ca-ah*, and *-lan* as *-la-an* in Figure 4-7. The examples of *u-chich-aah* 'he picked it up' and *u-mach-aah* 'he grasped it' in the "Creation of the Uinal" text in the Chumayel (Gordon

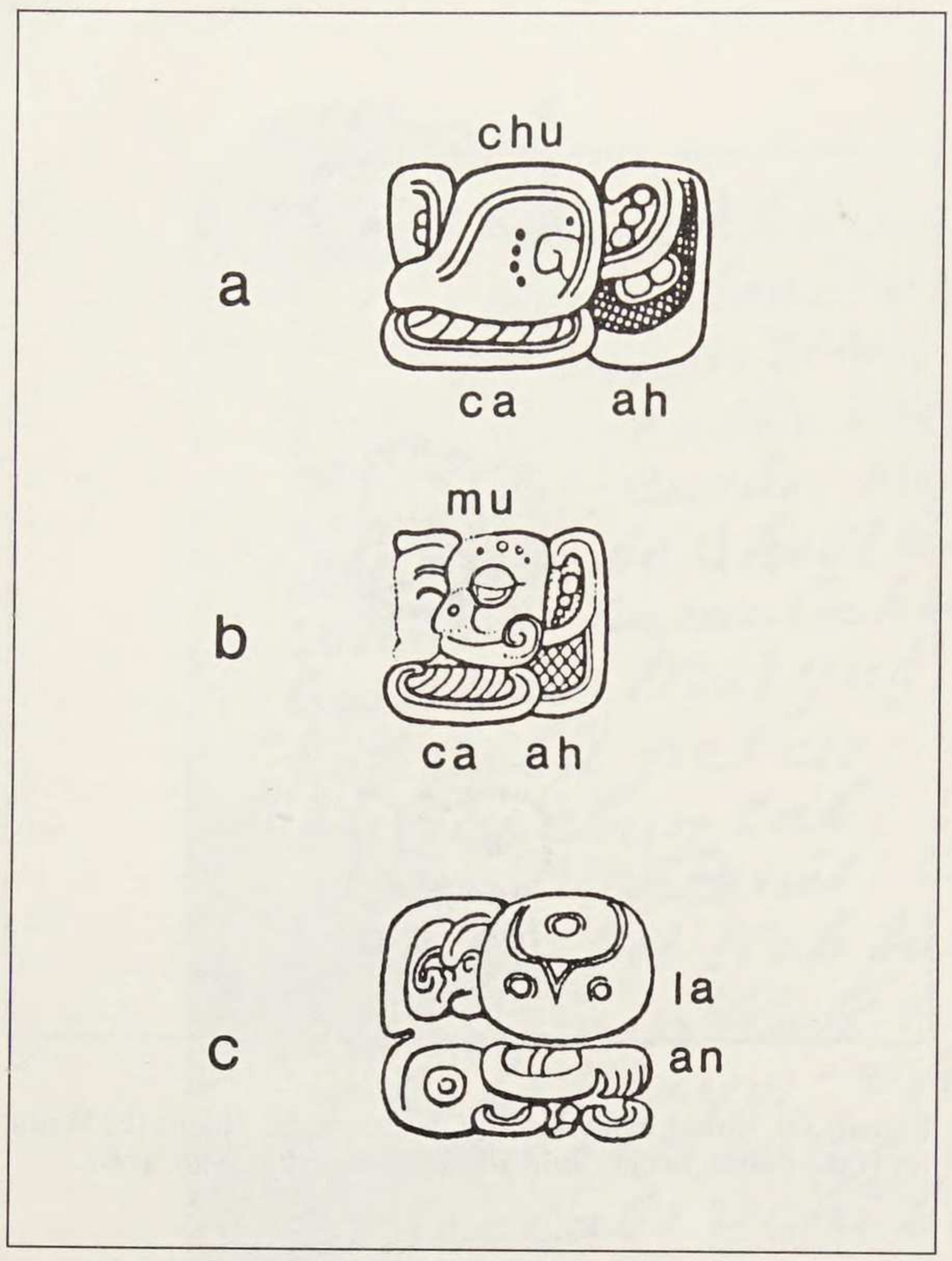


Figure 4-7. Vowel insertion in -VC suffixes. (a) Yax. Str. 44, S. E. doorway, upper step, D1b (Graham 1982:166); (b) Dos Pilas 8, H14 (drawing by Ian Graham); (c) Pal. Fol., N7 (Maudslay 1889–1902:4, pl. 82).

1913:61–62) can be syllabified in the same way, as *u-ch̓i-ch̓a-ah* and *u-ma-cha-ah*, respectively. Similarly, the inserted vowels in the suffixes of *ual-aac* (p. 13), *sac-aal* (p. 86), and *yax-aal* (pp. 72–73) imply that they were written syllabically as *ua-la-ac*, *sa-ca-al*, and *ya-xa-al*. The use of vowel insertion for this purpose is therefore another example of the influence of logosyllabic principles of writing in Colonial Maya texts.

VOWEL DELETION

The correlation text on page 15 of the Chumayel contains one example of still another kind of adaptation of the Precolumbian script to the Latin alphabet. The example in question, *at.5*, has been interpreted by Edmonson (1976:714n) as a partial rebus spelling of *a ti ho* 'at Merida'. The period that follows the letter *t* indicates that it is an abbreviation for the preposition *ti* 'in, at, to'.

The first five pages of the Book of Chilam Balam of Chan Kan are peppered with numerous examples of the same abbreviation convention, where consonantal letters clearly represent CV syllables. The text on those pages can be divided into two chapters that Hires (1981:13–17) has entitled "Prognostics for the Maya Days" and "Yearbearers, Directions and the Number of Days in Christian Months." Most of the remaining chapters of the Chan Kan manuscript are concerned with Spanish medical astrology, Biblical stories, a Spanish fairy tale, and historical accounts of the Spanish Conquest. The first two chapters, which contain most of the examples of the use of consonantal letters as syllables, are written in a single hand that differs significantly from the handwriting in the rest of the manuscript (Hires 1981:12). The topics dealt with in those chapters, the *tzolkin* and the *hab*, are of Maya, not European origin. It is therefore possible that they were written before the other chapters in the manuscript, not long after the Spanish Conquest, when Maya scribes were still familiar with the syllabic conventions of the hieroglyphic script.

In Spanish, abbreviations can be identified by several symbolic conventions, used alone or in combination: (1) a period at the end of the word or immediately following the deleted letter(s); (2) a tilde (˜) over the letter immediately preceding or following the deletion or extended over the whole word; and (3) raising, or treating as superscripts, the letter or letters that immediately follow the deleted portion of the word. For example, *padre* can be abbreviated as *P.* or *P.*^{e} or *Señor* as *S.*^{r}, *Sr.*, and *Sõr* (Cuyás 1904:585). The printed questionnaire for the *Relaciones Geográficas* that was sent to Yucatan in 1577 contains many examples of the use of the tilde in Spanish abbreviations—for example, *q̃* for *que*, *d̃* for *de*, *mẽcion* for *mención*, *sustẽto* for *sustento*, *cãtidad* for *cantidad*, *obp̃ado* for *obispado*, *peq̃ñas* for *pequeñas*, and *porq̃* for *porque* (de la Garza et al. 1983:3–6 *passim*). As far as I have been able to determine, neither colonial nor modern Spanish abbreviation conventions permit more than one tilde or period per word (*peq̃ñas* is not an exception because the tilde over the *n* signifies palatalization, not deletion). Although the placement of the symbol within the word can vary, apparently its frequency cannot.

The Maya scribe who was responsible for writing the first five pages of the Chan Kan was familiar with all three Spanish abbreviation conventions. He marked vowel and consonant deletion with both periods and tildes, and he included one example of "raising" (*cuyã.*^{tali} for *cu yantali* on page 1). He departed from Spanish usage only in marking syllable boundaries with periods and tildes. For example, on page 2, instead of abbreviating *ayikal* 'rich, wealthy' as *aykl.*, he wrote *ãy.k.l.*—pointing off the syllables, *a-yi-ka-l(V)*, with one

tilde and three periods (Figure 4-8, line 9). Similarly, on the same page (line 11), he abbreviated *yahalcab* 'dawn' as *y.h.l cab*, instead of *yhl.*^{cab} or *yhlcab*. Although Spanish scribes also sometimes deleted vowels in abbreviations (e.g., writing *mrd.* for *merced*, *m*^{td} for *mitad*, and *R̃mrz.* for *Ramírez* [Cuyás 1904:584–85; Millares and Mantecón 1955:66]), they did not point off the consonants remaining with periods or tildes. The novel use of Spanish abbreviation conventions for syllabification implies that the Maya scribe was treating the Latin alphabet as a syllabary, letting consonantal letters represent CV syllables and vocalic letters represent V syllables.

Why did the Maya scribe assign syllabic values to alphabetic signs? The answer probably lies in the way the Spanish priests transmitted their alphabet to the Maya after the Conquest. Justeson and Stephens (1980:62–64) point out that the names of the letters in many alphabets have a syllabic structure and that alphabets are often taught by naming their letters instead of illustrating their use in text. There is good evidence, in Landa's famous "alphabet," that Spanish priests used such a strategy for teaching the Latin alphabet in Yucatan (Figure 4-9). Landa apparently tried to elicit the glyphs for the "Maya alphabet" by reciting the Spanish names for the letters of the Latin alphabet. Because most of the names he recited had a syllabic structure—*a, be, se, e, a-che, ka, e-le*, etc.—his informant drew for him the glyphs that corresponded most closely in pronunciation to those syllables (Durbin 1969). A similar misunderstanding probably lies behind the treatment of consonantal letters as syllables in the first five pages of the Book of Chilam Balam of Chan Kan.

CONSONANT DELETION

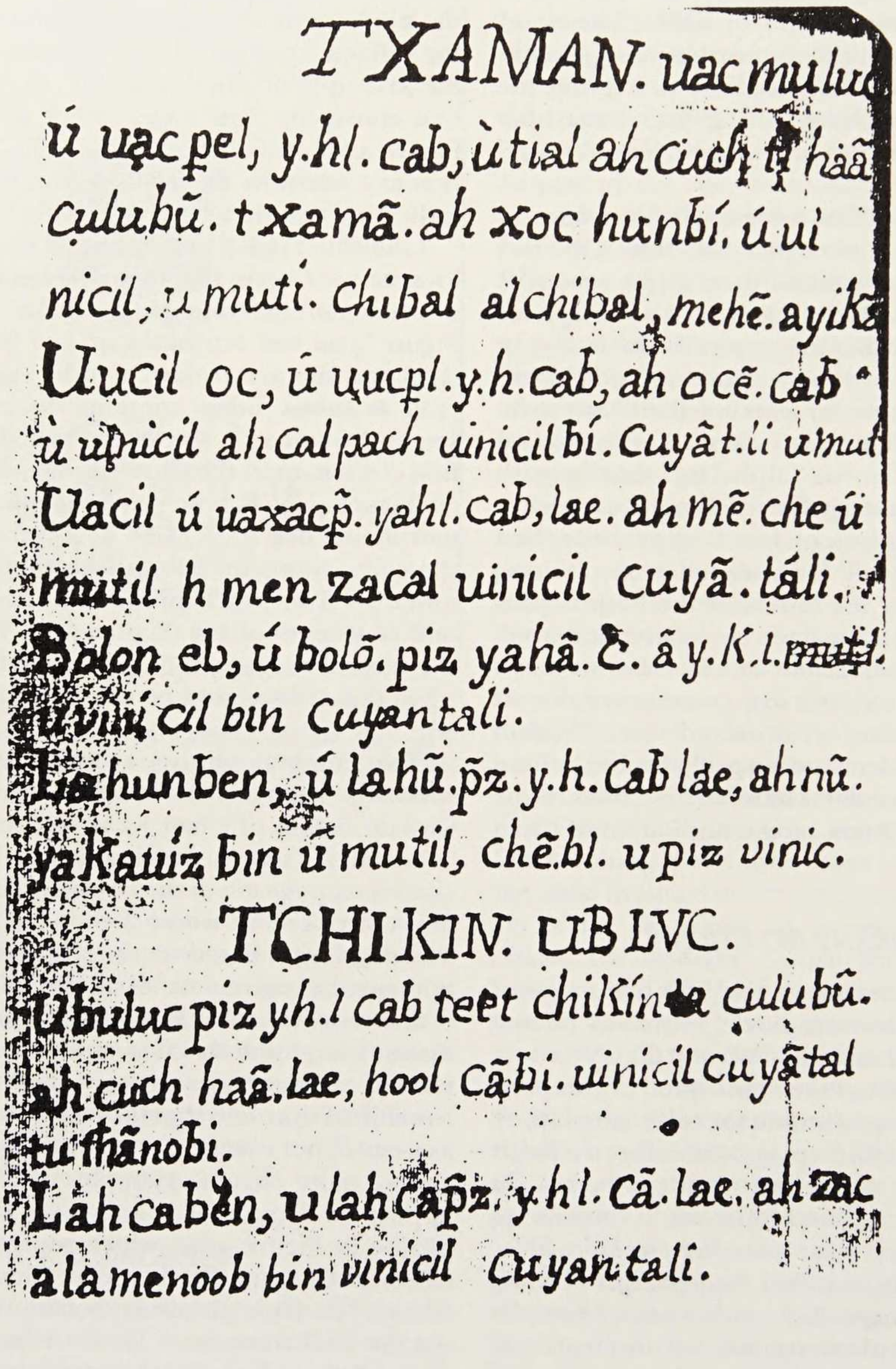
The Maya scribe who wrote the first five pages of the Chan Kan sometimes employed a strategy of consonant deletion for syllabifying CVC and CVCVC roots. Some striking examples of the application of this principle appear on these pages: *bolõ* for *bolon* 'nine' (p. 2), *mehẽ* for *mehen* 'man's child' (p. 2), *culubũ.* for *cu lubul* 'it falls' (p. 2), *xamã* for *xaman* 'north' (p. 2), *yahã.cã* for *yahalcab* 'dawn' (p. 3), and *cuzũ* for *cu zut* 'it returns' (p. 4). The syllables in these examples, *bo-lo, me-he, cu-lu-bu, xa-ma, ya-ha-ca*, and *cu-zu*, manifest the principle of vowel synharmony. Those pages also contain some examples in which the purpose of consonant deletion may have been to eliminate consonant clusters. The variant spellings of *cu yantali* on pages 1 and 2 as *cuyã.*^{tali}, *cuyã.tálí, cu yãt.li*, and *cuyã.táli* have in common the deletion of *n* before *t*, which permits it to be syllabified as *cu-ya-ta-li*. Similarly, *numya* 'suffering' may have been spelled as *nũ.ya* on page 2 to facilitate syllabification as *nu-ya*, and *u-can-lahun-piz* 'the fourteenth measure' may have been written as *ucã.l.hũ.p̃z* on page 3 so that it could be syllabified as *u-ca-la-hu-pi-z*(*V*).

There is also some evidence of consonant deletion in the Precolumbian script. For example, the inscriptions of Chichen Itza and the neighboring site of Yula contain several collocations for *kak* 'fire' from which the final consonant is missing. Figure 4-10*a* illustrates the syllabic spelling of *kak* as *ka-k*(*a*), which employs the principle of vowel insertion. In contrast, only the first consonant and vowel of *kak* are represented in Figure 4-10*b* and *c*; the "smoke" affix, T122, must function as a semantic determinative in these collocations, indicating that they refer to *kak* 'fire'.

Lounsbury (1984) has identified several nominal collocations at Copan that may also employ the principle of consonant deletion. He notes that the main sign in Figure 4-11*a* has attributes of two birds, the quetzal (*kuk*) and the macaw (*mo*), and he suggests that it was read as *kukmo. kukmo* contains the consonant cluster *km*; and when it is written syllabically at Copan, the first consonant in the cluster is deleted, yielding *ku-mo-*(*o*) (Figure 4-11*b*). If, however, the glyph for a vowel-initial morpheme like *ahaw* (T168 or T533) appears between the collocations for *kuk* and *mo*, then T604 (*ku*) is followed by T61, which presumably represents the second consonant of *kuk* (Figure 4-11*c*). This suggests that the second consonant of *kuk* was deleted in Figure 4-11*b* so that *kukmo* could be written syllabically as *ku-mo-*(*o*).

The nominal phrase, *u-mut-il* 'his bird, omen', is spelled *u muti* on the second page of the Book of Chilam Balam of Chan Kan (Figure 4-8, line 4). The collocation T1.*19*:59, which appears three times in the clauses on page 18b of the Dresden Codex (Figure 4-12), is usually read as *u-mu-t*(*i*) or *u-mut* 'his bird, omen'. This reading is based on the principle of vowel insertion, but the inserted vowel (/i/) does not echo the vowel of the root (/u/). The absence of vowel synharmony in these examples makes it possible that the principle of syllabification employed was consonant deletion, not vowel insertion, and that they were intended to be read as *u-mut-il*, not *u-mut*.

Two more obvious examples of consonant deletion appear in Figures 4-13 and 4-14. The prepositional phrase in Figure 4-13*a*, which represents *ta ahaulel* in Classical Chontal (Bricker 1980; Closs 1982), means 'in office'. The same phrase is shown in Figure 4-13*b* without the final consonant. There are only four examples of the full spelling of *ahaulel* in the monumental inscriptions and only one in the codices; it was usually abbreviated as *ahaule* in the Precolumbian script. Figure 4-14 illustrates the same contrast between vowel insertion and consonant deletion in syllabic spellings of *catzew*, the name of the fifth month in the Maya



TXAMAN. uac mu lu
ú uạc ꝑel, y.hl. cab, ù tial ah cuch t̰ haã
culubũ. txamã. ah xoc hunbí. ú ui
nicil, u muti. chibal alchibal, mehẽ. ayikã
Uucil oc, ú uucꝑl. y.h. cab, ah ocẽ. cab
ù uꝑnicil ah calpach uinicilbí. Cuyãt. li umut
Uacil ú uaxacp̃. yahl. cab, lae. ah mẽ. che ú
mutil h men zacal uinicil Cuyã. táli.
Balon eb, ú bolõ. piz yahã. C. ã y. K. l. mutil.
u uinicil bin Cuyantali.
Lahunben, ú lahũ. pz. y. h. Cab lae, ah nũ.
yaKauiz bin ú mutil, chẽ. bl. u piz vinic.

TCHIKIN. UBLVC.

Ubuluc piz yh. l cab teet chikín la culubũ.
ah cuch haã. lae, hool cãbi. uinicil cuyãtal
tu thãnobi.
Lah cabẽn, u lah cap̃z. y h l. cã. lae. ah zac
a la menoob bin vinicil Cuyantali.

Figure 4-8. Page 2 of The Book of Chilam Balam of Chan Kan. Courtesy of the Middle American Research Institute, Tulane University.

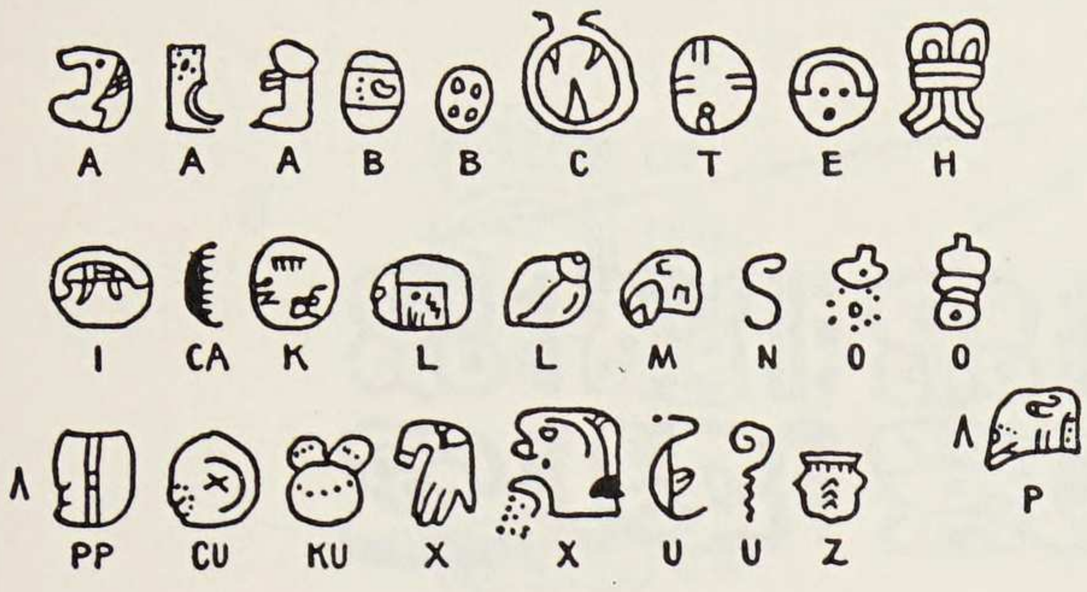


Figure 4-9. Landa's "alphabet" (Tozzer 1941:170).

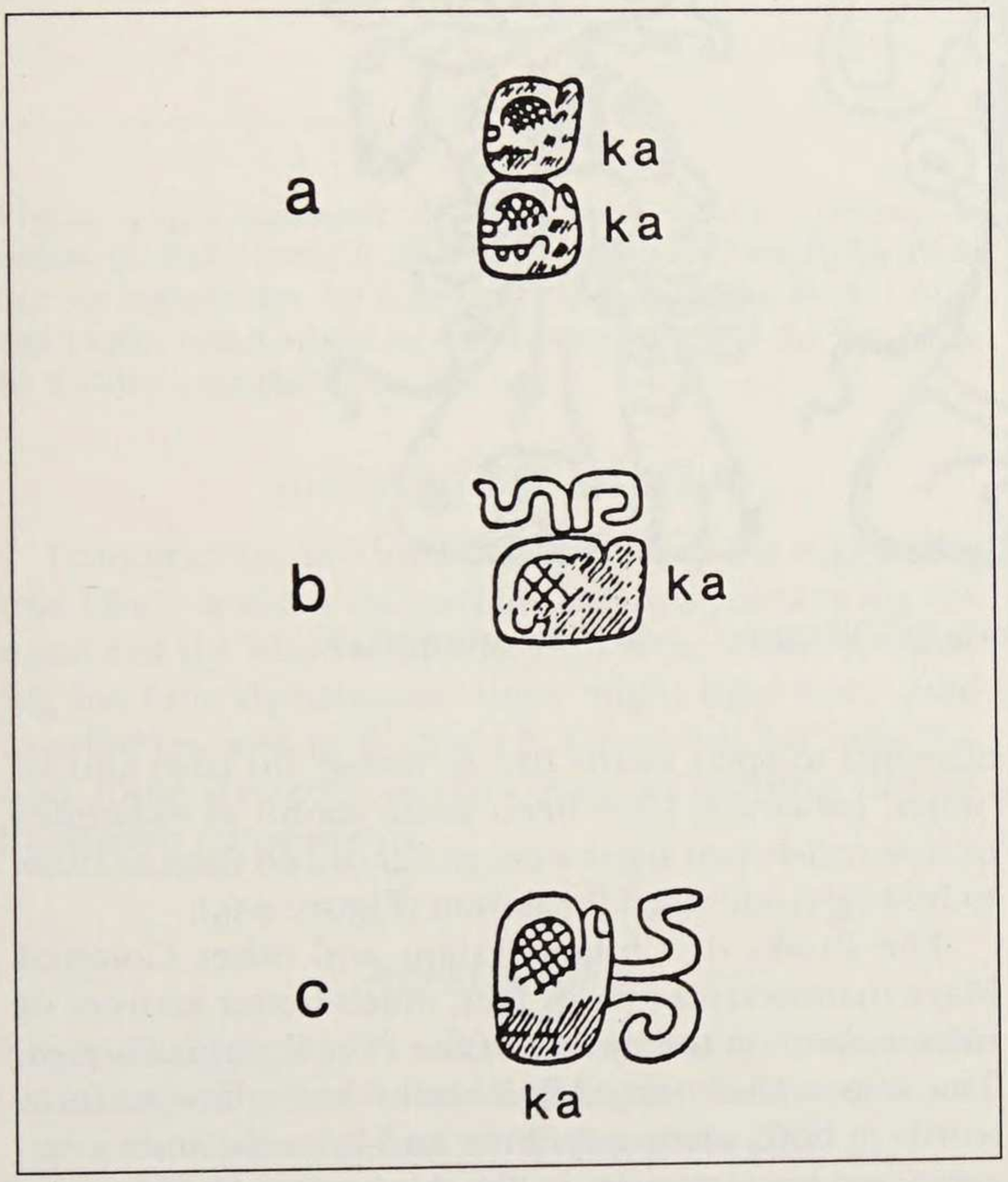


Figure 4-10. Consonant deletion at Chichen Itza and Yula. (a) Monjas L. 4, Z2 (Beyer 230); (b) Four Lintels L. 2, G3 (Beyer 245); (c) Yula L. 1, E5 (Beyer 246).

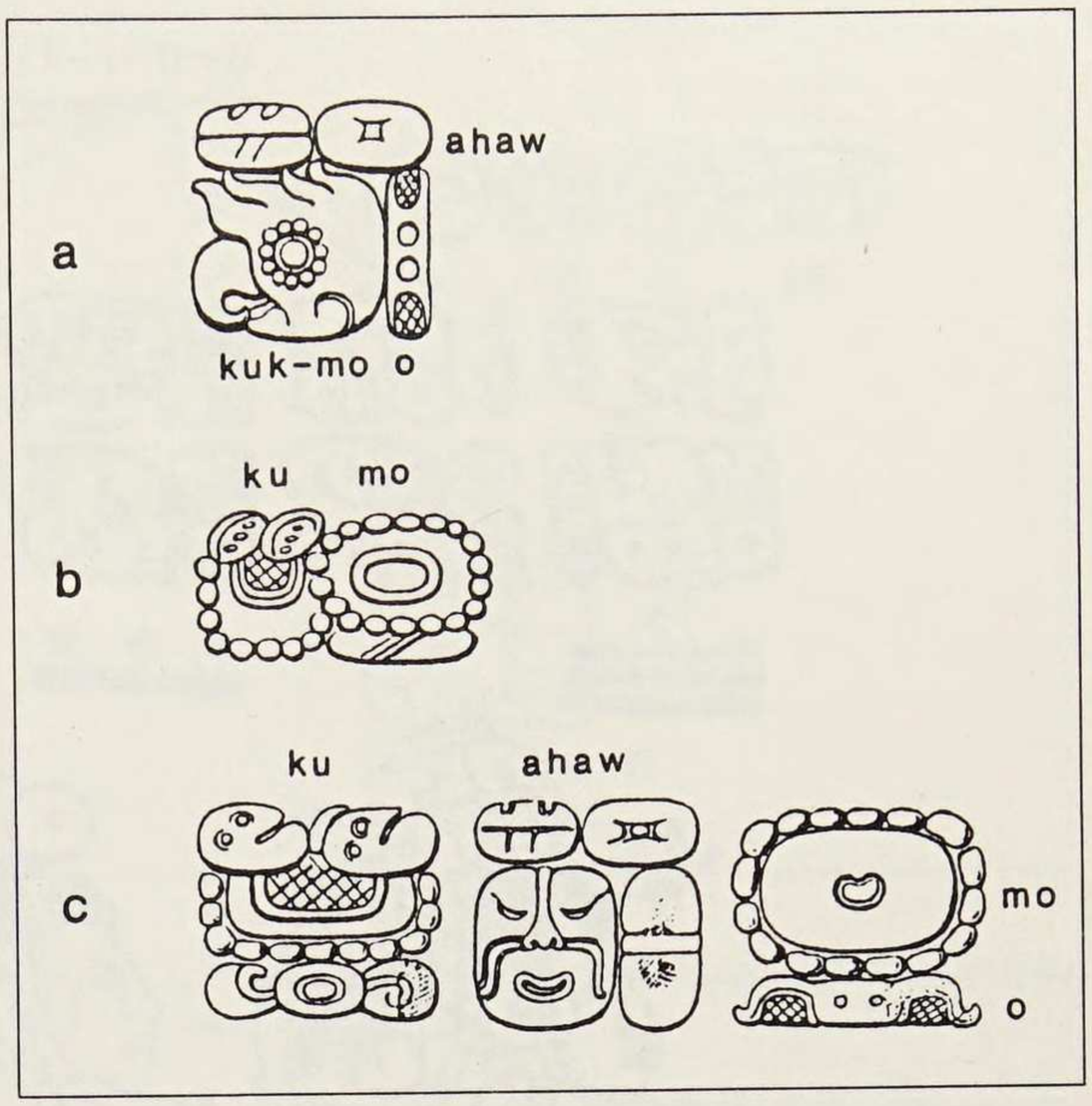


Figure 4-11. Consonant deletion at Copan. (a) Cop. Alt. Q, A3 (Maudslay 1889–1902:1, pl. 93); (b) Cop. T. 11, N. step, right (Maudslay 1889–1902:1, pl. 8); (c) Cop. Alt. R, C1–C2 (Maudslay 1889–1902:1, pl. 94).

solar calendar. In this case, however, the vowels in question are not synharmonic (*wa* does not echo the vowel in *tze*), and vowel insertion was the preferred alternative.

Thus, the pattern of consonant deletion in the Book of Chilam Balam of Chan Kan seems to have both Precolumbian and Spanish analogues. The Classic-period scribe employed the same principle to eliminate consonant clusters and to reduce the number of signs needed to represent polysyllabic words. Figures 4-10, 4-11, and 4-13 imply that consonant deletion was normally employed only when the second consonant of a CVC sequence was the same as the first: *kak* is written as *ka*, *kuk* is written as *ku*, and *-lel* is written as *-le*. In these examples, at least, the missing consonant can be inferred from the one that is written. However, it is possible that consonant deletion was also signaled by vocalic disharmony, as is suggested by the examples of *mu-ti* and *ca-tze* in Figures 4-12 and 4-14. A much larger sample of hieroglyphic abbreviations based on consonant deletion is needed in order to resolve these questions.

CONCLUSION

In the past, Landa's *Relación de las cosas de Yucatan* (Tozzer 1941) has been the only Colonial manuscript mined by epigraphers for clues to the nature of the Precolumbian Maya hieroglyphic script. Although Landa's "alphabet" and associated examples contain phonetic readings for a number of glyphic signs, they do not explain how the signs were combined to form words. Landa's method for eliciting hieroglyphic spellings of words was based on the false premise that the Maya had an alphabetic writing system; therefore, his

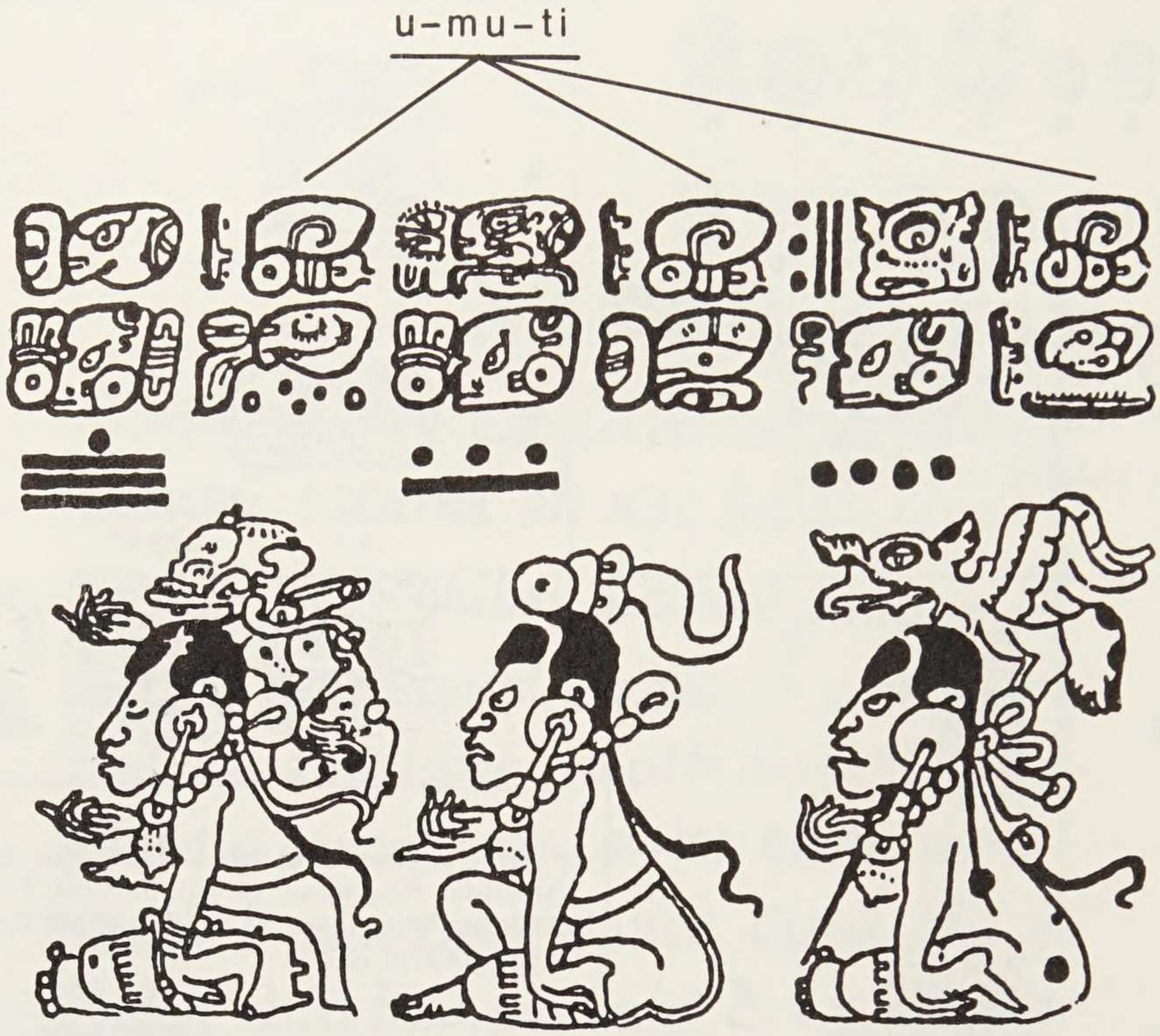


Figure 4-12. D.18b. Drawing by Carlos A. Villacorta (in Villacorta C., and Villacorta 1976:46).

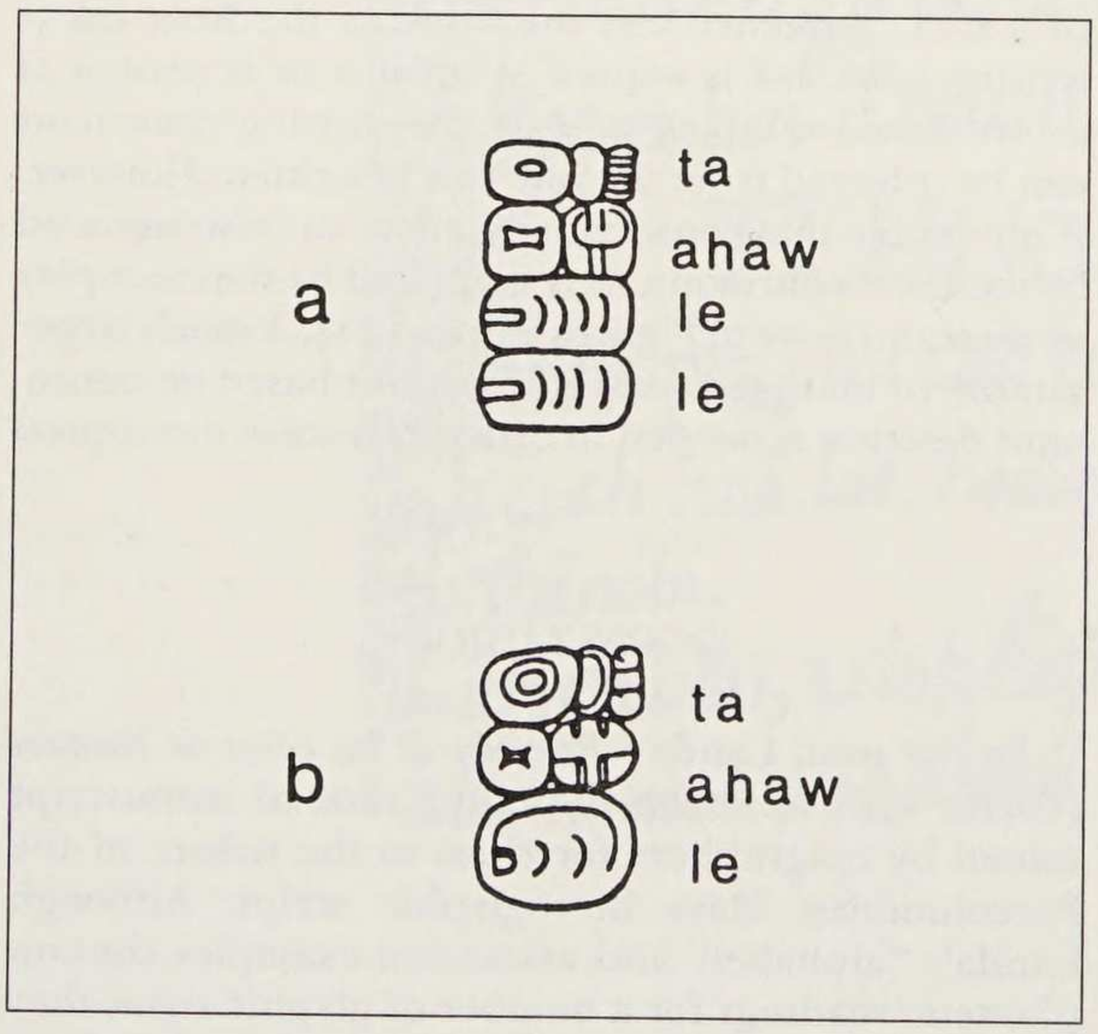


Figure 4-13. *ta ahaulel* and *ta ahaule* collocations. (a) P.N. Thr. 1, G′3b (Morley 1937–38:3, fig. 111); (b) P.N. 3, F5a (Marcus 1976:fig. 12).

attempts to spell words like *le* 'noose' (as *ele-e*) and *ha* 'water' (as *ache-a*) have been more useful as examples of how individual signs were pronounced than as clues to hieroglyphic word formation (Figure 4-15).

The Books of Chilam Balam and other Colonial Maya manuscripts are, in fact, much better sources of information on the nature of the Precolumbian script. The sixteenth-century Maya scribe knew how to form words in both writing systems, and he sometimes demonstrated his virtuosity in the two scripts by using the Latin alphabet as a syllabary. In this, he was more successful than Landa, for he apparently understood Spanish spelling and abbreviation conventions much better than Landa understood the use of Maya phonetic signs. I have shown that traces of the logosyllabic principles of consonant insertion, vowel insertion, and consonant deletion appear in the aberrant spellings and abbreviations of Maya words in the Books of Chilam Balam of Chumayel and of Chan Kan and that they are exemplified in analogous linguistic contexts in the Precolumbian script. The unusual spellings of words in Colonial Maya manuscripts are therefore evidence of *scribal syncretism*, not of ignorance of alphabetic writing conventions.

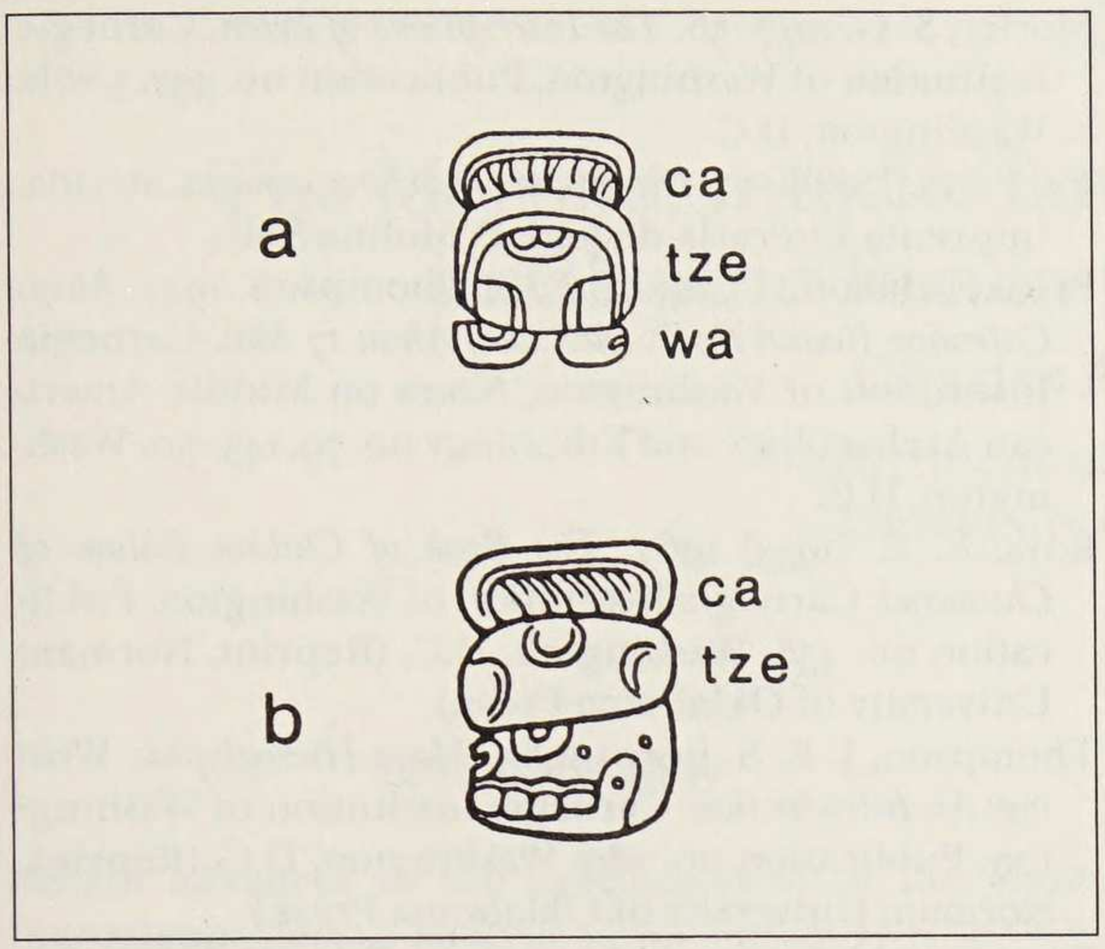


Figure 4-14. Consonant deletion in a syllabic spelling of *catzew*. (a) Pal. House A, Pier A (from *Maya Hieroglyphic Writing: An Introduction*, by J. Eric S. Thompson, fig. 16 *45*. Copyright 1960, 1971, University of Oklahoma Press); (b) Yax. L. 41, B1 (Graham 1979:91).

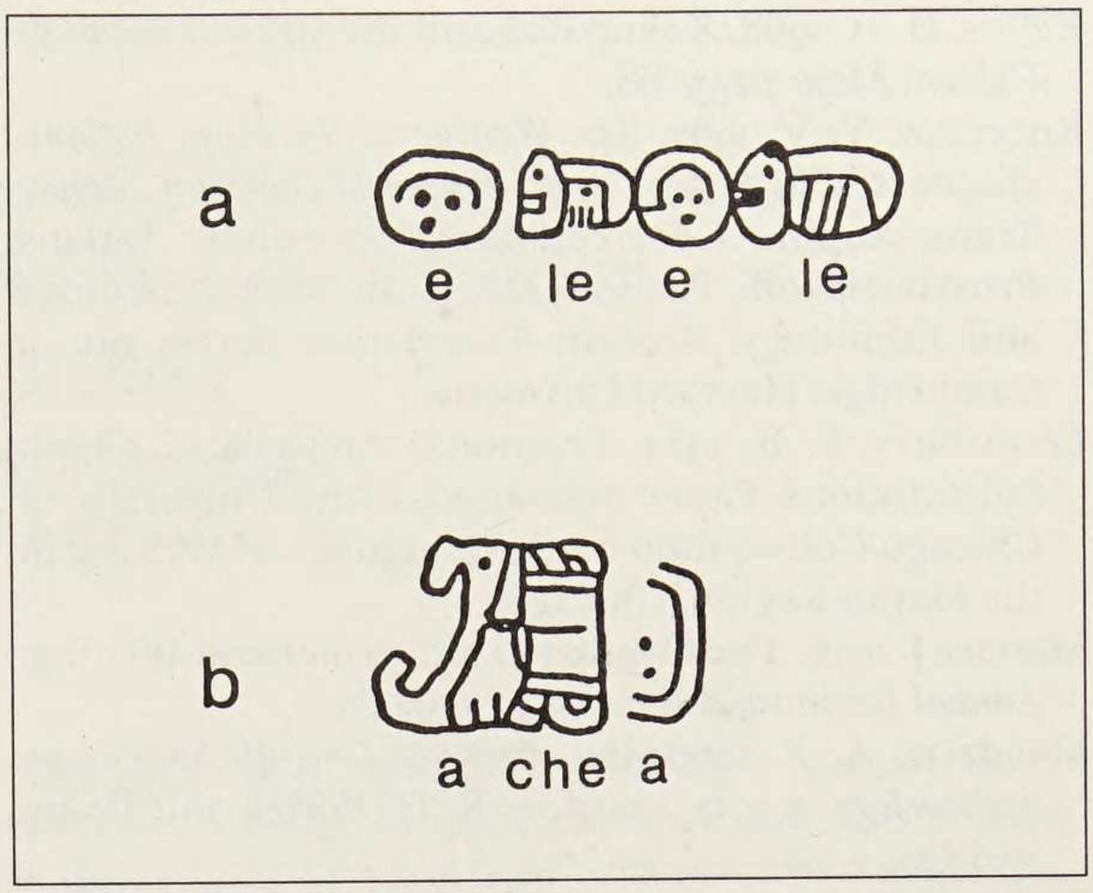


Figure 4-15. Landa's alphabetic spellings of *le* 'noose' and *ha* 'water' (Tozzer 1941:170).

ACKNOWLEDGMENTS

I am grateful to Floyd G. Lounsbury for suggesting that I look at abbreviations for insights concerning the nature of the Maya script, to John S. Justeson for showing me how alphabetical signs might have been used as syllables, and to Richard E. Greenleaf for information about sixteenth-century Spanish spelling and abbreviation conventions.

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5

The Morphosyntactic Basis of Discourse Structure in Glyphic Text in the Dresden Codex

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INTRODUCTION

Recent advances in the decipherment of the Maya hieroglyphs permit analysis of the discourse structure of hieroglyphic texts in a more rigorous fashion than previously possible. Our present understanding of basic aspects of the noun and verb morphology, and of the phonetic values of signs recorded in the glyphs allow us to posit the language base for increasing numbers of signs; and repeatedly, it is demonstrated that many linguistic structures present in the surviving Cholan and Yucatecan languages are also reflected in the hieroglyphs. In this study I investigate discourse highlighting mechanisms in evidence in the Moon Goddess Almanacs of the Dresden Codex, which are also closely related to structures documented in extant Yucatecan languages. Like Campbell (1984), I assume that the languages of primary importance for the Dresden Codex are Yucatecan (but see Bricker 1986b, who questions this assumption).

In discourse, speakers highlight information of particular salience and leave in the background less important information. For example, passive constructions often reflect the highlighting of the semantic patient, which is the subject of the verb, and the backgrounding of the semantic agent. Linguistic mechanisms for highlighting information in discourse include noun phrase (NP)* specification (e.g., by deictics), voice (e.g., active vs. passive), marked word orders, and linguistic parallelisms (e.g., couplets). All of these occur in spoken discourse of the relevant modern Yucatecan languages and in Colonial Yucatec documents such as the Books of Chilam Balam. Differences in genre are also associated with particular highlighting mechanisms. Couplet structures, for example, are more prominent in formal or ritual speech than in less formal genres. The important task of specifying differences in genre is only beginning, and few conclusive generalizations have yet been made. However, as the codices reflect a formal genre, one expects and, indeed, finds a high degree of linguistic parallelism and formulaic phrasing.

It should be emphasized that in order to analyze a discourse stretches of text should be well understood at all linguistic levels and, most essentially, at the morphosyntactic level. A general understanding of the lexical and propositional semantic content of a text is necessary but insufficient. Discourse analysis reveals not only what the content is but also how it is structured in discourse (i.e., how and why particular information is highlighted through morphosyntactic marking). For example, word order variation often reflects discourse highlighting, not different semantic content. Discourse analysis of hieroglyphic texts has only recently become possible.

Several discourse highlighting mechanisms have been recognized in the hieroglyphs. One of the first to be noted was couplet structures and other forms of linguistic parallelism (Lounsbury 1980; Schele 1982). The high degree of redundancy in the hieroglpyhs and their formulaic character were early features to be recognized, and led to many key advances in decipher-

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*Abbreviations:

3	third person
ABST	abstract
AFFIRM	affirmative
DEM	demonstrative
DGA	Death God A
GCh	God Ch
GL	God L
GQ	God Q
IPr	independent pronoun
MASC	masculine
MG	Moon Goddess
NOM	nominal
NP	noun phrase
O	direct object
OST	ostensive
POSS	possessive
PPr	possessive pronoun
PROX	proximal
S	subject
TOP	topic
V	verb

ment, particularly with regard to calendrics and title series (Kelley 1976; Schele 1982).

The investigation of word order in the hieroglyphs has also received some attention (Schele 1982; Bricker 1986b), but it has not been a systematic investigation with regard to the function of variation and highlighting. Part of the difficulty in investigating word order has been related to difficulties in distinguishing nominal and verbal morphology and in identifying active vs. passive verbal forms. Bricker (1980, 1986b) has proposed that the verbal morphology in the glyphs reflects a split-ergative system with nominative-accusative verb agreement in the incompletive aspect and ergative-absolutive agreement in the completive aspect, just as in the modern Yucatecan and Cholan languages. However, unlike the modern Yucatecan languages, the hieroglyphs do not consistently distinguish between transitive and intransitive verbs in the incompletive aspect. Moreover, these forms are often identical to, and easily confused with, possessed nominal forms (Bricker 1986a). An additional difficulty is that no hieroglyphic marker for passive verb forms has been positively identified. These indeterminacies and uncertainties are often problematic for analyzing word order.

Basic word order is generally claimed to be Verb-Object-Subject (VOS) in the hieroglyphs as in the modern Yucatecan and Cholan languages (Schele 1982; Bricker 1986a). This point is problematic (Hofling 1982, 1984), especially regarding the hieroglyphs, for several reasons: (1) transitive verbs with two nominal arguments are rare in most forms of discourse (Du Bois 1985); (2) the distinction of active vs. passive verb forms has not been identified in the hieroglyphs; and (3) the distinction between two argument transitive constructions and two argument stative constructions with Possessed and Possessor NP's is often unclear. It should also be noted that most sentences in the glyphs are not unmarked basic word order sentences, but rather adverbially focused constructions (Bricker 1986a).

In all of the modern Yucatecan languages and in Colonial Yucatec (the only language of the subfamily for which we have Colonial documents), word orders other than VOS are common and, indeed, VOS is generally less frequent than SVO (Hofling 1984). Thus, there is a puzzling discrepancy between modern linguistic data and assumptions regarding word order in the hieroglyphs. Word order variation has not been sufficiently explored in the hieroglyphs, and marked orders may be more frequent in hieroglyphic discourse than is generally assumed.

A prominent mechanism for highlighting nominal information in Mayan languages—and, indeed, most languages—is to place it at the beginning of a sentence (see Brody [1984] for a general discussion of basic word order with particular reference to Tojolobal Maya). In the extant Yucatecan languages as well as in Colonial Yucatec, nominal arguments of the verb are fronted to highlight both topical old information and contrastive new information, resulting in SV and OV constructions (Hofling 1984). Stative constructions are also employed to highlight nominal information, as in the following example taken from an Itza Maya folktale where the independent pronoun marks focused information [see also (2) below for Colonial Yucatec examples]:

(1) . . . layti u-si'pil t-u-hah-il
3IPr 3PPr-crime to-3PPr-AFFIRM-POSS
. . . it/that is his crime, truly

The specification of NP's by deictics has not been well documented in the hieroglyphs, although elaborate deictic systems are characteristic of all of the surviving Yucatecan languages. I believe that this discrepancy is due both to differences in genre and to incomplete models of linguistic analysis. The hieroglyphic texts, unlike extant texts recorded in the Roman alphabet, have an extremely high frequency of proper nouns naming the personages involved, and proper nouns may be less subject to deictic modification. Thus, in the inscriptions a ruler is often highlighted by a series of titles, rather than by deictics. However, deictics that have not hitherto been recognized may be recorded in the script. They are difficult to recognize because they are not easily identifiable by means of the substitution tests which have proved so successful in determining the phonetic and semantic equivalences (and differences) of signs.

As it is most commonly employed, distributional analysis of signs occurs at the lexemic level. This may apply to semantic substitutions (e.g., TUN vs. HAAB for 'year'), or involve phonetic substitution sets with phonetic complements or equivalences of syllabic signs composing lexemes. Once a sign value is established at the logographic or phonetic levels, it may also lead to new decipherments. Such distributional analyses may lead to demonstrations of the polyvalence of signs (Fox and Justeson 1984). What they will not show is discourse function, because discourse function cannot be demonstrated so long as the level of analysis is lexemic. Whether a NP is new or old information, highlighted or backgrounded, its semantic referential value does not change.

There is an important additional reason why discourse markers are difficult to determine in the script. They are by and large monosyllabic and easily confused with phonetic complements and syllabic signs, particularly as postfixes. In glyphic texts reflecting Yucatecan speakers, we might expect to find the following nominal highlighting deictics on the basis of postcontact linguistic materials (Hofling 1985): an ostensive marker of the form *he?*, which typically occurs

before nominals in conjunction with proximal or distal marking (*-la?*, *-lo?*, respectively), and/or the topic marker (*-e?*); and a general nominal demonstrative, probably of the form *la?*. The suffix *-e?* serves as a marker of highlighted old information, occurring as a topic-marking suffix on nominals and as a phrase-terminal marker for relative and adverbial clauses. All of these are quite frequent in Colonial Yucatec and might be expected in the codices. The following examples are from the Chilam Balam of Tizimin (adapted from Edmonson 1982). Note, too, that these examples are stative constructions involving Possessed and Possessor NP's.

(2) (Lines 3821–22) He ahau la e
OST lord PROX TOP
This was the lord:

Amaite Kuil u u ich
Amayte Kauil 3PPr face
Amayte Kauil was his face.

(Lines 4887–89) La u cuch
DEM 3PPr burden
That is the burden

La u chaan
DEM 3PPr appearance
That is the appearance

Katun
of the Katun.

(Lines 4433–34) Lai u than
DEM 3PPr word
That was the word

Uaxac Ahau ual e
eight Ahau again TOP
of Eight Ahau again.

As suggested above, the failure to recognize deictic suffixes may be due to confusions with phonetic complements and syllabic signs. Knorozov (1967) proposed a "synharmonic" constraint such that phonetic signs of the CV form are in harmony with the vowel of the preceding syllable. Since his original proposal, it has been suggested that there are neutral vowels (*e* and *a*, [Justeson 1978; Bricker 1986a:7]) in phonetic complements which need not be in harmony with the vowel of the preceding syllable and, in general, the "synharmonic" constraint has been weakened or ignored. It is certainly true that phonetic signs based on *a* and *e* are very common; but without attention to vocalic values and discourse (not just lexemic) context, it is impossible to detect the *-e?* suffix and difficult to determine the *-la?* suffix, since so many glyphically identified words end in *l*. I am suggesting that what appear to be violations of the "synharmonic" constraint may in fact be deictic marking.

THE MOON GODDESS ALMANACS

I have chosen as the corpus for analysis, the Moon Goddess (MG) almanacs of the Dresden Codex, which appear on pages 16 to 23 (Thompson 1972). Each page is divided horizontally into three sections labeled from top to bottom as Sections a, b, and c, respectively (cf. Figures 5-2–5-5). As the hieroglyphs in the top section (a) of these folios have largely been destroyed, I focus on Sections b and c. Each section records a series of almanacs which were numbered by William Gates (Thompson 1972:20). In Section b the Moon Goddess Almanacs 39–42 and 44 appear (Almanac 43 is not a Moon Goddess Almanac); in Section c Almanacs 47–52 are recorded in well-preserved hieroglyphic text.

Each almanac represents a cycle in the sacred 260-day calendar, and calendrical day signs form a vertical column at the beginning of each almanac (cf. Figures 5-2–5-5). Almanacs are vertically divided in a series of units labeled *t'ol*s by Thompson (1972). Typically, each *t'ol* is composed of a hieroglyphic text of four glyph blocks at the top, immediately above calendrical glyphs indicating the day in the sacred calendar to which the text applies and the temporal interval between *t'ol*s. A full-figure portrait of the Moon Goddess and one other protagonist generally appears in each *t'ol* beneath the hieroglyphs. For example, Almanac 39 appears in the middle section of pages 16 and 17 of the Dresden (D16b–D17b; see Figure 5-2). It begins on D16b with a column of day signs. The first two *t'ol*s each have a full-figure portrait of the Moon Goddess, but *t'ol*s 2 and 3 on D17b are each simply composed of a column of hieroglyphs without portraits.

The MG almanacs are composed of from two *t'ol*s (as in Almanac 41, D19b) to six *t'ol*s (as in Almanac 40, D17–18b). Most *t'ol*s are composed of four glyph blocks which tend to fall into four categories: one represents the MG; one represents a character involved with the MG on the specified dates; one represents the action or state relating the MG and the other character; and the fourth, which is also generally last, indicates the augury (e.g., whether the day is favorable or dangerous). In the MG almanacs there are three basic glyph compounds (or equivalents) indicating the relation of the MG to other characters. Generally, one of the three appears in each *t'ol* of an almanac and each will be considered in the sections below.

Each page of the Moon Goddess almanacs reproduced in Figures 5-2–5-5 appears in appendix 1 with Thompson numbers for the noncalendric hieroglyphs along with their linguistic values, as far as they are

known to me. In appendix 2 the almanacs are presented in numerical sequence with Yucatec Mayan transliteration and English translation. The sections below are largely a commentary on the texts as presented in the appendices. References to logographic sign values are in capitals, and phonetic signs are in lower case.

These texts are well suited to discourse analysis for several reasons. First, the semantic content is relatively well understood throughout. Second, it is clear that they were written at one time and about one major theme, the Moon Goddess. Finally, the formulaic nature of the text allows controlled comparisons at the level of the *t'ol* and almanac, in addition to the levels of glyph block and sign.

As mentioned above, it is often noted that the hieroglyphs correspond to modern Yucatecan languages in having VOS word orders. This is not obvious in these almanacs, which may be due to a low frequency (or absence) of transitive verbs. Also as mentioned above, transitive verbs are marked distinctly from intransitive verbs in the hieroglyphs only in the perfective aspect, where they have an -AH suffix (T181). In the incompletive aspect, transitives and intransitives alike are marked simply by a pronominal prefix, U- in Yucatecan languages. In the MG almanacs, and generally in the codices, the verbs are in the incompletive aspect, in accordance with the nature of these passages as records of repeated prognostications rather than completed events.

Hieroglyphs with the U- prefix may represent four distinct morphosyntactic categories: transitive verbs in the incompletive aspect, transitive verbs in the completive aspect, intransitive verbs in the incompletive aspect, or possessed nouns (Bricker 1986a); and, as will be seen below, it is not always easy to determine which is being recorded in the hieroglyphs.

KUCH ALMANACS

The relational glyph T528:515 (KUCH) typifies Almanacs 39 (D16b), 48 (D17–18c), 49 (D18–19c) and 50 (D19–20c). In Almanac 39 (D16b) each *t'ol* follows the formula: Date - New Character - U-KUCH - Moon Goddess - Augury (see figures and appendices 1 and 2). In each, U-KUCH is represented by T1.528:515 where T1 represents the third person pronoun U-, and T528:515 (ku:ch(u)) represents the root syllabically. KUCH is a root meaning both 'burden' and 'to bear' (Barrera Vásquez et al. 1980:342), and thus U-KUCH might represent either a possessed noun or a verb with a third person subject.

The MG is represented in each *t'ol* by T171.1026.103. T1026 is the basic main sign for the Moon Goddess CHEL (Justeson and Campbell 1984:361) or COLEL (Thompson 1972). I adopt the CHEL reading for T1026 below. The prefix T171 does not have a generally agreed upon interpretation, and may simply be an iconic sign for the MG with T1026 (Justeson and Campbell 1984:328). It is the most common, least marked prefix to occur with T1026. The T103 postfix is also problematic in this context. It has been suggested that it represents *-al* or a -VL suffix logographically (Justeson and Campbell 1984:323), neither of which suggests clear confirmation in this context.

The first two *t'ol*s of Almanac 39 have portraits of the MG carrying on her back the Rain God Chac and a death god, respectively; and in the glyphic text, the first glyph of each *t'ol* clearly corresponds to the figure on the MG's back. In the remaining *t'ol*s the first glyphs are also assumed to refer to the MG's burdens (Thompson 1972). Thus, at a semantic level, in each *t'ol* we have the different burdens of the MG initially, followed by the glyphs for U-KUCH, the MG, and finally the various auguries.

At the syntactic level, there are two different structures which might be reflected. The first three glyph blocks might reflect a transitive construction with the order Object-Verb-Subject, followed by a nominal augural expression. For example, in the first *t'ol*, Chak u-kuch Chel might be translated 'Chel bears *Chac*'. This construction would mark Object focus, as in modern Yucatecan languages (Hofling 1984). Alternatively, the first three glyph blocks could reflect an equative (stative) expression of the form Nominal X = Possessed N – Possessor N (e.g., 'Chac is the burden of Chel'), and this is the interpretation usually given for these constructions (Fox and Justeson 1984; Bricker 1986a). In either case, the first nominal is highlighted and both are marked constructions.

In such constructions, the first nominal (naming the burden) might be unmodified or modified by adjectives, including demonstratives, but would not be modified by topic marking. The Moon Goddess, however, might be topicalized, since she is the discourse topic throughout these almanacs. The T103 suffix on T1026 might serve such a function. As VC logograms can have CV phonetic sign values (Justeson and Campbell 1984:367), rather than serving as a logographic -AL or -VL suffix, T103 might represent la or le phonetically, yielding the demonstrative form CHEL-la or the topicalized form CHEL-e. It may be significant that when the MG appears in Section a of the MG almanacs (e.g., Almanac 33, 16a), the T103 suffix is absent.

Although the construction in Almanac 39 is a marked one, signaling the highlighting of the first NP, it is the standard form for the *t'ol*s of the KUCH almanacs. In Almanac 48 (17–18c), however, the *t'ol*s evidence some interesting variations. *T'ol* 1 follows the formula just outlined, although the Death God burden curiously has a T1 prefix, which Thompson (1972:48) suspects is a

scribal error. *T'ol* 2 has the following form: Burden (T144:17.281) - U-KUCH - ITZAMNA - CHEL, whereas *t'ol* 3 appears to have a couplet structure: Burden - U-KUCH - U-MUK - CHEL ('X is the burden, the omen of Chel'). It is unclear why Itzamna is mentioned in the second *t'ol*. Almanac 49 (18-19c) likewise begins with the standard structure in *t'ol* 1; but in *t'ol* 2, T144:17.281 is again the burden and the Maize God appears in position three rather than the MG, paralleling *t'ol* 2 of Almanac 48. The last of the KUCH almanacs (Almanac 50, D19–20c) follows the standard order in all but the second *t'ol*, which has the unusual order: Burden - SAK CHEL - U-KUCH - Augury. Although all almanacs conform fairly closely to the standard formula, the second *t'ol*s evidence the most variation.

MUT ALMANACS

Almanacs 40 (D17–18b) and 47 (D16–17c) have T1.19ms:59 (U.mu:t(i)) or its equivalent as the relational glyph. MUT, in Yucatec, means both 'bird' and 'omen' (Fox and Justeson 1984:33). Like the KUCH almanacs, the standard order of each *t'ol* is Bird/Omen - U-MUT - CHEL - Augury. Since there is no report of a verbal form of MUT, the syntactic form is apparently Nominal - Possessed NP - Possessor NP - Nominal and is evidence for analyzing the KUCH almanacs in the same way.

In Almanac 40 there are several minor variations on this structure. All *t'ol*s appear to begin with the Bird/Omen, and the second glyph compound is U-MUT in all except the second *t'ol*, where the pronominal prefix U- is inexplicably missing. The MG has the T171 prefix in *t'ol*s 1–3 and 6, but appears as T58.1026 (SAK CHEL) in *t'ol*s 4 and 5. *T'ol* 6 of the almanac has the added distinction of ending in the couplet form: Omen - U-MUT - MG - U-MUK ('X is the tidings of Chel, her omen') resembling the form noted in *t'ol* 3 of Almanac 48 above.

In Almanac 47 *t'ol*s 1 and 3 also have a couplet structure with U-MUK in final position. In *t'ol* 2, U-MUK appears alone as a substitution for U-MUT in second position. In *t'ol* 4, U-MUT and CHEL reverse positions as was noted above for Almanac 50, *t'ol* 2. *T'ol*s 5 and 6 are in the standard order, but in *t'ol* 6 the form T1.19ms:130 appears in position 2 with the T130 *wa* affix instead of T59 *ti*, perhaps representing *mu?wak*, another term for omen (Barrera Vásquez et al. 1980:543). Thus, while the theme is constant, there are a number of poetic variations involving couplets and semantic substitutions.

YATAN ALMANACS

The last type of Almanac to be considered involves the relational compound T47.552:24/23 (ya.TAN:ne/n(a)), which probably represents the possessed form of'wife', YATAN (Lounsbury 1984:179; Bricker 1986a: 68–70). (There is a slim possibility that it might be a verbal form meaning 'to take a wife' [Barrera Vásquez et al. 1980:18; Bricker 1986a:68–70]). If it represents the possessed form YATAN, we would expect different constructions than we have seen above, because the possessed form refers to the MG and not to the other characters involved in the scene; and indeed, the *t'ol* structure of these almanacs is different.

In Almanac 41 (D19b) we appear to have paratactic constructions in couplets, each beginning with T47.552:24 - CHEL. As Lounsbury notes (1984:179), in the YATAN compounds both T23 (*na*) and T24 (*ne*) occur as postfixes. He suggests that although the occurrence might be considered a phonetic complement that does not fully comply to the rule of "synharmony," it might indicate an *-e* suffix, which in Yucatec typically marks topics and relative clauses. Since the MG is the referent and it is occurring initially, such an interpretation is plausible. *T'ol* 1 would then read: YATAN-e - CHEL, SAK CHEL - Augury ('His wife is Chel, White Chel, Augury'). Note that the Possessor NP is not stated, but is understood from the portrait below. Alternatively, Bricker (1986a:96–97) has suggested that T24 be read as *li* or *la*. The latter reading might reflect the demonstrative *la?* noted earlier for Yucatecan languages. In *t'ol* 2, the structure is the same, but the Possessor NP occurs finally and no augury is present. The Possessor (Death God A) appears to be marked both by word order and morphosyntactically. Rather than occurring immediately after the Possessed nominal, it is separated by two MG titles and receives the postfix T140 (*la*), which may again represent the deictic *la?*. In the MG almanacs, the T140 affix occurs with the Death God T1047a only in this marked construction.

In Almanac 42 (19–20b), the first *t'ol* presents a different pattern. Rather than have the couplet with the repetition of CHEL titles, we find YATAN - CHEL - Deer God - Augury (Fox and Justeson [1984:328] identify the third glyph as a deity associated with deer). In the YATAN compound, the T24 *-ne* suffix is replaced by T23, *-na*. If the YATAN compound is verbal, this would be an example of basic VOS order (Bricker 1986a:69). Alternatively, YATAN is a Possessed nominal and the Possessor NP is present in third position followed by the augury, which is the interpretation presented below. The second *t'ol* has the same structure but the T24 postfix is again present. Note that in the first *t'ol*, YATAN does not have the *-ne* suffix, but the MG has the T103 affix, and in the second one, the *-ne* affix is present on YATAN, but the T103 affix is absent.

Almanac 44 (21b) presents another pattern which closely resembles the basic pattern of the KUCH and MUT almanacs. We find: CHAN CHEL - YATAN-e - Part-

ner · Augury ('Chan Chel is the wife of X, augury'). However, the affixing patterns and the discourse pragmatics suggest significant differences. Whereas in the KUCH and MUT almanacs the first position was occupied by highlighted, variable, new information and the third by the MG, here the roles are reversed. It is the topical MG which occupies the highlighted initial position and the variable partner which is in third position. Note too, that the MG glyph T1026 without suffix is prefixed by T166/114 (chan) and that the *-e* suffix is again present on YATAN, whereas the partners have no affixes. The MG is again being marked as highlighted topical information, but in a poetically different way.

Almanac 51 (D21c) appears immediately below Almanac 44 and has what I consider to be the least marked YATAN pattern: YATAN · Partner · MG · Augury ('The wife of X is CHEL, Augury'). In this structure, the Possessed nominal YATAN and the Possessor (Partner) are contiguous, there is clearly no *-e* suffix, and the MG is minimally marked, appearing as T171.1026. Note that in the third *t'ol*, the MG is omitted.

Almanac 52 (D22–23c) is the last of the MG almanacs, and also the most irregular and least understood. The portraits are like those of the YATAN almanacs but the YATAN compound only occurs in *t'ol*s 4 and 5. The MG is also sporadic in occurrence, appearing only in *t'ol*s 1, 2, and 6.

DISCOURSE HIGHLIGHTING OF THE MOON GODDESS

Although variation in the glyphic compounds representing the MG has been noted in the sections above, it is difficult to detect general patterns in this variation when the *t'ol* or almanac, or even the almanac type, is the unit of analysis. In this section I present observations of the distribution of these MG variants throughout the MG almanacs and its discourse significance. Four basic compounds occur representing the MG (Figure 5-1); each variant will be considered below.

As previously mentioned, Fox and Justeson (1984:328) do not consider T171 to be a glyphic element, but rather an iconic sign attached to the MG's forehead. I consider it the least marked of the prefixes which occur with the MG. It is perhaps worthy of note that the MG (T1026) always occurs with some prefixed element. The distribution of T171.1026 in the MG almanacs does not appear to be random and the following observations can be made. Although Section a of the MG almanacs has only been mentioned in passing, because so much of the glyphic text has been destroyed, T171.1026 is more prominent in these initial almanacs than in those of Sections b and c. In Sections b and c (and as far as it can be read, in Section a) T171.1026 has a tendency to occur in the first and/or last *t'ol* of an almanac. It occurs in both the first and last *t'ol*s of Almanacs 51 and 52, only in the first one in Almanacs 41 and 49, and only in the last one of Almanacs 40 and 42. It occurs in a medial *t'ol* only once in Almanac 51. It appears in almanacs of all types, but it is most prominent in YATAN almanacs. The distribution of the relatively unmarked T171.1026 is generally in accord with discourse structures of modern Mayan languages. Relatively unmarked NP's are often present on first mention or in introductory material, and the repetition of the sign relates to parallelisms also found in spoken discourse. The double reference to the MG in the YATAN almanacs (by YATAN as well as by a MG title) may account for the prevalence of the less marked T171.1026 in these almanacs.

T171.1026.103, hardly apparent in Section a of the MG almanacs, is the most frequent form in Sections c and d (Almanacs 39, 40, 41, 42, 47, 48). It occurs in every almanac type and is not restricted regarding *t'ol* position, and in fact appears in every *t'ol* of Almanacs 39 (D16–17b) and 48 (D17–18c). This freedom of occurrence suggests that it is the standard way to refer to the topical MG in the MG almanacs. In other almanac types in the Dresden Codex, where the MG is not the primary theme, the T103 postfix does not appear as a standard form with T1026.

T58.1026, SAK CHEL, has a distinct distribution. In Almanac 50 (D19–20c), it appears in every *t'ol*. This is atypical and the only almanac of this kind. In the other MG almanacs where SAK CHEL appears, it follows another form of the MG that lacks the SAK (T58) prefix. In Almanac 41 (D19b) it follows T171.1026(.103) in couplet structures. In Almanacs 40 (D17–18b) and 47 (D16c) SAK CHEL appears in almanac-medial *t'ol*s, substituting for T171.1026.103 found in parallel structures in previous *t'ol*s. In Almanac 40, SAK CHEL appears in *t'ol*s 4 and 5 after three examples of T171.1026.103. In *t'ol* 4 is a unique occurrence of T58.1026.103, with T58 (SAK) replacing T171 found in the previous *t'ol*. In *t'ol* 5 SAK CHEL appears without T103, which is mirrored in the final *t'ol*, where T171.1026 appears. In Almanac 47 (D16–17c) is a similar occurrence of T58.1026 in *t'ol* 3,

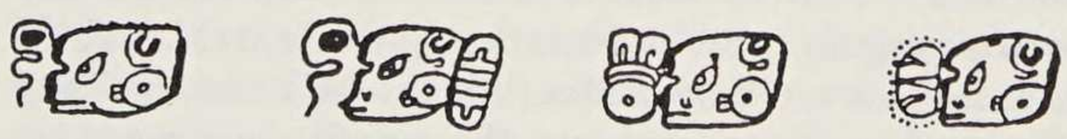


Figure 5-1. Left to right: T171.1026; T171.1026.103; T58.1026; T166.1026.

with T171.1026.103 in every other *t'ol*. This distribution suggests a contrastive or emphatic function for this MG title, where topic marking is not expected.

The final forms of the MG to be considered appear in Almanac 44 (21b). In this almanac, and only here, the MG occurs in *t'ol*-initial position as either T166.1026 or T114.1026, which I interpret as CHAN CHEL (Little? Chel), and in each *t'ol*, YATAN-e appears in second position. Both the position of the MG and the unusual prefix suggest highlighted information. The MG title appears to be emphatic, with her topical status marked on the YATAN glyph.

HIGHLIGHTING OF THE OTHER PROTAGONIST

As a rule, in each *t'ol* of the MG almanacs one other protagonist is introduced, as a burden, partner, or omen. Because this is new and contrastive information, one would expect it to be treated differently from the topical CHEL, and it is. One obvious difference is that, unlike CHEL, none of the protagonists appears in contiguous *t'ol*s, much less throughout an almanac, and none is subject to the variation in affixal modification noted above for CHEL. Rather, they substitute for one another from one *t'ol* to the next in positions syntactically marked for contrastive focus.

In the KUCH and MUT almanacs, the various protagonists most typically appear in *t'ol*-initial position without any apparent morphological affixation or affixal variation, as in Almanacs 39, 40, 47, and 50. In the KUCH Almanacs 48 and 49 the burdens also occur in initial position, but some prefixes are also present. This corresponds well with contrastive focus marking in modern Yucatecan languages, in which the focused element generally appears in a fronted position and is either unmodified or contrastively modified (e.g., by demonstratives [Hofling 1982, 1984]).

In the YATAN almanacs, as noted above, there is more variation in the order of constituents. These almanacs also differ from the others in that CHEL is semantically the Possessed/Patient rather than the Possessor/Agent, which is a more usual relationship for a discourse topic. Both the glyphic constructions and the portraits below reflect this difference. In the portraits of the KUCH and MUT almanacs, the Moon Goddess is portrayed facing left with her burden or omen of smaller size behind her. In the YATAN almanacs, the MG is portrayed either facing right opposite a left-facing partner of equal size or facing left with her partner on her lap.

In the first *t'ol* of Almanac 41 (D19B), God H is in portrait facing the Moon Goddess, but there is no apparent reference to the protagonist in the glyphs. In the second *t'ol*, the Death God A faces the MG and is mentioned in a unique fashion. Although Death God A appears frequently in the MG almanacs, this is the only example where it occurs in *t'ol* final position modified by T140, *-la*, which here might reflect the demonstrative, highlighting this focused constituent.

In Almanac 42 (D19–20b) the glyph order, YATAN - CHEL - Protagonist - Augury, might reflect either a VOS, Augury construction, or an equative construction of the form Possessed = CHEL, Possessor, Augury. In either case, the partner appears in third position, just as the MG did in KUCH and MUT almanacs. In *t'ol* 2, God H has the SAK prefix, which also mirrors the MG in the previous almanac. However, in the YATAN almanacs, this has become the variable and contrastive position. In Almanac 44 (D21b), where the order is CHAN CHEL - YATAN-e - Partner - Augury, an unmodified partner again appears in third position.

In Almanac 51 (D21c) the partner again follows YATAN in a Possessed - Possessor relationship, but in this almanac, and only here, the partner occurs in second position. Thus, in the YATAN almanacs there is considerable variation in the position of the MG and her protagonist, often involving a reversal from that found in the KUCH and MUT almanacs, which relates to the semantic reversal of the Possessed and Possessor NP's and the pragmatics involved in the discourse. In all positions, the MG's protagonists are minimally marked by affixes.

SUMMARY AND CONCLUSIONS

The discussion and analysis above suggest that the Moon Goddess almanacs share many features with Yucatecan Maya discourse recorded after Spanish contact. It is highly repetitious discourse, a noted characteristic of ritual language generally and a prominent feature in many forms of Maya discourse (Brody 1986; Edmonson 1985; Hanks 1986). Within the tightly constrained range of structures present, there is also significant variation, a manipulation of forms with poetic highlighting effects.

In some ways these calendrically structured almanacs are like a table in the regularity of the information presented, which may account for some of the variations in sign order which do not have obvious linguistic correlates. That is, these almanacs are a literate form which may allow permutations not found in spoken discourse. In most respects, however, there is a very clear connection between the forms recorded in the hieroglyphs and forms noted in post-contact Maya discourse.

As in spoken discourse, the highlighting of nominal information is signaled through word order and affixation patterns. In both the KUCH and the MUT almanacs, the glyph referring to the protagonist of the Moon Goddess typically occurs in *t'ol*-initial position

with minimal affixation, marking its status as contrastively focused information. In these almanacs, the Moon Goddess typically appears in third position as a Possessor NP and is frequently marked by affixes, most notably the T103 suffix, which I have suggested marks her topical status. In this context it might be read as *-la* or *-le*, the former reflecting the demonstrative as in *Chel-la* and the latter the topicalized form *Chel-e*.

In the YATAN almanacs, the semantic roles of the Possessor and Possessed NP's (or Agent and Patient NP's if transitive constructions are recorded) are reversed, and more variation is present. In these almanacs it appears that the topicality of the Moon Goddess may be marked by affixes either on her name glyph by T103 as above or on the YATAN 'wife' glyph by the T24 (ne or la) suffix. In these almanacs the variable protagonist glyph follows the YATAN glyph in second or third position, again, with minimal affixation.

Like other formal Maya discourse, linguistic parallelism is pervasive and the formulaic character of these almanacs is pronounced. Although I have not addressed the calendrical aspects here, calendrics very clearly format the text in a series of cycles. Noncalendric intertextual relations also connect each almanac to those surrounding it through parallelistic repetition and substitution. The formulaic character of the text is perhaps most evident at the level of the almanac, each composed of a parallel series of calendrically framed *t'ol*s. Yet within this predictable and powerfully repetitive organization, we find a subtle and poetic manipulation of structure with highlighting effects much like that apparent in modern Maya discourse.

APPENDIX I: The Moon Goddess Almanacs of the Dresden Codex

APPENDIX 2: Maya Transliteration and English Translation of the Moon Goddess Almanacs of the Dresden Codex in Almanac Sequence



16 17

Figure 5-2. Dresden Codex, pp. 16–17 (after Anders 1975).

APPENDIX 1: The Moon Goddess Almanacs of the Dresden Codex

The almanacs are in sequence according to page number with Thompson numbers and their linguistic values (excluding calendric glyphs). Logographic signs are in capital letters, phonetic signs are in lower case.

Dresden 16b

Almanac 39

T1		T2	
669.103	1.528:515	24.1047a	1.528:515
CHAK.k(i)	U.ku:ch(u)	?.DGA	U.ku:ch(u)
171.1026.103	168:612	171.1026.103	15.736:140
?.CHEL.?	AHAW:le	?.CHEL.?	ah.KIMI:l(a)

Dresden 16c

Almanac 47

T1		T2		T3	
XIII.748	10.19ms:59	604.604	1.648:25	582.99	?.19ms:59
MUWAN	U.mu:t(i)	k'u.k'(u)	U.mu:k(a)	mo.'o	U?.mu:t(i)
171.1026.103	10.648:25	171.1026:103	III.567:130	58.1026	1.648:25
?.CHEL.?	U.mu:k(a)	?.CHEL:?	?:w(a)	SAK.CHEL	U.mu:k(a)

Dresden 17b

Almanac 39

T'ol 3	*T'ol* 4
152.1009c:23	1050b
its?.ITSAMNA:na	GQ
1.528:515	1.528:515
U.ku:ch(u)	U.ku:ch(u)
171.1026.103	171.1026.103
?.CHEL.?	?.CHEL.?
24.533:24	267:613
?.AHAW:li?	?:MEN

Almanac 40

T'ol 1		*T'ol* 2	*T'ol* 3
47.791[24]	1.19:59	70.755	559:568
ya?.?[?]	U.mu:t(i)	ma.MA?AX	tsu:l(u)
171.1026.103	168:612	19ms:59	1.19ms:59
?.CHEL.?	AHAW:le	mu:t(i)	U.mu:t(i)
		171.1026.103	171.1026.103
		?.CHEL.?	?.CHEL.?
		168:613	III.567:130
		AHAW:MEN	?:wa

Dresden 17c

Almanac 47

T'ol 4	*T'ol* 5	*T'ol* 6
47.791[24]	747	528.559
ya?.?[?]	TA?HOL/K'UCH	ku.ts(u)
171.1026.103	?.19ms:59	1.19ms:130
?.CHEL.?	U?.mu:t(i)	U.mu:wa
13.648:59	171.1026.103	171.1026.103
U.mu:t(i)	?.CHEL.?	?.CHEL.?
168:612	31.613	162:501.506
AHAW:le	?.MEN	?:?.K'AN

Almanac 48

T'ol 1	
1.24.1047a	1.528:515
U.?.DGA	U.ku:ch(u)
171.1026.103	13.736:140
?.CHEL.?	U.KIMI:l(a)



18 19

Figure 5-3. Dresden Codex, pp. 18–19 (after Anders 1975).

Dresden 18b

Almanac 40

T'ol 4		*T'ol* 5		*T'ol* 6	
24.1047a ?.DGA	1.19ms:59 U.mu:t(i)	152.1009c:24 its?.ITSAMNA:na	1.19ms:59 U.mu:t(i)	XIII.748 MUWAN	T1.19ms:59 U.mu:t(i)
58.1026.103 SAK.CHEL.?	15.736:140 ah.KIMI:l(a)	58.1026 SAK.CHEL	24.533:24 ?.AHAW:?	171.1026 ?.CHEL	1.648:25 U.mu:k(a)

Dresden 18c

Almanac 48

T'ol 2		*T'ol* 3	
144:17.281 ?:YAX.K'AN	10.528:515 U.ku:ch(u)	19ms.62 mu.y(u)	1.528:515 U.ku:ch(u)
152.1009c:23 its?.ITSAMNA:na	171.1026.103 ?.CHEL.?	10.648.25 U.mu.k(a)	171.1026.103 ?.CHEL.?

Almanac 49

T'ol 1	
58.109:736 SAK.CHAK:KIMI	1.528:515 U.ku:ch(u)
171.1026 ?.CHEL	15.736:140 ah.KIMI:l(a)

Dresden 19b

Almanac 41

T'ol 1		*T'ol* 2	
47.552:24 ya.TAN:ne	171.1026 ?.CHEL	47.552:24 ya.TAN:ne	171.1026.103 ?.CHEL.?
58.1026 SAK.CHEL	III.567.130 ?.wa	58.1026 SAK.CHEL	24.1047a:140 ne?.DGA:la

Almanac 42

T'ol 1

47.552:23
ya.TAN:n(a)

171.1026.103
?.CHEL.Vl?

VII.159:582
?:?

31.613
?.MEN

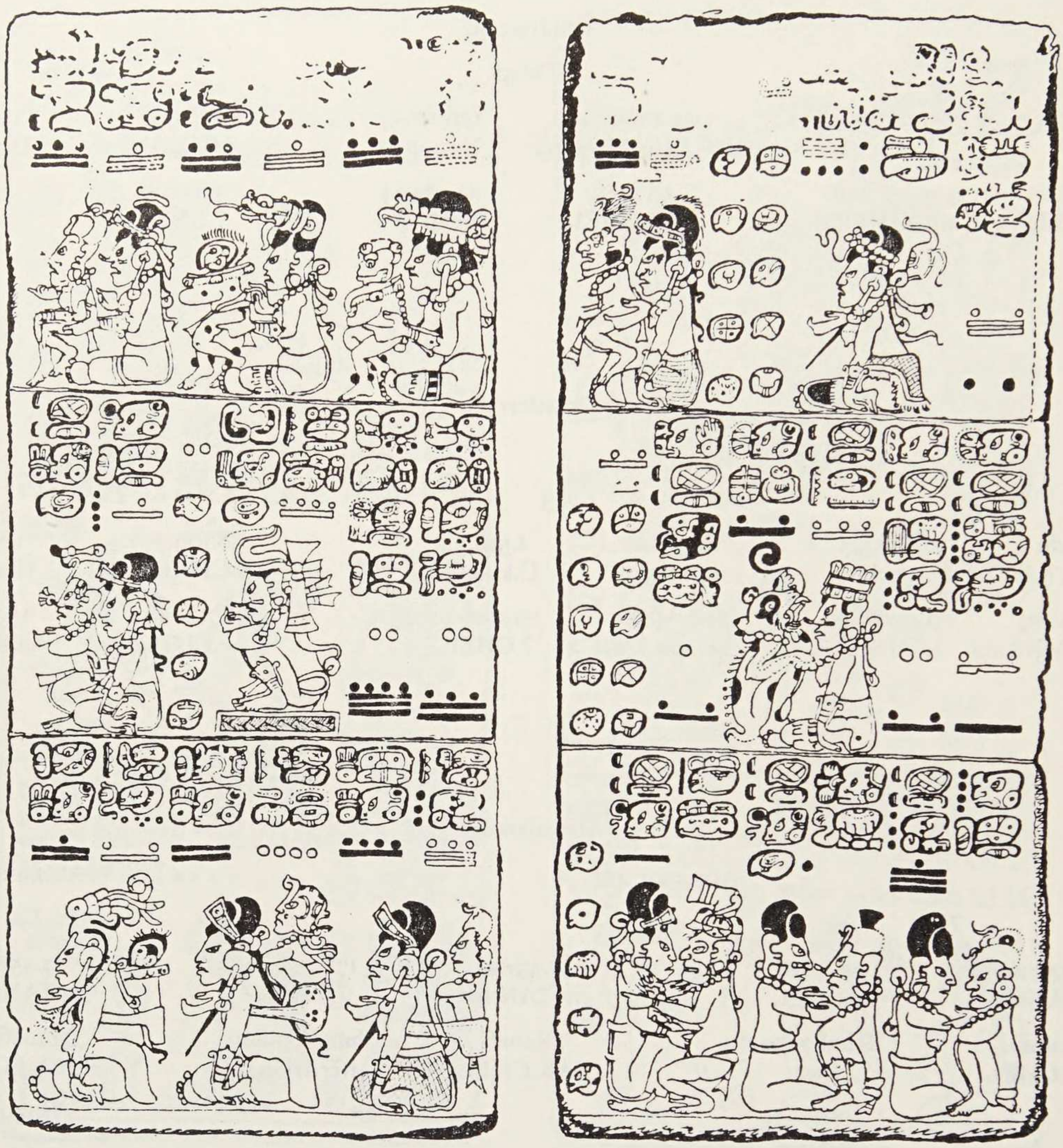
Dresden 19c

Almanac 49

T'ol 2	
144:17.281 ?:YAX.K'AN	1.528:515 U.ku:ch(u)
24.1006b ?.XI?IM	162:501.506 ?:?.KAN?

Almanac 50

T'ol 1		*T'ol* 2	
1050b GQ	1.528:515 U.ku:ch(u)	122:563 Smoke:K'AK'	58.1026 SAK.CHEL
58.1026 SAK.CHEL	112.87.758 ?.?.?	13.528:515 U.ku:ch(u)	122.87:528 ?.?:?



20 21

Figure 5-4. Dresden Codex, pp. 20–21 (after Anders 1975).

Dresden 20b

Almanac 42		Almanac 43
T'ol2		(not a MG almanac)
47·552:24 ya.TAN.ne	171.1026 ?.CHEL	
58.1059 SAK.GH	24·533:24 ?.AHAW:li?	

Dresden 20c

Almanac 50

T'ol 3		*T'ol* 4		*T'ol* 5	
24.1047a ?.DGA	10.528:515 U.ku:ch(u)	24.1006b ?.XI?IM	10.528:515 U.ku:ch(u)	58.533:103 SAK.AHAW:?	10.528:515 U.ku:ch(u)
58.1026 SAK.CHEL	15.736:140 ah.KIMI:la	58.1026 SAK.CHEL	162:501.506 ?:?.K'AN	58.1026 SAK.CHEL	III.567.130 ?.wa

Dresden 21b

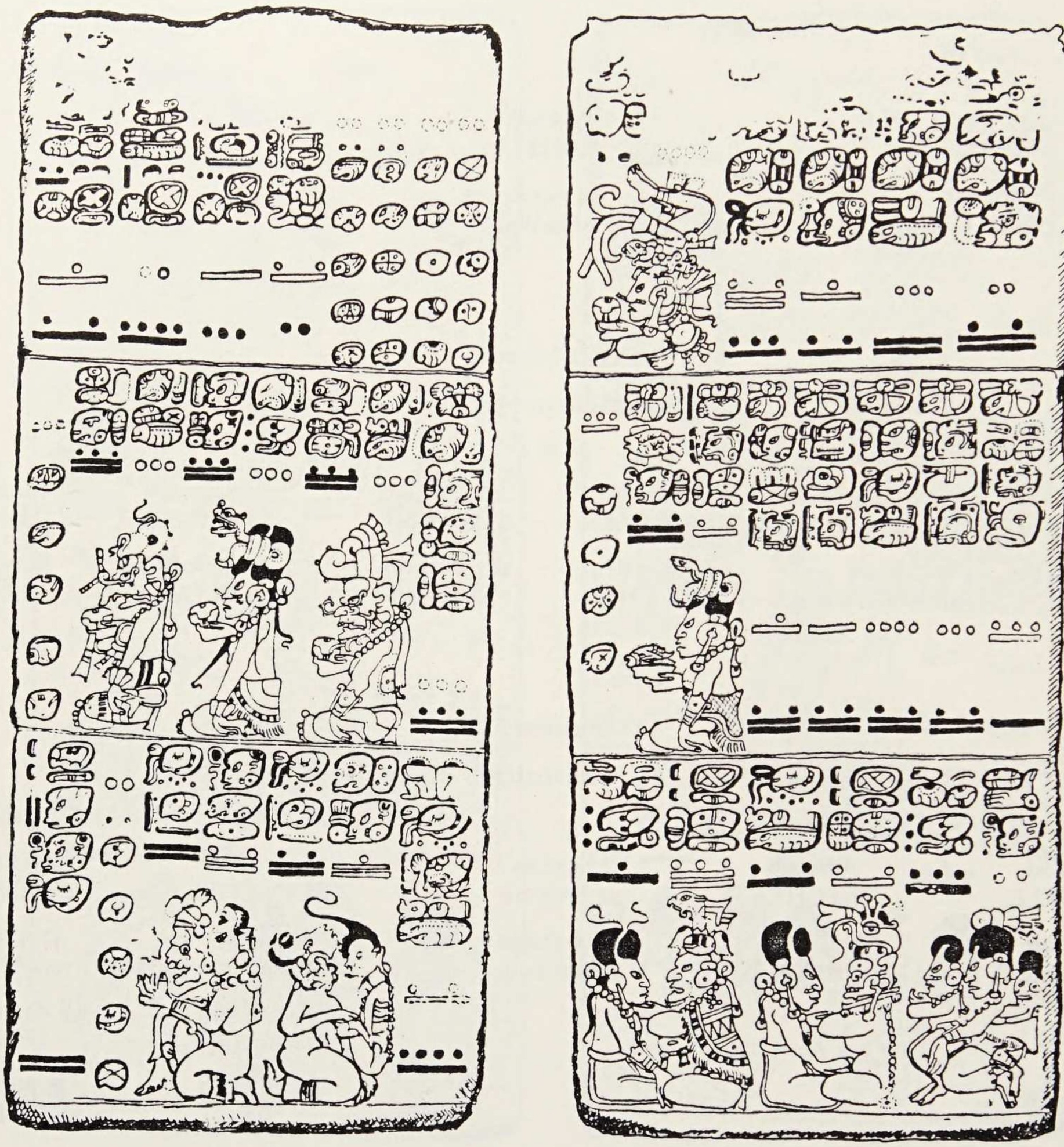
Almanac 44

T'ol 1	*T'ol* 2		*T'ol* 3	*T'ol* 4
166.1028d cha.CHEL?	166.1026 cha.CHEL	47·552:24 ya.TAN:ne	114.1026 CHAN.CHEL	166.1026 cha.CHEL
47·552:24 ya.TAN:ne	559·568b tsu.l(u)	10.648:25 U.mu:k(a)	47·552:24 ya.TAN:ne	47·552:24 ya.TAN:ne
1054 GL			679.558:669 i.ba:ch(a)	IV.84:219.521 ?:?.?
168:609.130 AHAW:POP.wa			III.567:130 :wa	15.736:140 ah.KIMI:l(a)

Dresden 21c

Almanac 51

T'ol 1	*T'ol* 2		*T'ol* 3		*T'ol*4 (D22c)
47·552:23 ya.TAN:na	V.63:528 ?:?	47·552:23 ya.TAN:na	17.1059? YAX.GCh	47·552:23 ya.TAN:na	IV.1027? BAKAB	47·552:23 ya.TAN:na
171.1026 ?.CHEL	168:609 AHAW:POP	171.1026 ?.CHEL	234.558:186 LOOB.ba:IL	III.567:130 ?wa	24·533:24 ?.AHAW:li?	1050b GQ
						171.1026 ?.CHEL
						15·736 ah.KIMI



22 23

Figure 5-5. Dresden Codex, pp. 22–23 (after Anders 1975).

Dresden 22c

Almanac 52

T'ol 1		*T'ol* 2		*T'ol* 3	
15.736:140 ah.KIMI:l(a)	171.1026 ?.CHEL	15.736:140 ah.KIMI:l(a)	1048.585a ?.?	227.227 ?.?	15.736:140 ah.KIMI:l(a)
1.648:25 U.mu:k(a)	1048:585a ?:?	1.648:25 U.mu:k(a)	58.1026 SAK.CHEL	1.234.758:186 U.LOB.ba:IL	31:613 ?:MEN

Dresden 23c

Almanac 52

T'ol 4		*T'ol* 5		*T'ol* 6	
162:501.506 ?:?.?	47.552:24 ya.TAN:ne	15.736:140 ah.KIMI:l(a)	47.552:24 ya.TAN:ne	162:501.506 ?:?.K'AN	584:670 AH:BAK'
III.567.130 ?.wa	24.533:24 ?AHAW:li?	31.613 ?.MEN	?.507.24 KAN.?	III.567.130 ?.wa	171:1026 ?:CHEL

APPENDIX 2: Maya Transliteration and English Translation of the Moon Goddess Almanacs of the Dresden Codex in Almanac Sequence.

Almanac 39 (D16–17b)

Muluk Chak u-kuch Chel-?, ahaw-lel
Muluc Chac 3-burden Chel-TOP? lord-ABST
On Muluc, Chac is the burden of Chel, rule.

Ok DGA u-kuch Chel-?, ah-kim-il.
Oc 3-burden Chel-top? MASC-die-NOM
On Oc, Death God A is the burden of Chel, Lord Death.

Kimi Itsamna u-kuch Chel-?, ahaw-lil?
Cimi 3-burden Chel-TOP? lord-ABST
On Cimi, Itzamna is the burden of Chel, rule.

Kimi GQ u-kuch Chel-?, ?-men
Cimi 3-burden Chel-TOP? ?
On Cimi, God Q is the burden of Chel, Augury

Almanac 40 (D17–18b)

Eb ? u-mut Chel-?, ahaw-lel
Eb 3-tidings Chel-TOP? lord-ABST
On Eb, ? is the tidings of Chel, rule.

Akbal ma'ax mut Chel-?, ah-men.
Akbal monkey tidings Chel-TOP? MASC-make
On Akbal, Monkey is the tidings of Chel, the master.

Ok tsul u-mut Chel-?, ?
Oc dog 3-tidings Chel-TOP?
On Oc, Dog is the tidings of Chel, Augury

Kib DGA u-mut Sak Chel-?, ah-kim-il
Cib 3-tidings White Chel-TOP MASC-die-NOM
On Cib, DGA is the tidings of White Chel, Lord Death.

Eb Itsamna u-mut Sak Chel, ahaw-lil?
Eb Itzamna 3-tidings White Chel lord-ABST
On Eb, Itzamna is the tidings of White Chel, rule.

Ahaw, Muwan u-mut Chel, u-muk.
Ahau Muan 3-tidings Chel 3-omen
On Ahau, Muan is the tidings of Chel, her omen.

Almanac 41 (D19b)

Lahun Ik, y-atan-e Chel, Sak Chel ?
ten Ik 3-wife-TOP Chel White Chel
On ten Ik, his wife is Chel, White Chel, Augury.

Oxlahun Chuen, y-atan-e Chel-?, Sak Chel, DGA-la
thirteen Chuen 3-wife-TOP Chel-TOP White Chel DEM?
On thirteen Chuen, his wife is Chel, White Chel, the Death God A's.

Almanac 42 (D19–20b)

Wak Kib, y-atan Chel-? ? ?-men
six Cib 3-wife Chel-TOP Deer God
On Six Cib, his wife is Chel, the Deer God's, Augury.

Waxak K'an, y-atan-e Chel, Sak GH, ahaw-lil?
eight Kan 3-wife-TOP White lord-ABST
On Eight Kan, his wife is Chel, White God H's, reign.

Almanac 44 (D21b)

Uuk Ahaw, Chan Chel? y-atan-e GL, ahaw poop
seven Ahau little? Chel 3-wife-TOP lord mat
On Seven Ahau, Little Chel is the wife of God L, Lord of the mat.

Hun Manik', Chan Chel y-atan-e Tsul, u-muk.
one Manik little? Chel 3-wife-TOP Dog 3-omen
On One Manik, Little Chel is the wife of Dog, its omen.

Waxak Ix, Chan Chel y-atan-e Ibach, ?
eight Ix little? Chel 3-wife-TOP armadillo Augury
On Eight Ix, Little Chel is the wife of Armadillo, Augury.

Ka Imix, Chan Chel y-atan-e ?, ah-kim-il.
two Imix little Chel 3-wife-TOP MASC-die-NOM
On Two Imix, Little Chel is the wife of ?, Lord Death.

Almanac 47 (D16–17c)

Muluk, Muwan u-mut Chel-?, u-muk.
Muluc Muan 3-tidings Chel-TOP? 3-omen
On Muluc, Muan is the tidings of Chel, its/her omen.

(?), K'uk' u-muk Chel, ?
Quetzal 3-omen Chel
On ?, Quetzal is the omen of Chel, Augury.

(?), Mo'o u-mut Sak Chel, u-muk.
Macaw 3-tidings White Chel, 3-omen.
On ?, Macaw is the tidings of White Chel, its/her omen.

(?), ? Chel-? u-mut ahaw-lel.
Chel-TOP? 3-tidings lord-ABST
On ?, ? Chel, her tidings, rule.

(?), K'uch u-mut Chel-?, ?-men.
Vulture 3-tidings Chel-TOP? ?
On ?, Vulture is the tidings of Chel, Augury.

(?), Kuts u-mu'wak? Chel-?, ?
Turkey 3-tidings Chel-TOP?
On ?, Turkey is the tidings of Chel, Augury

Almanac 48 (D17–18c)

Ho' Ahaw, DGA u-kuch Chel-?, u-kim-il.
five Ahau 3-burden Chel-TOP 3-die-NOM
On Five Ahau, Death God A is the burden of Chel, its death.

Wak Men, Yax K'an u-kuch, Itsamna, Chel-?
six Men green yellow? 3-burden Itzamna Chel-TOP?
On Six Men, Yax Kan is her burden, Itzamna, Chel.

Oxlahun Lamat, Muy? u-kuch, u-muk Chel-?
thirteen Lamat rabbit? 3-burden 3-omen Chel-TOP?
On Thirteen Lamat, Rabbit is her burden, the omen of Chel.

Almanac 49 (D18–19c)

Oxlahun Ahaw, Sak Chak Kimi u-kuch Chel, ah-kim-il.
thirteen Ahau White Red Death 3-burden Chel MASC-die-NOM
On Thirteen Ahau, White Red Death is the burden of Chel, Lord Death.

Wak Eb, Yax K'an u-kuch, Xi'im, ?
six Eb Green Yellow? 3-burden Corn God ?
On Six Eb, Yax Kan is her burden, the Corn God, Augury.

Almanac 50 (D19–20c)

Oxlahun Ahaw, GQ u-kuch Sak Chel, ?
thirteen Ahau 3-burden White Chel
On Thirteen Ahau, God Q is the burden of White Chel, Augury.

Buluk Chuen, K'ak' Sak Chel u-kuch, ?
eleven Chuen Fire White Chel 3-burden
On Eleven Chuen, Fire, White Chel, her burden, Augury.

Bolon Ik', DGA u-kuch Sak Chel, ah-kim-il.
nine Ik, 3-burden White Chel MASC-die-NOM
On Nine Ik, Death God A is the burden of White Chel, death.

Uuc Ben, Xi'im u-kuch Sak Chel, ?
seven Ben Corn God 3-burden White Chel
On Seven Ben, the Corn God is the burden of White Chel, Augury.

Kan Ak'bal, Sak Ahaw u-kuch Sak Chel, ?
four Akbal White Ahau 3-burden White Chel
On Four Akbal, White Ahau is the burden of White Chel, Augury.

Almanac 51 (D21–22c)

Kaban, y-atan ? Chel, Ahaw Poop.
Caban 3-wife Bacab? Chel lord mat
On Caban, the wife of the Bacab is Chel, Lord of the Mat.

Ik', y-atan Yax-? Chel, loob-il.
Ik 3-wife Green-GCh Chel bad-ABST
On Ik, the wife of Green God Ch is Chel, evil.

Ak'bal, y-atan Bakab, ?, ahaw-lil?.
Akbal 3-wife Bacab lord-ABST.
On Akbal, (she is) the wife of the Bacab, Augury, rule.

Kawak, y-atan ? Chel, ah-kimi.
Cauac 3-wife GQ Chel MASC-death
On Cauac, the wife of God Q is Chel, Lord Death.

Almanac 52 (D22–23c)

Insufficiently understood for transliteration and translation.

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Principles of Style and Composition

FLOYD G. LOUNSBURY
The Names of a King:
Hieroglyphic Variants as a Key to Decipherment

WILLIAM F. HANKS
Elements of Maya Style

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The 819-Day-Count: A Soulful Mechanism

CAROL HENDRICKSON
Twin Gods and Quiché Rulers:
The Relation between Divine Power and Kingly Rule in the Popol Vuh

6

The Names of a King: Hieroglyphic Variants as a Key to Decipherment

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The hieroglyphic name phrase of an important eighth-century ruler of Copan, Honduras, appears in numerous different forms in the inscriptions at that archaeological site. The phrase is composed usually of from seven to nine hieroglyphic signs, variously aggregated, forming from two to four compound hieroglyphs, but disposed in such a manner as to preserve a constant reading order. The component signs, however, are variable. In most cases the sequential place of any one of them can as well be filled by another, or by any of several others, from a set of distinct signs, either simple or compound. The set of such alternatives thus constitutes a class of mutual substituents, functionally equivalent (at some level) in the total construction.

A result of this is that different hieroglyphic representations of the ruler's name often appear to have very little in common with each other. In extreme cases the similarity can be reduced to as little as a single common element, or even none at all, between two variants. They would thus not be recognizable as having a common referent, or even as having a common syntactic function, were it not that their distribution in relation to other constituents of the sentences in which they occur guarantees this. For example, their occurrence before the "emblem glyph" of the site (a hieroglyph combining a lordly title with a place name or polity designation unique to the site) assures that they all represent local royal names. And their occurrence in positions of grammatical subject in association with hieroglyphic phrases denoting events such as birth, accession to rule, death, etc., in contexts where these events are precisely dated in the Maya calendar, assures their common reference. Thus, when Name-Phrase-1 and Name-Phrase-2 both occur as subjects of accession phrases in two different inscriptions at the site and when in both cases the accession is dated as having taken place on the same day (6 Caban 10 Mol, 9.16.12.5.17 = A.D. 763, July 2), it is reasonable to suppose that the two name phrases, in spite of their apparent nonsimilarity, must have designated the same individual.

Even with this assurance, however, it could not be assumed that they represented the same name (i.e., the same linguistic form), for multiplicity of personal and chiefly appellatives is not to be ruled out. But when forms composed of phonetic signs having previously established values are found to alternate with logograms and when the phonetic forms "spell" identifiable Maya vocabulary items having meanings appropriate to the iconic or already known semantic aspects of their logographic alternates, it offers evidence for their homonymy and for the sameness of the linguistic form which they separately, and in different ways, represent.

This compositional principle, which permits free alternation among members of a constituent set, is not unique to the name of this particular king or to the names of kings in general; it is a pervasive one in the Maya hieroglyphic writing system. Alternations between signs that are different in form but inferrably equivalent in some function and between phonetically composed hieroglyphs and others that are simple logograms or semantically composed are common to the inscribed texts of the entire Maya area. In effect, they offer to epigraphers a built-in "Rosetta stone."

In the following we consider some graphic variants of a ruler's name at Copan, taking the opportunity to show the steps by which their decipherments, to the extent so far determined, have been established.[1]

The hieroglyphic phrase in Figure 6-1 is from Stela 8 at Copan. It represents the name of the eighth-

[1]The conclusions presented here, and the evidence and arguments leading to them, were first set down in a series of letters to William Fash dated January 14, January 19, and February 8–20, 1978, as preliminaries to an attempted interpretation of a then recently discovered full-figure inscription at Copan (the CV-43 bench), which contains the name that is under consideration here together with that of this ruler's immediate predecessor.

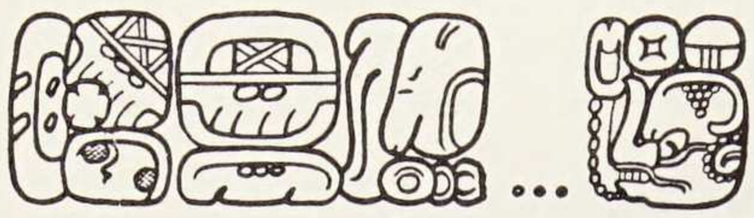

Figure 6-1. Hieroglyphic phrase from Stela 8 at Copan.

century ruler to whom allusion was made in the opening paragraphs above. Its context in Stela 8 is a sentence which begins with the dates 6 Caban 10 Mol (9.16.12.5.17) and 9 Ik 15 Zip (9.17.12.6.2), with a temporal-relational hieroglyph—the so-called posterior date indicator—between them. The latter date, which was one katun and five days after the first (i.e., later by 1.0.0.5, or twenty chronological years of 360 days each, plus a final increment of 5 days), is followed by a verbal phrase which refers to the offering of royal blood to a deity whom we know as "god K." This was apparently the climax of the rites marking the one-katun anniversary of the ruler's accession to the throne. The accession occurred on the first of the two dates noted, which in our terms would have been A.D. 763, June 28 in the Julian calendar or July 2 in retroactive Gregorian. The anniversary rites were nearly twenty years later, in 783, and the ritual specified here was on March 19 Julian or 23 Gregorian.[2] Following the verbal phrase, in agreement with the normal order of Maya syntax, is the subject of the verb. This consists of the name of the ruler (as shown in Figure 6-1), together with attributive phrases naming him as a now "second-katun ruler," saying something about his descent or affiliation (with the Copan emblem glyph, as pictured in Figure 6-1 after the string of dots for the omitted attributes) and giving his parentage on his mother's side (his mother was a lady from far-away Palenque).

That is essentially the content of the better preserved side of the stela. The other side, which is properly the first, begins with a reference to the end of the hotun (the Maya lustrum) of 9.17.15.0.0, this being the dedication date of the stela;[3] and it memorializes the principal event of that hotun (namely, the one-katun anniversary of the ruler's accession). The date of the anniversary, 4 Caban 10 Zip (9.17.12.5.17), was recorded here, but of this only the 10 Zip survives. The almanac day 4 Caban is obliterated, as are also the crucial parts of the event phrase, the second and third glyphs of the ruler's name, and all of the other attributive phrases applying to it. Remaining, however, are the first glyph of the name (similar to the one in Figure 6-1), and, in next-to-last position, the Copan emblem glyph. It can be assumed that the obliterated areas contained other titular glyphs together with the ruler's parentage on his father's side, inasmuch as the layout of glyphs and symbolic ornament on the two sides of the stela follows the same pattern.

We may consider now the hieroglyphs that make up this ruler's name, noting what has previously been understood about them. The first glyph of the phrase consists of two main parts. At the left, in a 90-degree rotation for prefixation, is the sign YAX [T16].[4] At the right is a three-part glyphic compound consisting of the signs CAAN [T561] tilted at a 45-degree angle, K'IN [T544] partially inserted into CAAN, and CAB [T526] at the bottom. CAAN is 'sky', K'IN is 'sun', and CAB is 'earth'. The sky, however, meets the earth at an angle; and in that angle is the sun. The iconicity is transparent; the compound has long been known to epigraphers as the "sun-at-horizon" glyph. Eric Thompson distinguished three uses of this glyph in the inscriptions: (1) with the 'forward' prefix attached to it, occurring between a preceding distance number and a following day designation, and signifying 'to the day . . .'; (2) either with a prefixed coefficient of 'one' or without any prefix at all, in contexts where it explicitly indicated the very next day or next morning; and (3) with the YAX prefix, only at Copan, where its occurrences did not relate directly to chronology as in cases of the first two types. Cases of this last type were still uninterpreted when Thompson wrote; that the hieroglyph with its prefixed YAX might have stood for a proper name had not yet been anticipated. As for the question of whether the main part of the glyph was intended to represent sunrise or sunset, it was cases of the second type that allowed Thompson to conclude that "sunrise" or

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[2] These translations into European calendar and chronology are premised on the 584285 correlation (i.e., Julian Day Number = Maya Day Number + 584285.

[3] The opening date of Stela 8, long misunderstood, has only recently been deciphered. A paper on that subject is soon to appear (Lounsbury, in press).

[4] Conventions for referring to hieroglyphic signs are as follows: (a) logograms are given capital-letter transcriptions approximating their hypothesized phonetic values whenever such are available; (b) phonetic signs are given in lower-case italic transcriptions when possible; (c) signs of all types are identified by their so-called "T" numbers—their numbers in the Thompson catalog (1962)—which are placed in square brackets when parenthetic to a transcription.

Orthographic conventions in transcriptions of Mayan words are the following: Vowels are as in Spanish. A sixth vowel (mid-central) of Chol is transcribed with the letter *v*. An apostrophe after a stop-consonant represents glottalization of the consonant. The letter *c* represents the unglottalized consonant *k*, regardless of the following vowel (i.e., even before *i* and *e*, as in Yucatec and Chontal colonial orthography). The letter *q* (only in Highland Maya words) is for the postvelar stop. The letter *x* is as it was in sixteenth-century Spanish (i.e., like English *sh*).

"daybreak" was indicated. (See Thompson 1950: 48, 166, 168–69, and fig. 31, nos. 41–51; also 1962:133.)

In regard to the prefix, the senses of the glyphic sign YAX correspond to those of words of that or related phonetic form in the spoken Mayan languages; they include its calendrical senses (the Maya month Yax and the prefix in the name of the month Yaxk'in), also its senses as a color term (colors in the range of green and blue), and the additional important senses of 'first' and of 'great' or 'intense'. These are not necessarily all homonyms, although their differences are of sorts that did not inhibit generalization of the sign from one to another of these. Thus, in Yucatec the month name and the green-blue color term were *ya?x* (with a glottally interrupted vowel), commonly written *yaax*, whereas the word for 'first' and 'great' or 'intense', which is also the first syllable of *yaxk'in*, is *yá:x* (with a long vowel and high tone, rising or falling depending on context). Thompson (1950:111) attributed also the meaning of 'new' to *yax*, and following him it has frequently been glossed in that sense in archaeological literature; but there is no support for that reputed sense.[5]

The first hieroglyph in our ruler's name may be understood then as 'Great Sunrise' or 'First Dawning'. But although the composition of the sun-at-horizon glyph and some of its uses betray its inherent meaning, there is nothing in it to give a clue to its reading (i.e., to the way it was pronounced). Nor can that be determined by default (as with the YAX glyph) or approximated by an educated guess, since words for dawn and sunrise are numerous and varied in the pertinent Mayan languages. It is of interest to note that although the component parts of this glyph are essentially "arbitrary" signs, their compounding is semantically and iconically motivated. This exemplifies one of the potential manners of glyph building in Maya writing; but although appealing in its way, it is not one of the more frequently employed. As will be seen, there are others that are put to greater use.

As for the second glyph in the name phrase, its main sign should now be familiar; it is CAAN again, but this time in its normal form, without the tilting and consequent adaptation to the glyph-block space that was seen in the previous example. Moreover, it is here with an inferior suffix that is known only as a phonetic sign [T23]; there are no known instances of its employment either as an autonomous logogram or as a semantic indicator. Its primary phonetic value is the syllable *na*; although in keeping with one of the apparent principles of Maya writing, it can be used also alphabetically for a word-final consonant (a final *n*) or as a redundant but confirmatory phonetic complement for such a final consonant, either of these in contexts where its vowel agrees with the root vowel of the word to whose sign it is attached.[6] This second glyph can be represented then as CAAN-na, with the understanding that the function of the suffix was probably that of a phonetic complement, confirming the final consonant of the word represented by the main sign of the glyph and, by implication, also the root vowel of that word. This compound is the standard form of the "sky" hieroglyph whenever it is encountered as an independent logogram, both in the monumental inscriptions and in the Maya codices. The corresponding word in Yucatec is *ca?n* (usually written *caan*); in the Cholan languages it is *chan*. The reading of the glyph at Copan must have been similar to one of these. In this separate second glyph of the royal name it would have been read as such, whereas in the first glyph it would very likely have been a silent semantic component.

The third hieroglyph of the name phrase is of three parts. The prefix at the left [T115] has been understood as a phonetic sign representing one or more syllables beginning with *t*, most likely *tu* or *ti*, possibly also *to* or *tv*, or equivocal as far as its vowel was concerned (Justeson 1984:324; Lounsbury 1984:175–76). One of its most frequent apparent uses was to represent the contraction of a locative preposition with the third-person possessive pronoun when this combination precedes a word that begins with a vowel; in this function its possible readings would have included *tu* and *ti* if read in either Yucatec or Chontal, or just *ti* if in Chol, but in all cases followed by a *y* glide before the vowel of the next word. Recently, however, this interpretation has been called into question and a quite different phonetic hypothesis has been proposed (Stuart 1987). Consideration of the problem will be postponed until later, when the rest of the data have been reviewed; for the time being one of these '*t*' values will be entertained, tentatively, at least as a heuristic.

The main sign at the upper right of the glyph [T761] is a logogram to which I was once inclined to ascribe the phonetic value of *to*, remaining noncommittal as to its semantic value. It appears now that that hypothesis is not tenable. Others have proposed a more specific logographic value, AT "membrum virile," in some contexts possibly a title or status epithet, but employable also simply as a phonetic sign. Consensus ascribes at least a consonant *t* to its value, which is quite secure,

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[5] The meaning of *yá:xk'in* is 'intense sun' not 'new sun' as it has often been interpreted through false equation of the first morpheme with *ya?x* 'green'. Its reference is to a hot dry-season.

[6] The evidence for the phonetic *na* signs was presented in an earlier paper (Lounsbury 1984). The influence of vowel harmony in the selection of syllabic signs for syllable-final consonants was first noted by Knorozov (1952).

but the likeliest possibility for its reading now seems to be *at* (cf. Justeson 1984:356).

The suffix at the bottom of the glyph [T59] is a phonetic sign (some would say a logogram, extensible, however, for just its phonetic value). It is yet another with the consonant *t*. When employed as a prefix it commonly represents the Mayan all-purpose locative preposition. In Yucatec, as in the hieroglyphic codices, this is phonetically *ti*; in the Cholan languages, represented by most of the monumental inscriptions outside of the peninsula of Yucatan, it is *ta* or *tv*. When employed as a suffix, as here, its function is purely phonetic, providing or confirming the final consonant of a word.

All that can be said, then, about this third glyph of the name phrase is that it is composed of three signs, all of which (if the hypothesis cited here for the first of them is correct) include a consonant *t* in their readings and one of which probably includes also the vowel *a*. The number of syllables could be three if all of the signs were to be read with full syllabic values (a rather unlikely possibility); two, if only two of them were; or just one, if the prefix and the suffix were serving as phonetic complements or alphabetic supplements to the main sign. To register a hypothesis concerning the identity of the word represented by this glyph, or its meaning, would at this time be premature.

The final glyph of the phrase in Figure 6-1 (after the dots, which are in place of the anniversary title and other descriptions that intervene on Stela 8) is the Copan emblem glyph. It does not require discussion here, since there is an ample literature on this subject.[7] Suffice it to say that the central sign of an emblem glyph refers to a place or a polity, and with its prefix and superfix it refers to a local ruling lineage. The central sign of the Copan emblem glyph is a conflation, consisting of a head with an iconic detail representing the Central American leaf-nosed bat and with infixation of features diagnostic of the multivalued Cauac/haab/tun sign [T528]. Neither its reading nor its literal sense is known, but its uses are well understood.

Figure 6-2 is another example of the same hieroglyphic phrase as the one shown in Figure 6-1 (but without the intervening titles of occasion, which were there omitted). It contains all of the same components and in the same arrangement. Such minor differences as may be seen are of insignificant graphic variation. It is from Altar U, a monument of two hotuns (nearly ten years) later than Stela 8—namely, 9.18.5.0.0, 4 Ahau 13 Ceh. The text commemorates a pair of notable events of that hotun and recapitulates past history to the ex-



Figure 6-2. Hieroglyphic phrase from Altar U at Copan.

tent of recording the date of accession of the ruler whose name we are considering here, as well as that of an apparent successor or confederate. The passage containing the former begins with the date 6 Caban 10 Mol (9.16.12.5.17); this is followed by one of the classic accession phrases; and following this there is the subject's name phrase as reproduced here in Figure 6-2. The accession phrase, composed of eight hieroglyphic signs aggregated into two glyph blocks, is one which in recent years has been deciphered and has been read in its entirety, and for which there is also historical and linguistic documentation in Chontal (the Cholan language most likely represented in the inscriptions); it is *chumwanih(i) ta ahawlel*, 'he was installed (lit., 'seated') in the kingship.'[8]

The example shown in Figure 6-3 is from the inscription on the top surface of Altar Q, in a passage dated 6 Ahau 13 Kayab (9.17.5.0.0) narrating an act performed by this ruler on that date, the nature of which is not yet clear, but which invoked or in some way involved his relationship to a former ruler and ancestral figure, also named, of some generations earlier. Comparing this with the version in Figures 6-1 and 6-2, one notes that the first glyph is the same as in those; the second glyph has the same components although differently disposed; but the third glyph shares only its final affix with the corresponding glyph of the previous examples (here a postfix, there a "subfix"), whereas the two components that precede it are different.

The first of these is a superfix [T44] consisting of two identical elements (beaded circles with interior hooks) over the head of some deity, these substituting for the prefix and the main sign previously noted. The superfix has for some time been suspected of having simply a phonetic value of *to* (cf. the tabulation of hypotheses by Justeson [1984:319]), although logographic values of *toc* 'burn' and *kak* 'fire' have also been posited (Evreinov et al. 1961, vol. 2:263; Knorozov 1967:78–79). All of these have been motivated by the long-observed and often-noted association of this superfix, especially in the Maya codices, with glyphs and iconography denoting flaming torches, burnt

[7] The significance of emblem glyphs was first discovered by Heinrich Berlin (1958), although they had been isolated as a category by Thompson (1950:276, and fig. 43, nos. 9–32). See also Barthel 1968.

[8] Documentation of the linguistic value of this accession glyph was first presented by Peter Mathews in an unpublished paper in 1977. Other epigraphers have also independently noted it. Cf. Mathews and Justeson (1984).



Figure 6-3. Hieroglyphic phrase from Altar Q at Copan.

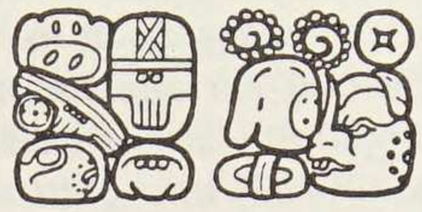

Figure 6-4. Hieroglyphic phrase from Altar R at Copan.

offerings, fire drilling, etc., the phonetic hypothesis, however, taking into consideration also a similar association of the superfix with glyphs and iconography representing flint or obsidian and abstracting, therefore, only what is common to the words *toc* 'burn' and *tok'* 'flint, obsidian', which is the open syllable *to*.

Here (in Figure 6-3) we see an example of yet another association of this superfix (one widely attested in monumental inscriptions and iconography), which is with the glyph of a deity whose identity remains to be established. The posited phonetic value of the superfix makes it inviting to consider that the deity's name may have begun with *to*, in which case the readiest candidate would be the Highland Maya rain god Toh, Tohil, or Hun-Toh, god of the ninth day of the *veintena* (which is Toh or cognate in the central and eastern highland languages, but Muluc or cognate in Yucatec, Cholan, Tzeltal-Tzotzil, Chuh, and Jacaltec). However, even the most felicitous hypotheses must be put to the test, and all too often are found wanting. So it is with this one, which had been entertained for a time, but is now set aside as unlikely. For if *to* were the proper reading of this sign, then that should be expected also for the main sign of the analogous glyph in Figures 6-1 and 6-2 [T761] with which this deity-head glyph appears to alternate. But that no longer seems possible.

For now, then, it must suffice simply to note the alternation of the combination of components seen in Figures 6-1 and 6-2 [T115 + 761] with that seen here in Figure 6-3 [T44 + T030i/j] and await the outcome of the remainder of the comparisons of this ruler's hieroglyphic name phrase.

Figure 6-4 is from the final passage in the inscription of Altar R, dated 7 Ahau 3 Zip (either 9.15.9.13.0 or 9.18.2.8.0), and follows an unfamiliar event glyph. That it names the same ruler is clear from the opening date of the inscription, 6 Caban 10 Mol, even though that opening passage contains another puzzle not yet satisfactorily solved (and not to be entered into here). If the proper Long Count placement is the earlier of the two alternatives noted (Morley's hypothesis [1920:299]), then the event of this passage is one that happened some twenty-two years before the ruler's accession; but if the latter alternative (Teeple's hypothesis [1930:73, 74]), then it is something that took place nearly thirty years after his accession. The earlier date is more likely the correct one; and until the event glyph is deciphered, one thinks of the ruler's birth or perhaps a rite of heir-designation as possibilities for its significance.

In comparing again the name phrases, it is seen that the first two glyphs in this one are the same as in all of the previous examples, except that here they are compounded into the space of one block. In the third glyph, however, there are more differences: the superfix [T44] is the one just seen in Figure 6-3; the main sign [T761] is that of Figures 6-1 and 6-2; but the "subfix" is something new [T103]. However, it is a glyphic sign that is very well known in other textual contexts and is found in the inscriptions of virtually every Maya site. It is a phonetic sign whose fundamental value is the syllable *ta*. It often substitutes for the final affix that was seen in this position in the first three examples [T59], serving both as a syllabic sign and, in final position, as an alphabetic sign; and, like that phonetic affix, it also is often used as a morpheme sign (in initial position) for the locative preposition. The substitution set to which these two affixes belong has been treated in careful and extensive detail by Mathews and Justeson (1984:186–203). These are not the only members of the set; there are others, although these are the only ones that will be seen in the examples under review here.

A point worth noting now is that this example of the name phrase, compared with the previous one, shows that the superfix [T44] is free to substitute for the prefix [T115] independently, with or without the often-correlated substitution of the deity head of Figure 6-3 for the alternate sign of Figures 6-1, 6-2, and 6-4. This is important because it puts the alternations of these components on a one-to-one basis rather than on the pair-to-pair basis which was as much as could be inferred before. With this, we have now the following alternations within the third glyph of the name phrase: T115 with T44, T761 with the deity head of T1030j, and T59 with T103.

This third glyph of the phrase is compounded here with the Copan emblem glyph, the two being compressed into a single block.

The name phrase we have been examining was not always known as such. When Morley published his study of the inscriptions at Copan (1920) and when Teeple attempted to interpret dates from this site (1930), such a possibility had not even been anticipated. Nor had it been when Thompson's great work on Maya hiero-

glyphic writing appeared (1950). The sorting out of hieroglyphs into categories, such as emblem glyphs, event glyphs of several varieties, name phrases, etc., was initiated in 1958 with Heinrich Berlin's study of emblem glyphs, and it was brought to fruition in 1960 in Tatiana Proskouriakoff's paper on the historical implications of a pattern of dates at Piedras Negras, in which she succeeded in isolating glyphs indicating such events as the inauguration of a ruler, a ruler's birth, and his death and in which she launched a wholly new approach to the interpretation of Maya inscriptions, discovering in them their historical content. And it was not until 1962, in a paper attempting to formulate rules by which names might be recognized in Maya inscriptions, that David Kelley (1962b) first isolated these phrases with the sun-at-horizon glyph as naming a historical person who was inaugurated on 9.16.12.5.17 as lord of Copan. Three of his examples were those illustrated here from Altar U, Altar Q, and Altar R (Figures 6-2, 6-3, and 6-4). Regarding the variability in the glyph that appears after "sky," he observed that these variants "seem to substitute for each other." He noted also that the sequence of the sky glyph and the somewhat variable glyph immediately after it occurred frequently both at Copan and at Quirigua, probably indicating that the rulers of the two places belonged to the same dynasty; and he suggested that "the sky glyph represented the patronymic of the dynasty, . . . and their family name may actually have been *caan*, sky."

Figure 6-5 is from the east panel in the north doorway of Temple 11 at Copan. Its context is a complete Initial Series, containing all of the data proper to such a series, together with a following statement of an event and the name of its protagonist: 9.16.12.5.17 (Long Count date); 6 Caban (day in the 260-day cycle); G9.F (date is under the ninth lord of the night); 10 Mol (day in the 365-day cycle); 11D (age of the moon is eleven days); 6C (sixth month of the lunar half-year); glyphs X and B (once present in the inscription, but no longer surviving); A10 (current month is a 30-day month in the 29-day/30-day alternation of month lengths); the event (accession to rulership status); the protagonist (the name as shown here in Figure 6-5).

This version of the name phrase shows that the variability noted by Kelley in the glyph after the "sky" glyph is a more general phenomenon, not one confined to that single position. The version that is before us now is radically different in its first glyph from those seen previously in Figures 6-1 to 6-4. The YAX prefix is the same, but the main sign is one that Thompson labeled "hatched with line of dots" [T602] or, in one of its variants, "hatched dot" [T586]. If Kelley's analysis is correct, this should be the personal or given-name component of the phrase (cf. also Riese 1971:224–27). The date and the event, however, inform us that this



Figure 6-5. Hieroglyphic phrase from north doorway, Temple 11 at Copan.

name must refer to the same person as do those with "sun-at-horizon" in this position. This fact was first pointed out, I believe, by Gary Pahl in his dissertation on the inscriptions of Copan, where he noted in the context of this present example, "This . . . substitution of the Yax Cross-Hatched name or title for the . . . New Horizon name or title satisfies the writer that the two are equivalent names or titles of one ruler" (1974:263, cf. 257).

The glyph with the cross-hatching [T602], together with its undotted variant [T586] and its affix variant [T202], is one that has been shown to be a phonetic sign having the syllabic value *pa*. Kelley (1962a, 1968) brought to light the first good evidence for this phonetic interpretation in his reading of the name of Kakupacal in the inscriptions at Chichen Itza (where T586 represents the third syllable) and in the name of the ruler Pacal at Palenque (with T602 as the first syllable). Bishop Landa's representation of the hieroglyph for the Maya month Pax also had the crosshatched sign prefixed as a phonetic complement to the PAX logogram (see Tozzer 1941:164); and David Stuart has noted a completely phonetic spelling of that month name, *pa + x(a)*, used in place of the logogram in the representation of a Pax date inside the cave of Nah-tunich in the Peten of Guatemala. The value of *pa* for all three variants of this sign [T602/586/202], as well as for a codical variant [T715] which lacks the cross-hatching, to which Knorozov (1955) first ascribed that value, is now firmly established.

An apparent consequence of this fact is that the reading of the sun-at-horizon glyph must either have been, or have begun with, the syllable *pa*. And the pronunciation of the ruler's name phrase must have started with *Yax Pa*. But was that all? Looking again at Figure 6-5, one sees that there is another glyphic element, not present in any of the previous examples, prefixed to the sky glyph in the second block of the name phrase. This is a "dotted" variant of a sign which has long been known to have the phonetic value *ca*. The latter [T25] was Landa's "ca" sign in his purported "abc" (in the position for "k" in his alphabet, but glossed 'ca' for the Spanish spelling of the pronunciation of that letter), and that value for the sign has been amply confirmed in recent epigraphic work. The dotted variant which is seen here [T25v] is known to alternate

frequently in one important context with the plain variety, and it has been assumed to have had either the same basic value (*ca*) or else that value with the addition of one of the laryngeal consonants after its vowel (i.e., *ca?* or *cah*). Prefixed as it is here to the sky sign CAAN, there are two possibilities for its interpretation: either it was put there as a phonetic complement to go with CAAN, indicating the pronunciation of its initial consonant and vowel, and, together with the subfix *n(a)* [T23], fully specifying the reading of the main sign, or else it was intended as an autonomous component to be given a separate reading. Suggestive of the first alternative is the fact that its value appears to agree with that of the initial of CAAN as well as the fact that it was attached to that sign (although this by itself is not a reliable indicator of that function). Against this, and suggesting the second alternative, is that if the first were true it would be the only known instance of the sky sign having been written with an initial phonetic complement—not in itself unlikely, but a bit surprising considering that the sky sign is the fifth most frequent of the "main signs" (with 354 occurrences) in the corpus from which Thompson compiled his catalog (cf. Thompson 1962:20–21). Some further evidence is thus required.

The third glyph in this version of the phrase has the prefix [T115] that was seen in those of Figures 6-1 and 6-2, together with the main sign [T761] of Figures 6-1, 6-2, and 6-4, and the suffix [T103] of Figure 6-4. Thus the components are not new, although their combination is. But there is another element, a sharp-pointed object resembling a piercing instrument, with three knots and bow loops of an apparently clothlike material tied around the middle of its shaft, that is overlaid on the upper part of the prefix and the forepart of the main sign. This is new. It is a most important detail, serving to secure the identification of the main sign.

That main sign [T761] was characterized in Thompson's glyph catalog as "Pseudo Jog," where the term "jog" was his tongue-in-cheek coinage for a series of animal heads that by earlier writers had been characterized variously as jaguars and as dogs, and about which Thompson noted, "The identification of the animals represented in glyphs 757–761 is very difficult." Many of the available drawings of T761 did indeed portray it somewhat resembling an animal head, and many (including the present writer) had taken it to be that. Some of the examples of this glyph at Copan, however, when the originals are seen, are sufficiently explicit to remove uncertainty as to the object portrayed. It is not an animal head.

The present example of the glyph, in the east panel of the north doorway of Temple 11, is in six pieces, with the mortar-filled gaps in their assembly and an extraneous central piece confusing the lines of the glyph. But when the pieces are reassembled from photographs, and the now missing central piece restored (for which see Morley [1920: pl. 28c]), the lines of the original become precisely clear, including those of the overlaid piercing instrument with its three bow-tie knots.

This ritual instrument is now well known and well documented (Joralemon 1974). There are representations of it in stone carvings and in painted ceramics, as there are also of the rite in which it was employed. The knots, usually three, tied with one loop of the material extending from each knot, are its special signature (for a reason not at all clear), differentiating it from other similar instruments. It is the lancet that was used for drawing sacrificial blood from the genital organ of a king. Such implements were made from stingray spines, agave spines, bone, and obsidian. Examples have been found archaeologically in burials, significantly over the genital region of the skeleton. The rite was one of a cluster of such that involved drawing blood from various parts of the body, especially also from the tongue, ears, and nose. These rites are documented pictorially in the hieroglyphic Madrid Codex, as well as historically in post-Conquest chronicles and even in modern times.

The presence of the three-knotted lancet in the hieroglyph with which we are concerned at this point serves to clinch beyond doubt the identity of T761. Its function may be said to be that of an optional semantic determinative. Additional markings on the glyph apparently represent cuts or gashes such as are described in early historical reports of the practice (cf. Tozzer 1941:113–14, and n522). There is no apparent candidate for the reading of this sign other than *at*.

The fourth glyph of the phrase is again the Copan emblem glyph.

Figure 6-6 is from Temple 26, southwest corner, where it accompanies a standing relief portrait of the ruler. Like the example in Figure 6-5, this one also has the *pa* sign [T602] as its main sign, instead of the sun-at-horizon glyph. And again as in Figure 6-5, it has the presumed *ca* variant [T25v] in the second glyph. But this time it is not prefixed to CAAN as it was in that example; instead it is compounded with the so-called lunar affix [T181], leaving CAAN by itself now in the third block.

The new component [T181] is a phonetic sign known to have the value *ah* in its two most frequent applications, one as a glyphic prefix for the agent particle or title *ah* and the other as a verbal aspect suffix of that form. Its presence here, added to the *ca* variant, is evidence that the latter was not intended as an initial phonetic complement to CAAN (as might have been inferred from the arrangement in Figure 6-5), but was to be syllabic in its own right. With the *ah* suffix now (as in Figure 6-6), it appears that it may have been read

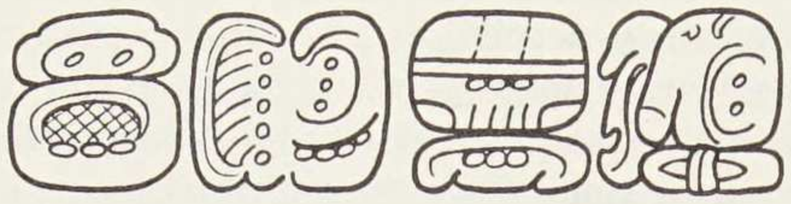

Figure 6-6. Hieroglyphic phrase from southwest corner, Temple 26 at Copan.



Figure 6-7. Hieroglyphic phrase from inner doorway, Temple 11 at Copan.

either as *cah* or as *ca?ah*. Thus, the name of the ruler is shaping up phonetically as something approximating *Yax Pa-cah Caan T- . . . -at*.

The remaining two glyphs have nothing new. In this instance the emblem glyph is omitted.

Figure 6-7 is from the cornice on the east side of the inner doorway in Temple 11, where it accompanies a high-relief portrait of the ruler, seated, holding in his left hand a plate with a god-K mask on it. This again has YAX and *pa* in the first glyph and the *ca* variant and *ah* in the second glyph. But here, instead of forming a freestanding glyph in a block of their own, these two are prefixed to a zoomorphic head with a *na* suffix underneath it. The head [T764] is identified by its principal diagnostic, the spaced snaggleteeth of a snake. Further confirmation comes from the fact that it often serves as a head-variant glyph for the day Chicchan (the day of the snake). Its appearance here poses no new mystery, for it is already well known as a frequent substitute for the sky sign. There is a double basis for the alternation between these two, one that is both phonetic and semantic: the words for sky and snake are either homonyms or near-homonyms in many of the Mayan languages, and, if one may judge from iconographic evidence, the sky—or at least its zodiacal band—was conventionally represented as a celestial serpent. The serpent sign here, like the sky sign in the previous examples, is followed by the phonetic complement *na*, confirming its final consonant and, by implication, also the preceding vowel.

There are two other innovations in this version of the ruler's name as compared with the previous examples; these are seen in the third glyph. The prefix [T115] still remains the same as in Figure 6-1, 6-2, 6-5, and 6-6, but in place of the previously seen main signs [T761, T10030i/j-head] we find here a combination of the "crossbands" sign [T552] with a superfix [T228 or 229].

Affixes T228 and T229 are regarded by epigraphers as variants of the same sign. The one that is present here has features of both; I shall refer to it henceforth as T228v. These affixes are regarded as equivalent also to T238, and have been identified with one of Landa's three different "*a*" signs in his purported alphabet. With ample attestation, they have been accepted in that phonetic value—with or without an adjacent *h*. (Cf. Justeson 1984:332–33 re T228, 229, and 238; Stuart 1985). This *a* value is in nice accord with the initial of the assumed reading *at* of the sign for which this affix and the crossbands jointly substitute [T761], and it lends further support for that reading.

The crossbands sign, however, appears to complicate the problem. There is a long-standing tradition that has posited a logographic value with phonetic form *k'at* and a meaning of 'laid across' or 'crosswise' for this sign. This has been based on a combination of two considerations: (1) the existence of a root of that form in Yucatec and Chontal, and of cognate form *k'vt* in Chol, with such a meaning; and (2) a list of month names, apparently Cholan in form, in which the second and third months of the Maya year are recorded as "*Icat*" and "*Chacc'at*." These forms appear to match, part for part, the composition of the hieroglyphic signs for those months, in a way in which their names in other Mayan languages do not (for example, "Uo" and "Zip" in Yucatec). The sign of the second month consists of 'black' plus 'crossbands', and that for the third month is 'red' plus 'crossbands'. Chol for 'black' is *ik'* and for 'red' *chvc* (cf. Yucatec *ek'* and *chac*). It has been supposed that the second morpheme in the listed Chol names was very likely *k'at* (although inadequately spelled in the first instance),[9] which would match nicely a literal iconic interpretation of the crossbands sign. (Cf. Thompson 1932; 1950:107–8; Fox and Justeson 1984:54–56; Mathews and Justeson 1984:198).

If this is so, and if the crossbands sign is to be phonetically *k'at*, then its presence here runs counter to the apparent implication of the AT sign that is more often seen in this position. However, these two month signs and the present version of the Copan ruler's name phrase are not the only contexts in which the crossbands sign appears; it occurs quite frequently in a number of other contexts as well, both in hieroglyphs and

[9] I have reproduced the spellings here as Thompson first published them (1932), viz., "Icat" and "Chacc'at." His *c* with *c*-superscript appears to have been intended to represent the *tresillo* that was used in highland Colonial orthographies for the postvelar glottalized stop [q'] of those languages.

in iconography. Further pursuit of its value in those contexts is thus in order.

One of its other contexts is the "wife" or "consort" glyph, of which it is usually the main sign. This is found mainly in the Dresden and Madrid codices (D. 2–3, 13–14, 19–23, 68; M. 94), but there are also two instances of it in the inscriptions, one at Piedras Negras and one at Naranjo (PN Stela 8; Nar. Stela 23; cf. Berlin 1968). The glyph must almost surely have been read *atan* (the unpossessed form of the word) or *yatan* (the possessed form) depending on the prefixes, whether T238 or T47; and there is one instance of it (D. 68) with two prefixes, T12 and T238, where its reference is clearly to the male partner, which must have been read *ah atan* 'married man, one who has a wife' (*casado que tiene mujer* as in the Motul dictionary). The crossbands main sign carries a phonetic subfix *na* [T23] in most of these cases, apparently as a phonetic complement, *ne* [T24] in a few, but none at all in the four instances in the Madrid Codex. They imply a reading of *tan* for the crossbands sign. There is no apparent way to accommodate the *k'at* reading that was implied by its occurrence in the signs for the second and third Maya months as described above.[10]

Yet another use of the crossbands [T552] is as a locative preposition. As far as I know, this is attested only in the codices, the language of which is Yucatec. In this function it is seen to alternate with the two *ta* signs [T59 and T103] that have been encountered in all of the examples of the name phrase so far reviewed as well as with other members of the phonetic substitution set to which they belong. But unlike all of those, which are observed in two different functions corresponding to two different positions—namely, as a locative preposition when prefixed, but as a phonetic complement when suffixed—the crossbands sign has not been found in this latter function. I do not know how seriously to take this distributional restriction, but if it is not fortuitous, it could imply that the basis for the alternation of the crossbands with the members of the *ta* set in prefixed position is one of synonymy rather than homonymy. That is, it shares a grammatical function and a degree of semantic likeness with these serving as a locative, but not one of phonetic identity. Its reading, therefore, would not be expected to be the same as their reading (viz, *ta* or final *t* after *a*). Neither is *k'at*, the first of the apparent values of the crossbands, a possibility for this use of the sign. But *tan*, the second of them, is. There is a word *tan*, nominal in origin with meanings of 'front', 'middle', and 'presence' and with derived adverbial and prepositional uses 'in front (of)', 'in the middle (of)', and 'in the presence (of)', which could apply well to the situations and contexts in which the crossbands appears as a locative preposition in the codices. Thus, this usage can be interpreted without positing a third reading of the sign. Also, another of its uses, as a component in a glyph referring to a hunter's collecting his quarry from traps and nooses, can be accommodated with the *tan* reading (Lounsbury 1984:173, 180–81).

Other uses of the crossbands have not yet been systematically studied for possible linguistic interpretations. It appears as a frequent component in the so-called "sky bands" (of zodiacal signs), both on carved stone monuments and in the codices. It appears as an infix in a number of other hieroglyphs (as in the "sky" sign in the previous examples of this name phrase). It is the main component of the Naranjo emblem glyph. It is an important element in certain pieces of symbolic headgear and regal costuming. And it had yet other uses.

On the basis of the contexts in which it has been possible to give a linguistic interpretation to the crossbands sign, epigraphers have found it necessary to posit multivalence for it, allowing that it apparently had more than one reading—namely, *k'at* and *tan* (cf. Fox and Justeson 1984:48, 54–56; Justeson 1984:342). In the name phrase under examination here, however, neither of these appears to be applicable. The *k'* of the former and the *n* of the latter are extraneous. In order to be consistent with the AT sign for which the crossbands substitutes, and with the superfix that attaches to it in this substitution, a reading of *at* or of *ta*, preferably the former, is necessary.

One does not lightly resort to the positing of multivalence for a hieroglyphic sign. It is done only when there is no apparent alternative and when there can be seen a plausible explanation for the multiplicity of its values. The phenomenon as such, however, is not in question. It is widely prevalent and its examples are generally explainable in the logographically based writing systems of the Old World, both ancient and modern. It should not surprise us then to have to reckon with it also in Maya; many well-established examples of it are already known, especially among the signs employed in calendrical names. Historical processes that give rise to the phenomenon include the following: (1) transfer of a logographic system to a language different from that of its origin; (2) diffusion over a language area embracing several dialects; (3) semantic generalization of signs, with or without the addition of

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[10] In the modern languages *atan* is the word for 'wife' only in the Yucatecan branch of the family. It is thus the implied reading of the glyph in the codices. But the occurrence of the glyph on stelae at Naranjo and Piedras Negras suggests a once wider distribution of the word. In Chol of today, however, as in Tzeltal, 'wife' is *ihnam*.

disambiguating phonetic complements; (4) merger of once distinct signs; and (5) phonetic changes in language over time. The first and the third of these are distinct possibilities in the case of the crossbands sign which concerns us here, and possibly also the fifth. In regard to the first, it is to be noted that the crossbands is one of the oldest and most widely diffused signs in the several ancient iconographic and writing systems of Middle America, including those of the Olmec and the Izapan cultures, antedating the appearance of Maya writing by several centuries. It would likely have had different readings in the languages represented by these cultures. And in regard to the third, this sign is one that is iconically appropriate to the meanings of more than one vocabulary item even in a single language, the possibilities being multiplied when more than one language is involved.

The phonetic qualification of the crossbands here with its superfixed *a* sign, together with the probable reading of the sign which these two here jointly replace [T761], is cause to posit now a third reading, *at*, for this already multivalued sign. The circumstances, as best we can understand them, are compelling.

The alternations and substitutions that have been encountered so far do not yet exhaust the resources that were exploited for diversifying the representations of this name phrase or for displaying the virtuosity of the scribes. I shall review quickly a few more.

Figure 6-8 is from Temple 26 (as was also Figure 6-6), this one near the northeast corner, accompanying another standing full-figure portrait of the ruler. The first, third, and fourth glyphs of this phrase have all been seen here before, but the second glyph is new. It consists of a face with a CABAN (or CAB) sign infixed into the position of the mouth [T1004v]. It substitutes here for the combination of the *ca*-variant [T25v] plus *ah* [T181] that was seen in Figures 6-6 and 6-7, implying then that it very likely has the same function as these two together. If so, its phonetic value should be *cah*. The CABAN or CAB sign is a logogram whose fundamental value is *cab*, meaning 'earth'. It occurs with just that value in some contexts, but its most frequent use is as the sign of the day Caban. Its distinctive markings are also used iconographically to identify areas that represent the earth (as, for example, on the sides of the sarcophagus at Palenque). Meanings of the word *cab*, both in Yucatec and in Chontal, include 'world', 'region', and 'community' ('pueblo'), in addition to the meaning of 'earth'. But the latter two of these are also meanings of another word, *cah*, which is found in both of these languages. It appears that the CABAN/CAB sign was used on occasion to cover that similar and partially synonymous word also. At least it is apparent that *cah* is the value of this sign when it is placed in the mouth of this face. That value serves well in other



Figure 6-8. Hieroglyphic phrase from near northeast corner, Temple 26 at Copan.



Figure 6-9. Hieroglyphic phrase from step 5, south side, Temple 11 at Copan.

contexts also, where the same alternation (between CABAN-in-the-mouth and dotted-*ca*-variant-plus-*ah*) is observed.[11]

Figure 6-9 is from an inscription on the risers of the steps on the south side of Temple 11. It is associated there with the date of 9.17.0.0.0, 13 Ahau 18 Cumku, the important katun-ending in the reign of our ruler. It exhibits two new substitutions. In the first glyph, after the YAX prefix, there is a new compound sign consisting of a hand and a leaf over what looks like a seat or cushion with a braided band around it, but which is known (from comparison of its many graphic variants) to have been instead a form of the main sign of the "house" glyph [T614] with its conventional icon for thatch over a supporting structure. Here the combination of these two takes the place of the *pa* sign [T602], and so we presume that it had that value, even though we are totally in the dark as to why it should. It is followed, as was the *pa* sign in Figure 6-8, by the face-with-CABAN-in-the-mouth, which we have inferred was read *cah*. Here, interestingly, there is an *ah* sign [T181] affixed to the back of the head, showing that the intended syllable did indeed end with *ah* (i.e., with the vowel *a* followed by the voiceless laryngeal spirant).

[11] The alternation between T1004 (face with CABAN in mouth), T25v + 181 (*ca* variant + *ah*), and T630 + 181 (*ca* variant + *ah*) is seen also in a glyph consisting of one or another of these with a suffixed T178 or 534 (*-al*), the whole presumably read *cahal*. This was widely employed as a title or status designation, appended to the names of persons associated with a ruler but of lower rank, as if in the sense of "lieutenant" or governor of an outlying dependency (see Mathews and Justeson 1984:212–13). Saenz's Cakchiquel dictionary lists a word of exactly that phonetic form (although spelled according to his conventions; cf. note 14) glossed as '*el intermediario*'. The root from which the word is believed to be derived has a wider distribution.



Figure 6-10. Hieroglyphic phrase from Altar Z at Copan.

In the third glyph here we have again the snake-head sign, as in Figures 6-7 and 6-8, substituting for the sky sign; but instead of the phonetic complement *na* [T23] which both of those signs normally have, we see here the snake head compounded with a human head [T1000a], commonly called simply the "female head" because of its frequent use as a title preceding feminine names (first noted, I believe, by Heinrich Berlin [1959]). In another paper (Lounsbury 1984) I have shown that this head, in addition to its already known function, also served in a number of other contexts simply as a phonetic sign with the value of *na*. As a logogram its reading must have been *na'*, a word whose common meaning was 'mother', but which in the inscriptions was used also as a title for ladies of high status. Employed as a phonetic sign, however, it was one of a set of signs [T4, T23, T537, T1000a] that alternated apparently freely with one another, all with the basic value of *na*, but in word-final position also serving as a phonetic complement for a final *n* after a root vowel *a*. That is its function and its value here.

Figure 6-10 is from Altar Z, again associated with the date 13 Ahau 18 Cumku, the katun-ending of 9.17.0.0.0. In this, after the prefix YAX, we find once more the sun-at-horizon glyph (though with its sky sign here inverted!). Unlike the *pa* sign which in the intervening examples has replaced it (or partially replaced it), this can do without the *cah* or *ca* + *ah* increment; and we see none here. But in place of the "sky" sign or the "snake" sign we find a new one, the head of a bird [T746] with a hooked beak and a distinctive sign covering its crest. This head is a familiar one. Its most common use is as a head-form glyph for the katun, the fourth-order unit of time (7,200 days) in the Long Count. In that function in monumental inscriptions it alternates with the normal katun sign, and its reading has always been supposed to have been the same. But here it alternates with two signs whose readings are *caan* or *can* in Yucatecan or *chan* in the Cholan branch of the family. Moreover, it stands here over the same *na* phonetic complement that is similarly subfixed to those signs. This combination of circumstances should imply, then, a similar reading. There seems to be no escape other than to attribute multiple values to this bird-head sign, *katun* as a chronological unit, but *caan* or *can* (or *chan*) at least in the present context.

There is, interestingly, an occurrence of this sign in one other context at Copan that also implies this latter value. It is in the inscription of Stela A in a series of four different representations of a "4-Skies" title, with four different numerical classifiers between the numeral and the noun, associated with a preceding similar series of the four direction glyphs and a following series of four emblem glyphs (Copan, Tikal, El Peru, and Palenque). Three of the "4-Skies" glyphs employ normal "sky" signs (like those seen here in several of the examples of our name phrase), but one of them, the second, has instead the katun bird (as in the present example of the name). And this, like the others, carries the suffixed phonetic complement *na* [T23]. Here then, too, we see an alternation between the normal "sky" and the "katun-bird" signs, in circumstances that imply a common pronunciation. This gives an added warrant for assuming their equivalence in the case of the name phrase of Figure 6-10.

Finally it can be noted that the shape of the bird's beak and a familiar type of feather at the back of its head betray it as the Muan (or Moan), a bird of uncertain zoological identification, but one with many mythological associations and one much represented in Maya iconography. And in addition to the two instances of alternation of this bird's head with the sky sign which are noted here, Thompson years ago noted one in the Dresden Codex. There, in two of a series of four similar segments of a *tzolkin*, the god Chac is seated on sky signs, in the third on an actual sky band, and in the fourth on a Muan (Moan) head. Thompson remarked, "the close relation of the Moan bird to the sky symbol and to the celestial dragons is beyond dispute" (1950:115). Yet another token of this equivalence can be seen on Stela 32 of Naranjo, where the sky bands terminate in Muan-bird heads, these replacing the more usual serpent-head terminations (Thompson's "celestial dragons"). In our Copan ruler's name we have now seen all three of these, first the sky sign, then the serpent, and now the Muan. They must all have symbolized the same concept and the same word and must have received the same reading.

Figure 6-11 is from an inscription on the riser of a step in Temple 21a. This version of the name consists of parts, all of which are familiar from previous examples. Its most unusual feature is that it has the combination of the *ca* variant plus *ah* (standing over the CAAN), this in spite of the fact that it is preceded by the sun-at-horizon logogram. On the basis of previously seen examples it was inferred that the *ca* variant plus *ah*, or the alternative "face-with-Caban-in-mouth," was required only when the position of the main sign in the first glyph was occupied by the phonetic *pa* sign, or by a phonetically equivalent alternative, and that the "sun-at-horizon" logogram could do without it. This



Figure 6-11. Hieroglyphic phrase from step, Temple 21a at Copan.



Figure 6-12. Hieroglyphic phrase from south doorway, Temple 11 at Copan.

phrasing of the generalization can still be accepted, provided that we understand it as specifying that one or another of the *ca* or *cah* groups is obligatory after one of the *pa* signs, but that it is optional (usually absent, but not necessarily so) after the "sun-at-horizon" hieroglyph. The implication of this is that the conventional reading of the "sun-at-horizon" glyph must already have included the syllable that was supplied by one of the *ca* or *cah* groups to supplement the *pa* sign. Its reading, therefore, must have been something approximating *pacah*. Hence, I shall refer to it now as the PACAH logogram. The added *ca* + *ah* group in the present example is thus redundant in the manner of an optional phonetic complement, whereas in its previously seen occurrences it was required to complete the reading that was initiated by one of the *pa* signs.

Figure 6-12 is from the west panel of the south doorway of Temple 11, where it is in a clause that contains the off-repeated accession date of 6 Caban 10 Mol. In this version, after the initial YAX, it appears to be the hand-and-leaf superfix alone that takes the place not just of the *pa* sign but of the *ca* or *cah* as well, for the CAAN that is below it must belong to the next component of the phrase.[12] The hand-and-leaf has been seen before, in Figure 6-9, where it was superfixed to a "house" sign. From that example the most that could be inferred concerning its value was that it must have included the syllable *pa*, for it was followed by a separate *cah* sequence [T1004.181] and it was uncertain what might have been the function there of the house sign. From the present example, however, it appears necessary to revise the hypothesis and to assume that the hand-and-leaf superfix contains both *pa* and *cah* in its reading. There are at least two other examples of this arrangement that lead to the same inference; they are in the inscriptions of Altars F′ and G1 (not illustrated here), and in both the hand-and-leaf superfix stands unmediated over the CAAN sign in this name. They are, thus, directly comparable to the present one, carrying the same implications.

[12] There is a suggestion of an infixed CAAN sign in the crown of the head of the deity in this example of the name (Figure 6-12). If genuine, it raises the possibility of an alternative explanation, with different morpheme allocations from that offered in the text.

In view of these, the house sign of Figure 9 must be seen as without phonetic value in that context, making no independent contribution to the reading of the whole. Neither of its usual readings as a logogram (*otot* and *nah*) is compatible with that context; and although it would not be difficult to defend a hypothetic third reading (*ca* or *cah*) that would be compatible, it would have to be seen as yet another redundant element—another phonetic complement—anticipating and duplicating the function of the next glyph.

The CAAN sign in Figure 6-12 is without the usual *na* phonetic complement [T23 or substitute]. This is true also of the examples just mentioned (but not illustrated) on Altars F′ and G1. In both of these cases the absence of the complement probably hinged on a consideration of vertical space economy, the redundant subfix being dispensed with in order to provide room in the upper tier for the hand-and-leaf sign. A similar two-tier problem was solved differently in the example of Figure 6-11, where the CAAN was narrowed and the *na* complement rotated and attached to its side as a postfix.

The final glyph is again the familiar deity head [T1030i/j], partially effaced, with its usual superfix [T44]. There is a suggestion of another CAAN sign, infixed into the crown of the head. If this is genuine, the above inferences about the hand-and-leaf and the CAAN in the first glyph may require revision. However, the analogous example on Altar G1 is without any second CAAN, which gives reason to suspect that the appearance of an infix into the deity-head here is spurious. The postfix at the right of the final glyph is a more elaborate version of the one seen in Figures 6-4, 6-5, 6-6, and 6-8. To distinguish it from the more frequent, simpler form [T103] we can refer to it as a variant of that sign [T103v].

The YAX prefix or superfix [T16] has been the one constant element in the dozen different portrayals of the name that have been reviewed up to this point. But, as can be seen now in the example of Figure 6-13, this too can be replaced. Here its place is taken by the head of a mythological personage [T1003], known for his principal roles as the "Chicchan god" and the "god of the number Nine." His principal diagnostic is a scattering of spots around the mouth and the lower part of his face, which in the most explicit and best-executed

examples is shown to represent a patch of jaguar skin. Usually he also has a short beard. In monumental Initial-Series dates his head often substitutes for the number "9," as, for example, twice (for that number of both baktuns and katuns) on Copan Stela P. But here in this version of the royal name it obviously stands for the word *Yax*.

This is not the only context that ties this deity to the concept of Yax. In fact, many inscribed representations of the head have a YAX sign attached over the forehead as an ornament (although this can be replaced by a knotted tassel, as here and also on Stela P); and in the hieroglyphic codices, whether designating the god himself or substituting for the number 9, his name glyph has a prominent YAX prefixed to the head. Thompson, noting these associations and substitutions, remarked that "the head of the Chicchan god, god of the number nine, is the personification of the yax affix" (1950:45, cf. also 75, 135, 278). The head must be presumed to have had several different readings depending on context: *bolon* ('nine'), *yax* ('great' or 'first'), and whatever else was its nominal reading when designating the deity. The word *bolon* appears to have had also another sense related to that of *yax*, for it appears in archaic compounds or fixed phrases in Yucatec with connotations of great, eternal, or immeasurable.

This version of the name phrase (Figure 6-13) is from Stela N, where it is the subject of a verb that is much used on period-ending monuments, at Copan and elsewhere, to designate a central event in the rites marking the completion of major chronological periods. It may have signified the dedication of the monument itself. Here it is the half-katun period of 9.16.10.0.0 that is commemorated, and Yax-Pacah Caan-T...at is the principal protagonist in the event. The date is some two years prior to his installation as ruler—a rather unusual circumstance, since it is normally the ruler currently in power who is named as officiant at these rites. His father, who was his predecessor in office, is named further on in the passage, but the intervening hieroglyphs which might eventually cast light on the situation are not yet understood.

With this we conclude our comparison of graphic variants of the ruler's name phrase, although not yet having exhausted their variety or having shown even half of their occurrences. Omitted, with regret, are the several lively full-figure representations of the name; to do justice to them would require another paper. The thirteen variants that have been reviewed are brought together now in transcribed form in the tables that follow. The first part of the name phrase (the presumed personal or "given" name) is in Table 6-1a, and the second part (the presumed familial or titular portion)



Figure 6-13. Hieroglyphic phrase from Stela N at Copan.

is in Table 6-1b. Transcription conventions are as follows:

(a) Logograms are given in capital-letter transcriptions approximating their inferred Mayan phonetic values.

(b) Phonetic signs are given in lower-case transcriptions, again approximating their inferred values, but with underspecification preferred to overspecification.

(c) Alphabetic transcriptions are followed by numerical transcriptions in the system of Thompson's catalog (1962).

The data contained in Tables 6-1a and 6-1b can be condensed and summarized in the form of positional charts, showing privileges of substitution (in the vertical dimension) and of combination (in the horizontal dimension). These arrangements are presented in Tables 6-2a and 6-2b. Included are illustrations of the signs and glosses for those whose primary values are logographic.

The division of the name phrase into two main parts (not including the emblem glyph) derives from the patterns of substitution that have been observed within it. The first part, as far as is known, is found only at Copan and applies only to a single individual; the second part occurs also at Quirigua in the designation of a senior contemporary and possibly related ruler.[13] The first part, therefore, is assumed to have been a personal name; the second part, as Kelley suggested, might have been a family or lineage name, or else some sort of adulatory title.

Each of these two parts of the name again clearly divides into two smaller parts, yielding four in all. We know that two of these parts, YAX and CA(A)N + na, correspond to Mayan words, and it is fair to presume then that the other two do also. If so, we are in a position to predict the existence (or at least the former existence) of a word *pacah* in an appropriate Mayan language, meaning 'sunrise' or 'dawn' or something closely connected with that semantic domain. And we should similarly predict another word, possible begin-

[13] This puzzling title is older in Maya tradition than either of these manifestations at Quirigua and Copan. It is found also on two unprovenienced inscribed plaques from another site (probably Rio Azul), associated with dates some three centuries earlier. See Berjonneau and Sonnery (1985: pl. 330, 331).

Table 6-1a. Comparison of the first part of the graphic variants of the ruler's name phrase.

Figure					
6-1	YAX [16]	PACAH [561<544>:526]	----------	----------	
6-2	YAX [16]	PACAH [561<544>:526]	----------	----------	
6-3	YAX [16]	PACAH [561<544>:526]	----------	----------	
6-4	YAX [16]	PACAH [561<544>:526]	----------	----------	
6-5	YAX [16]	pa [602]	ca(?) [25v]	----------	
6-6	YAX [16]	pa [602]	ca(?) [25v]	ah [181]	
6-7	YAX [16]	pa [602]	ca(?) [25v]	ah [181]	
6-8	YAX [16]	pa [602]	cah [1004]	----------	
6-9	YAX [16]	*pa-cah [222:614]	cah [1004]	ah [181]	
6-10	YAX [16]	PACAH [561<544>:526]	----------	----------	
6-11	YAX [16]	PACAH [561<544>:526]	ca(?) [25v]	ah [181]	
6-12	YAX [16]	*pa-cah [222:561]	----------	----------	
6-13	BOLON/YAX [1003]	PACAH [561<544>:526]	----------	----------	

Table 6-1b. Comparison of the second part of the graphic variants of the ruler's name phrase.

Figure					
6-1	CAAN [561]	na [23]	tiy [115]	AT [761]	ta [59]
6-2	CAAN [561]	na [23]	tiy [115]	AT [761]	ta [59]
6-3	CAAN [561]	na [23]	t.. [44]	?? [1030j]	ta [59]
6-4	CAAN [561]	na [23]	t.. [44]	AT [761]	ta [103]
6-5	CAAN [561]	na [23]	tiy [115]	AT [761]	ta [103]
6-6	CAAN [561]	na [23]	tiy [115]	AT [761]	ta [103]
6-7	CAN [764]	na [23]	tiy [115]	a-*t [229v:552]	ta [59]
6-8	CAN [764]	na [23]	tiy [115]	AT [761]	ta [103]
6-9	CAN [764]	NAA [1000a]	t.. [44]	?? [1030j]	ta [103]
6-10	KATUN/CAAN [746]	na [23]	tiy [115]	AT [761]	ta [59?]
6-11	CAAN [561]	na [23]	t.. [44]	?? [1030j]	ta [59?]
6-12	CAAN [561]	----------	t.. [44]	?? [1030j]	ta [103v]
6-13	CAAN [561]	na [23]	t.. [44]	?? [1030j]	ta [59?]

Table 6-2a. Condensation of data in Table 6-1a showing privileges of substitution (vertical) and of combination (horizontal).

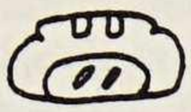
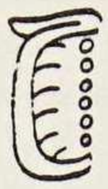
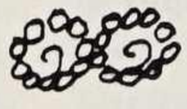
YAX [16] 'great, first'	PACAH [561<544>:526] 'dawn, sunrise'	-cah [25v]	-ah [181]
			
YAX/BOLON [1003] 'great; nine'	*pa-cah [222:561]	-cah [1004]	--------
			
	*pa-cah [222:614]	---------	
			
	pa- [602]		
			

Table 6-2b. Condensation of data in Table 6-1b showing privileges of substitution (vertical) and of combination (horizontal).

CAAN [561] 'sky, celestial'	-na [23]	tiy- [115]	AT/-at [761] 'mem.vir.'/phon.	ta [59]
				
CAN/CAAN [764] 'snake/sky'	NA?/-na [1000a] 'lady'/phonetic	t..- [44]	??/-*at [1030j] (a deity)/phon.	ta [103]
				
KATUN/CAAN [746] 'katun/sky/muan'	---------		-a-*at/K'AT/TAN [229v:552]	ta [103v]
				

ning with *t-* (although with some uncertainty about this) and apparently ending with *-at*, but with no firm clue to its meaning other than it should make sense when construed with the CAAN or CAN that immediately precedes it.

Eric Thompson, in one of his discussions of the composition and uses of the sun-at-horizon glyph (1950:48), suggested that the Yucatec word *hatzcab* and a Chol word *pascab* might be possible readings, noting that the first of these, based on the verb *hatz* meaning 'divide', would be particularly appropriate to the form of the glyph, in which the sun at dawn can be seen "in the cleft betwixt sky and earth" and in a sense dividing the universe. But those suggestions were offered in the absence of any then-apparent necessary constraints on the phonetic form of the word. Without such phonetic constraints there are yet other possibilities. For example, the Yucatec phrase *pa?xal u chun ca?an*, glossed in two of the early dictionaries as '*amanecer*' ('dawn'), but translatable literally as 'to split or rupture the horizon', with obvious reference to the emergence of the sun at dawn, also conforms nicely to the form of the glyph. And with less literal adherence to the iconography but equally appropriate in meaning there are yet others: Yucatec *sá:stal* or *sá:shal* '*amanecer, esclarecer el dia* (daybreak, dawn of day)'; *sá:shal cab* '*aurora* (first light of day)'; *ahal cab* '*madrugada* (early dawn)'; and Chol *pasel k'in* 'salir el sol (sunrise)'.

Our options now, however, are more limited. The value of the crosshatched glyph with dots [T602] can be regarded as secure. So if our hypotheses about the values of the *ca* variant [T25v/T630v] and the face-with-CABAN-in-mouth [T1004] are also correct, then we need a word of the form *pacah* or possible *paca'ah* or, if Cholan, possible *pachah* (depending on the extent to which sign values have been accommodated to phonetic changes in the language). The words cited above, although potentially expressive of the sense of the name, fail at least partially to satisfy the indicated phonetic requirements. Inasmuch as Mayan word roots are for the most part monosyllabic, that can be assumed to be the case here. The root of the desired word then should be *pac*, meaning 'dawn' or 'to dawn', and the suffix *-ah* should be derivational. We should hope then to find words for "dawn" in some Mayan language based on a root *pac*.

The search for a suitable form in available lexical compilations has led to an unanticipated source. Saenz's Cakchiquel dictionary (1940) lists the following forms (in a slightly different orthography, which I take the liberty of retranscribing to conform to that which is being used here):[14]

pacac — amanecer, salir el sol (to dawn, for the sun to rise)
pacacabah — aclararse el cielo (for the sky to clear)
pacapo — no ser todavia dia claro (not yet full daylight)
pacatah — estar amaneciendo; estar obscureciendo (to be dawning; to be getting dark)
pacpot — amanecer; estar todavia el cielo obscuro (to dawn; for the sky to be still dark).

Schultze-Jenas' Quiche glossary (1944:209–314) gives the verb root as follows:

pac — aufklären, aufhellen, erleuchten (to clear up, to brighten, to become light).

And Edmonson's Quiche-English dictionary (1965) lists a number of inflections of the root with meanings of 'to clear' or 'clear up' (of the sky, of weather, of illness, etc.), as well as 'to clear out' (intransitive, in the sense of 'evacuate'). These give evidence of a fair range of generalization from the basic meaning of the verb root. The most specific references to the first brightening of the sky at dawn appear to be in Cakchiquel, and one of the cited forms, *pacatah*, implies generalization to the similar twilight period of evening. Either, of course, would be appropriate to the iconography of the sun-at-horizon glyph. I have not found this verb in the available lexical sources for any other Mayan language. This poses something of a problem.

The general consensus among both archaeologists and linguists has been that the pertinent languages for Maya hieroglyphic writing should be those of the Cholan and Yucatecan branches of the family, Cholan for the inscriptions of the Classic period outside of Yucatan, and Yucatecan for those of Yucatan as well as for the post-Classic Maya codices. The likelihood of influences from the Highland Mayan languages has tended to be discounted. The Highland sources of the cited words with a root *pac* for dawn, sunrise, twilight, clearing, brightening, etc., and the apparent lack of such in any of the lowland branches of the family, raise questions now about the relevance of these linguistic data and about the validity of the linguistic inferences that have been drawn from the hieroglyphs. I am not yet ready to dismiss these out of hand just because the only potential verification has come from an unexpected quarter. As it appears now, the answers may be along the lines of one of the following alternatives:

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[14] Saenz's transcription uses the letter *q* (in place of Spanish *c* and *qu*) for the velar stop *k* and uses the letter *k* (in accord with Guatemalan tradition) for the postvelar stop *q*. His *q* and *k* thus represent, respectively, the *k* and *q* of the International Phonetic Association, exactly reversing their values. His *j* (in conformity with Spanish orthography) corresponds to our *h*. Our transcription in this paper has employed the letter *c* in place of *k* for the unglottalized velar stop, but only because of the convenience of conforming to the conventional representations of Mayan words in most lexical sources.

(a) The verb root *pac* found in Cakchiquel and Quiche, with meanings appropriate to the glyph to be read, might have been an early Mayan lexical item, present in the ancestral language and, hence, in these modern languages by direct line of inheritance, but absent elsewhere in the family due to replacement and consequent loss (or to extensive semantic drift and replacement) in more recent times. The glyphic usage could reflect a local continuation of the original expression, possibly even as an archaism. The fact that vocabulary items for dawn and the rising of the sun are numerous and varied in the languages of the Mayan family gives ample evidence for the play of innovating linguistic processes within this semantic domain throughout the history of these languages. This being so, it would not be inappropriate to posit its former presence in another branch of the family (e.g., Cholan, even in the face of its apparent absence at the present time).

(b) Alternatively, the verb root in question might not have been ancestral Mayan at all, but might have been an innovation within the Cakchiquel-Quiche branch of the family after its prehistoric separation from the other branches; but, at least as a proper name, and with retention of knowledge of its meaning in the language of origin, the name may have been taken into the language of a ruling family, lineage, or class at Copan. It is hardly amiss to posit cultural contact, or even transfer of personnel, from Highland to Lowland Maya communities. The present reading is not the only glyphic-linguistic hypothesis to depend on such an assumption, nor is it the only piece of evidence that can be adduced in support of it. The detailing of these, however, is a task not to be undertaken here.

(c) A third alternative must also be given some consideration. Without further argument, the weakest links in this hypothetic construct may appear to be the assumed values of the *ca* variant and the face-with-CABAN-in-mouth. Suppose that these are wrong. There are other verb roots beginning with *pa* which are employed in expressions for dawn and sunrise—for example, *pas* in the forms cited from Chol, which occurs also in Chontal. And there is a Tzeltal word *paht'ah* that is glossed as 'amanecer'. These invite consideration of other possible values for the *ca* variant and for the CABAN-in-mouth.

The supposed *ca* variant differs from the normal *ca* [T25] only in its line of dots. But for those, they are the same. The clearest example of a free alternation between the dotted form and the undotted form at Copan is in the flanking affix that brackets the "variable element" (patron of the month), or both that variable element and the TUN sign, in the Initial Series Introducing Glyph on stelae. Here the dotted form alternates not only with the undotted *ca* but also with the full-figured "fish" form [T203] and the "flattened fish-head" form [T204], both of whose alternations with the plain undotted *ca* have long been noted. For example, some with the undotted *ca* are on Stelae A, F, J, M, N, 2, 4, 6, 9, 10, and on Altar S; with the dotted variant on Stelae E, I, 1, and 7; with the full-figured fish form on Stela C; and with the flattened fish-head on Stela P. Such alternations argue for equivalence and for readings that are at least partially similar if not wholly identical. Arguing against total identity of readings, however, is the fact that there are many contexts in which one or all of the others occur but where the dotted form does not. This is one of the reasons for having suggested earlier that the basic value of the dotted form might have contained a syllable-final laryngeal (glottal stop or spirant) that was not inherent in the basic value of the undotted form. This measure of dissimilarity is known not to have been an obstacle to alternation of signs with otherwise identical readings. For example, the basic value of the NA logogram [T1000a] is *na'* (with a syllable-final glottal stop), meaning 'mother' and serving as a title for ladies of high status; but we have seen it used here (Figure 6-9) as a substitute for the simple phonetic *na* sign [T23], whose basic reading is without the laryngeal.

I am disinclined at present to ascribe much probability to the third of the above-listed alternatives. Similar arguments can be produced for the CABAN-in-mouth, but I shall not take time for them here.[15] The highest probabilities, therefore, are with the first two alternatives. But they call for further inquiry.

For now, and unless or until new evidence should require revision of the hypothesis, it appears that a reading as *Yax-Pacah* and a meaning something like 'Great Sunrise' or 'First Dawning' can be ascribed to the first part of this ruler's name phrase, in any of its graphic variants, with a fair degree of optimism about the possibility of its being historically true. An equally likely solution for the second part of the phrase, however, is not yet within our grasp. One of the difficulties, consideration of which was earlier postponed, requires a final comment now before tabling the matter.

There is a serious question about the value of the initial affix [T115] that appears in the final glyph of the phrase (not counting the emblem glyph). This was seen in Figures 6-1, 6-2, 6-5, 6-6, and 6-7, where it appeared as a prefix; and in Figures 6-8 and 6-10, where it was a superfix; and it was replaced by another affix [T44] in 6-3, 6-4, 6-9, 6-11, 6-12, and 6-13. When this affix was introduced in the discussion of Figure 6-1, it was noted that one of its most frequent apparent uses was in representing the contraction of the locative preposition

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[15] One of the pertinent items of data was presented in note 11.

with the third-person possessive pronoun when this combination precedes a noun whose root form begins with a vowel. In this function its possible readings could be either *tuy-* or *tiy-* in both Yucatec and Chontal, *tiy-* in Chol, and cognate forms in other languages of the family, in all cases prefixed to the initial vowel of the possessed noun. David Stuart has recently questioned whether the assumption of the presence of the locative preposition is really necessary in those cases that seemed to call for it, and he has cited occurrences where the assumption seems awkward. He proposed then that the value of the affix might rather have been phonetic *yo* and that its function in the glyphs which had motivated the earlier hypothesis was only to signal the possessed form of a word whose root form begins with the vowel *o* (Stuart 1987).

This revision for a time was appealing. It seemed to account for the otherwise curious coincidence that interpretable glyphs with that prefix did indeed involve words whose root initial is the vowel *o* rather than just any vowel.[16] But now we have on our hands an example where that apparent limitation gives way; the evidence before us points instead to a root with initial vowel *a*. It is not apparent how the *yo* hypothesis for T115 can be accommodated to this context. Nor is it apparent how the alternation of T115 and T44 can be compatible with the hitherto plausible hypothesis of a phonetic value *to* for T44 (cf. Justeson 1984:319). That, too, now seems shaky. As of the time of writing this, it seems necessary to retreat to the earlier hypothesis for T115 and to question the vowel entailed in T44. For the time being, then, the primary phonetic value of T115 is taken to be *ti* or *tiy* (the latter when prefixed to a vowel-initial root), but with *tuy* as an alternative possibility if read in Yucatec or Chontal; and the value of T44 is taken to be some syllable beginning with *t*, remaining noncommittal as to the vowel that followed. However, the level of confidence that can be attached to these values at this time is low. Challenges and proposals for revision are to be expected.

These questions will not be pursued further here. Other epigraphers may perhaps find a place for them in their agenda for the future.

[16] These include *otoch* (Yucatec) of the postclassic codices, *otot* (Cholan) of the Classic-period inscriptions, both meaning 'house' or 'temple'; *oc-kin*, apparently in the sense of 'sundown'; *och* 'food, nourishment'; and *oc-te* in a rare variant of the name of a primordial deity.

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7

Elements of Maya Style

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for Mac

INTRODUCTION

Systems of discourse have been a central focus of investigation in Maya studies for many years, and scholars have theorized the cultural basis of linguistic and literary forms in a variety of ways. Following on Garibay's studies of Nahuatl poetry and Léon Portilla's observations of Yucatec formal style, Edmonson (1970, 1973) has proposed a far-reaching account of Maya discourse throughout its post-Conquest history. Edmonson's account rests on the dichotomies between oral and written discourse, literature and nonliterature, and poetic and nonpoetic style. In this view, the traditional written discourse of the Books of Chilam Balam, for example, contain mostly literature, whose formal language is cast in a poetic style dominated by the semantic couplet (Edmonson and Bricker 1985:59; cf. Bricker 1974). Other scholars have found the use of paired lines of verse to be an important stylistic principle in discourse in other Mayan languages as well, including Tzeltal (Becquelin Monod 1979, 1981, 1986), Tzotzil (Gossen 1974a, b) and Quiche (Norman 1980), among others. Norman (1980) gives an excellent formal description of one canonical variant of the couplet in Quiche ritual language, defining it as two immediately adjacent lines that are identical in all respects except one. The nonidentical parts thus form a pair of terms which, in this system, acts as a single lexical unit with a single metaphorical interpretation. The potential significance of such a finding is not only that it can lead to a richer interpretation of Maya literature, but also that the metaphorical equivalents discovered in discourse embody the very constituents of Maya cultures (Edmonson 1973).[1]

A number of studies in the Mayan family have sought to incorporate the couplet into a broader system of style which includes extended parallelism as well as triplets, cycles, and other construction types. Gossen (1974a, 1974b, 1985) has demonstrated the prevalence in Tzotzil of what he called "metaphorical stacking," which he defines as "the tendency to repeat lines and themes for emphasis, in slightly different form; the greater the repetition, the more crucial the information" (1974b:399). This general principle of style operates across Tzotzil genres according to a single cultural esthetic of "heat." Relatively hot genres are more repetitive and more fixed in form, thematic content, and setting of performance than are relatively less hot ones (see also Gossen 1985:72ff).

For Chorti, Fought (1985) has shown the emergence of a cyclic principle of style, whereby discourse is formulated in an ordered series of lines which recur in fixed sequence, as in {ABCD,ABCD,ABCD,. . .n}. Assuming that the cycles follow upon each other in an unbroken chain, the period of the cycle is equal to the number of elements it contains, four in the notation just illustrated. Each one of these elements is part of a series whose length determines an epicycle within the larger sets of cycles, as in the two-member series of C in {ABC,ABC,ABD} (Fought 1985:134). Fought suggests that the couplet as a construction type arises naturally from the two-part predicational structure of Chorti sentences (and other Mayan languages as well) and, furthermore, that couplets are used in discourse to construct larger cyclic patterns. Hence, in Chorti, there is a systematic interaction between syntactic structure, the couplet, and the general Maya tendency to elaborate cycles.

Working from Quiche ritual and narrative, D. Tedlock (1983) has criticized Edmonson's emphasis on

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[1] An earlier version of this paper was presented at the Department of Linguistics, University of Chicago (May 1986), and I thank members of the audience for fruitful questions, in particular Gérard Diffloth, Paul Friedrich, John Lucy, Jerrold Sadock, and Michael Silverstein. I thank also Andy Hofling for very helpful written comments on the penultimate draft. I am responsible for all claims and opinions herein. This paper is dedicated to Norman A. McQuown, who taught us to hear speech in the Colonial documents.

the couplet as a stylistic device, and adduced evidence of at least three other significant devices in Quiche: (1) the use of isolated lines containing presentative deictics to introduce segments of text, (2) triplets in which the third member differs from the first two, and (3) the combination of triplets with couplets in larger constructions. Tedlock's work opens up important new questions about Maya literary tradition, including the range of principles it subsumes, the role of pause phrasing and other performance factors in literary form, and the delicacy of interpretation required to even *find* the structure in discourse.

This paper explores elements of style and construction in Colonial Yucatec Maya discourse (henceforth simplified to Maya, as opposed to Mayan, which refers more generally to any language in the family or to the language family as a whole), primarily from the sixteenth century. It builds on and seeks to contribute to the research summarized above, by showing a range of discourse structures resulting from the application of broad constructive principles. These principles include poetic *parallelism of variable length and density*; what Woodbury (1985) called "*particle phrasing*," whereby the syntactic placement of particles interacts with other rhetorical components, in some cases creating a level of organization of the discourse into blocks; *iconic prose* description, which reproduces the structure of referents in the form of the discourse; two kinds of *cyclicity*, in which cycles are immediately adjacent to one another, versus separated by intervening noncyclic text; and the *combination of couplets, triples, and four-part series*. A central focus in the analysis is the evidence of simultaneous alternative phrasings in discourse, which is viewed not as an indeterminacy to be overcome, but as a resource in the composition and reception of the text. As Woodbury (1985) argued, the "rhetorical organization" of discourse is an outcome of the interaction of multiple phrasings at several levels—prosodic, grammatical, and thematic. One important difference between the materials discussed here and the Yupik narratives analyzed by Woodbury is that in the Maya examples, the multiple phrasings are less regular and less obviously coordinated with one another. Rather, the coincidence of reinforcing poetic series in Maya is a periodic and noteworthy occurrence, rather than a systemic default condition. Consequently, verse constructions, such as the couplet or triplet, will be viewed as the variable outcome of constructive principles, not as fixed types of structure toward which the discourse necessarily tends.

While building on a shared empirical and theoretical foundation, this paper also differs basically from the other studies cited so far. The main difference lies in the kinds of texts studied, since the primary focus of this paper is official and bureaucratic discourse instead of high literary, ritual, or "traditional" forms. I will explore rhetorical and poetic style in letters to the Spanish king, land surveys, parts of a chronicle, and official agreements, all dated prior to 1600. The dichotomy between literary and nonliterary language may be justified as a native category within a given culture, but it does not constitute an analytic difference between codes. In Maya, the very principles familiar from Mesoamerican literary and ritual traditions are used and even elaborated in official discourse. Rather than boundaries between pre-established genres, one confronts frequent transpositions of stylistic features across discourses of widely different types. As an unavoidable corollary of the Conquest, Maya discourse forms incorporate Spanish features as well, resulting in blends between genres as different as the sign of the cross in catholic prayer and the official record of a land survey.

The early Colonial bureaucratic texts document a series of rhetorical experiments, adjustments, and creations which are no less Maya for having been formulated in response to the Colonial experience. Furthermore, it is my position that these texts provide some of the best exemplars of literary, poetic, and rhetorical style. Although I will not attempt to demonstrate it here, there are also numerous analogues between official Colonial discourse, such as the land survey of Yaxkukul (Barrera Vásquez 1984) and modern Maya ritual practice (Hanks 1984; Love 1984, 1986). These facts all belie the idea that literary history consists in the study of literature; they lead, rather, to the transposability and manipulability of structure across generic categories. In the early Colonial period in particular, the whole concept of a genre is thrown into question, along with the concepts of history, time, space, and other mediated representations (Bricker 1981; Hanks 1987).

While illustrating general elements of Maya style, the Colonial discourse also displays several particular features. These include the specification of the deictic coordinates in which the discourse was produced—the authors, addressee, witnesses, place and date of production. These factors are notably lacking in the better studied Books of Chilam Balam (Edmonson 1982), which have been recopied repeatedly and are not anchored to any one specific set of deictic coordinates. This is part of their very generality, and raises significant problems of interpretation, some of which Edmonson has addressed in the work cited. Furthermore, the features of format which appear in letters and agreements include well-marked beginnings and endings, conventional page layouts (e.g., official insignias centered atop the first page, placement of signatures at the end, and oaths of truth signed by scribes and other principals), and formulaic citations of date, place, and title. The themes treated are clearly focused on the historically specific conditions which gave rise

to the documents, and do not always recur in other texts. Hence, to offset the generalized characteristics of these texts, there are relatively individualized ones as well. This play between uniqueness and generality is typical of literary as well as other kinds of works. Following comparative analysis of segments of discourse from official texts, the final example is drawn from the Ritual of the Bacabs (Roys 1965). The purpose of this is to show the relative continuity of style between ritual and bureaucratic discourse, while nonetheless clarifying the differences between the two. I begin with a summary of the documents to be discussed.

FORMAT AND STYLE OF SIXTEENTH-CENTURY MAYA DOCUMENTS

In order to appreciate the stylistic diversity of early sixteenth-century official Maya documents, it is necessary to outline in brief some of their main shared features. Table 7-1 lists the documents on which the discussion will be based. The Ritual of the Bacabs and the Chilam Balam texts have been included for the purpose of comparison, and lack many of the format features common to the remaining ones.

All of the others show dates and places of completion. Authors and witnesses are identified by signatures (or at least names), and each document has an explicit, relatively elaborate opening (except for document 1 of Sotuta, the beginning of which Roys does not reproduce) as well as an ending, which brings the work to a close. Unlike the letters, the land documents from Yaxkukul and Sotuta, as well as the Chronicle of Mani (see Tozzer 1941:nn43, 45, 58, 62), contain surveys of the local area around the place of signing. Both Yaxkukul documents and the chronicle of Chicxulub (Brinton 1882:193–215) contain historical narratives which legitimate a set of Maya nobles as being from that area. All of these documents repeatedly assert their own truth or contain oaths of truth.

The presence of a specific "now," "here," and "we" in the discourse, along with explicit opening and closing frames for the whole, and the assertion and display of truth are all features common to early Colonial documents produced in response to Spanish actions. As the Chronicle of Chicxulub describes plainly (Brinton 1882:213–15), the Maya understood that the López Ordenanzas required a new reckoning of space. Pech lords had received the official commission measuring out the boundaries of the area and participated in the dividing of the forest. Although it is primarily a historical narrative, not a land survey, the Chronicle of Chicxulub is told in the first person by Nakuk Pech, as well as being anchored to a here and now. These features of deictic grounding in the discourse are conspicuously absent from other types of native text, such as the Books of Chilam Balam (Edmonson 1982, 1986) and the Ritual of the Bacabs (Roys 1965). Although both of these contain segments of discourse in the first person, in both cases these are reports of speech, and the "I" is some quoted speaker, not the "speaker" or narrator of the work as a whole.

Finally, discourse directed to a Spanish audience, either to the king in the second person or to the official record without overt addressee, has a strong tendency to appear as part of an intertextual series. Thus, Yaxkukul documents 1 and 2 are clearly related in that they issue from the same place, just eight days apart; both describe the placement of boundary markers to indicate the limits of the forest; and although they do not bear the same signatures, many of their signatories

Table 7-1. Sixteenth-century official Maya documents consulted.*

Chicxulub chronicle (Brinton [1882]1969:189–215), part of a set of Documentos de tierras de Chicxulub, 1542, Chicxulub (Ceh Pech)
Yaxkukul document 1 (Barrera Vásquez 1984), April 30, 1544, Yaxkukul (Ceh Pech)
Yaxkukul document 2 (Martinez Hernandez 1926), May 8, 1544, Yaxkukul (Ceh Pech)
Letter of March 19, 1567 (described in Hanks 1986), Merida
Letters of February 11, 1567 (Zimmermann 1970:31–32), Merida
Letters of February 12, 1567 (Zimmermann 1970:31–32), Merida
Sotuta survey (Roys 1939:421–33), September 2, 1600, Yaxcaba (Sotuta)
Sotuto conciertos (Roys 1939:428–30), September 6, 1600, Yaxcaba (Sotuta)
Ritual of the Bacabs (Roys 1965), no date, no place
Chilam Balam of Chumayel (Edmonson 1986), no single date or place

* Dates cited are the ones that appear on the documents. Most are disputed (see Hanks 1987:686f).

are clearly kinsmen in the Pech patriline. The Sotuta documents, partially reproduced in Roys (1939), are dated September 2 (document 1), September 6 (document 2), and September 6 (document 3), 1600. As in the case of the Yaxkukul series, the first document is the longest and most wide-ranging thematically, and the following ones appear to have been provided in order to reinforce its legitimacy. Curiously, the letters of 1567 also appeared in a series: seven similar versions of two main variants of a letter, dated February 11 and 12, 1567, respectively, followed by a longer and more encompassing letter dated March 19, 1567 (described in Hanks 1986). The appearance of these letters in a series was initially taken by scholars to indicate that they had been copied or otherwise faked. Viewed in light of the serial appearance of chronicles, it is tempting to suggest that this is a generic feature of early Colonial Maya productions. As I have suggested elsewhere (Hanks 1986:724), it is likely that this is an authenticating device, best understood in relation to the display of verisimilitude in the rhetoric of each text.

Verse Forms Addressed to the Spanish Crown

The first textual example is taken from a letter written in Maya, sent from Merida to King Phillip II of Spain, and dated March 19, 1567. The letter presents a broad-ranging description of the contemporary scene in Yucatan, focusing on the conduct of official representatives of the Spanish government and Catholic church and on the relation between them and the Maya ("we" in the letter). The exact circumstances under which the letter was composed are not known, although it was rendered in script by Gerónimo de Castro, royal scribe, and bears the signatures of twenty-six Maya nobles from the provinces of Ceh Pech, Ah Canul, Ah Kin Chel, Chakan, Campech, and Chakan Putun (see Roys 1943, 1957 for background). It is one in an intertextual series of eight Maya letters, all sent from Merida in the spring of 1567, all expressing devotion to the Franciscan fathers, in many of the same terms (see Hanks 1986 for fuller discussion). The March 19 letter contains a blend of rhetorically dense, persuasive language directed toward influencing Crown policy and relatively "standard" descriptive prose in which a narrative account of current affairs is presented. The first example, taken from the middle of the document, shows a prose statement of one of the communicative purposes of the letter—namely, to elicit the king's sympathy for the plight of the signatories. In the ten orthographic lines preceding the example, the Franciscan missionaries are praised for their good deeds in Yucatan and the misery and destitution of the Maya are described. Following line 114 is an endorsement of the present governor (don Luís Cespedes) and a request that a census be taken of the Maya, to show that they are numerous and in need of royal dispensation.[2] Abbreviations are listed in an appendix.

Example 1. Excerpt from letter of the Maya nobles to the crown, March 19, 1567 (Hanks 1986).

112.1 lai tah ok-l-al lic-il ca-mul-ok-tic
Dm Part RN-sf-sf Aux-sf Apro-infx-V-trns-inc
That reason we collectively weep ourselves
ca-ba tech
Apro-rflx Ipro
to you
Therefore we all cry out to you for mercy

112.2 ca a-Ca-b ca-ya-tzil
Comp Apro-V-opt Apro-N-sf
that you take our misery
to take pity on us.

113.1 y-ok-l-al he tũ ca-patan
Apro-RN-sf-sf Dm Part Apro-N
for this our tribute
t-ac-yum-il-ob e
Prep-Apro-N-sf-pl Trm
to our lords
For our tribute to our masters

113.2 y-et-el lic ca-Ca-ic tech e
Apro-RN-sf Aux Apro-V-inc Ipro Trm
and we give it to you
and that we give to you,

113.3 chambel pak-bil tanam
Adj V-prt N
simple folded mantle
is plain folded mantles,

114.1 hach muk-tzil lic-il u-tal
Part Adj-sf Aux-sf Apro-V
Intnsv tolerably it comes
easy to come by

114.2 ma-ix-tab c-u-chic-t-a ho-il toon
Neg-Conj-Part Aux-Apro-V-trns-sf N-sf Ipro
and nowhere it castigates our heads
and it's not punishing for us.

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[2] The orthography in examples is retained from the original sources, with the exception of a substitution of [C] in place of the "backward c" notation for the glottalized affricate corresponding to plain [tz], as in *Caic* 'give it' for what would be written *ƈ'aáik* in modern orthography. Colonial orthographies are explained in Tozzer (1921:21). The format of examples is as follows: top line is original Maya, with morpheme boundaries indicated by hyphen; second line is grammatical breakdown to morpheme or word; third line is a quasi-literal gloss; and fourth line is a freer translation.

114.3 hach ah num-ya-on
Part Agtv V-N-Bpro
Intnsv we are sufferers
We're really suffering.

114.4 ma-bal u-bal ca-ba /
Neg-N Apro-N Apro-rflx
nothing the thing of our selves
We're destitute.

From the perspective of Maya literary style, this example illustrates relatively standard prose language, with little or none of the poetic parallelism that marks verse, to be shown subsequently. The purpose of starting with prose, rather than tightly structured verse, is to point up some relevant facts about the standard grammar of sixteenth-century Maya and to establish a base line against which the elaborations of verse can better be appreciated. In all examples, whole line numbers refer to the number of orthographic line in the original document or reproduction from which the example comes, and the fractional numbers have been introduced for the purpose of analysis. In the absence of parallelism across stretches of discourse, the segmentation of the original text into lines is purely heuristic, and has been done according to the following default guidelines. Where appropriate, one line equals one clause (lexical verb with its core noun phrases), as in 112.1, 112.2, 114.1, and 114.2. A line may fail to be a clause, but be a "heavy noun phrase," as in the nouns plus modifiers in 113.1 and 113.3. Connectives occur in clause initial position and therefore tend to occur initial in lines as well (112.1–113.2). Deictic particles (nominal demonstratives, locative deictics, presentative adverb) also mark grammatical boundaries appropriate to the beginning of lines, since they occur in initial position in major constituents, such as 'that' in 112.1. Other deictics occur in constituent or sentence *final* position, and may be used to indicate the end of a line, as does *e* in 113.1 and 113.2.

Like other Mayan languages, Colonial Yucatec has a number of relational nouns—that is, noun stems which are used in possessive constructions to indicate relations such as 'because', 'by', 'with', 'over', 'and', 'under', 'alongside'. This is the case with line 113.1, where *ok* is a relational noun root possessed by the third person *y-* and followed by the suffix *-ol* (actually -Vl), meaning roughly 'it's cause/reason' and glossed 'for, because, on behalf of.' This connective is very common in narrative discourse and occurs even in discourse initial position. It is the same relational noun root in line 112.1 in the example, where it is preceded by the demonstrative particle(s) *lai tah*, rather than being possessed. The first word in 113.2 is another relational noun, based on the root *-et-*, which is used for conjunction ('and'), instruments, and accompaniment ('with'). Relational expressions typically occur in possessed form, where the possessive pronoun (prefixal, or A set) cross-indexes the immediately following noun phrase (or sentence). 'Under it' appears as *y-an-al* 'it's- under', and 'under the house' as y_1*-an-al le nah*$_1$ 'it's$_1$- under the house$_1$'.

The structural regularity of relational expressions, in most cases [possessive pronoun-root N-Vl suffix], is used as a phrasing device in Maya verse (cf. Fought 1985). For instance, a series of lines may begin with grammatically identical, semantically distinct, relational phrases and may, or may not, display other parallels, including rhyme, parallel syntax, and shared lexical items. The periodic recurrence of relational phrases contributes to the repetition of grammatical features across lines, reinforcing, or even determining the phrasing. Hence, a series of four lines such as "For W, by X and Y, because of Z" would show in Yucatec four grammatically parallel relational expressions in initial position of each constituent line.

Another feature of standard Yucatec that is elaborated in verse is plural marking. In standard Maya, plurality is marked on nouns, verbs, and adjectives by the morpheme *-ob*, the third person B set pronoun; singular reference is indicated by formal zero—that is, it is unmarked. Hence, *mac-ϕ* 'man (person)', *mac-ob* 'men (people)'. As is characteristic of privative oppositions in markedness, the zero form can be used to stand for the entire category; consequently, overt plural marking is grammatically ruled out or optional in some contexts. In fact, to my knowledge, plurality of reference is never obligatorily marked by the plural morpheme, but is most typically understood from context (see also McQuown 1960:237).[3] Overt plural marking is most likely to occur when the predicate is explicitly collectivized, as in *noh xib-**tac**-ob* 'they are (a collection of) elders'. In combination with quantifiers (e.g., "many," "few," "ten"), it is optional, even rare, *yab mac* 'many people', *cappel uinic* 'two men' (lit., 'two man'). Similarly, distributives which imply a plurality of referents nonetheless do not require overt plural marking, as in (modern) *ká'aká'a-tuúl kubin* 'Two-by-two he (they) go(es)'. Verbs, possessed nouns, and predicate nouns and adjectives indicate plurality of an associated noun phrase by the same morpheme, as in *yab* mac_1 *c-u-bin-ob*$_1$ 'many men (they) go'. Theoretically, plurality could be indicated, therefore, on the noun phrases and all associated predicative elements in a sentence, with the consequence that a single sentence could contain numerous instances of the *ob* morpheme referring to the same (or overlapping) group(s) of objects. In practice, the opposite is true, and a plural interpretation is typically derived from some other aspect of the surround-

[3] This statement bears on third person only. Number marking works differently in first and second person references.

ing discourse. In particular, it is rare in standard Yucatec to find two coreferential instances of the plural morpheme within a single (noncomplex) noun phrase or even a single clause. Hence, in lines 113.3–114.1 in example 1, there is no plural marking, but a plural interpretation is possible under which the noun phrase 'bundled mantles' and the verb 'they come' are semantically plural. The authors of the letter could have written *pakbi tanam* **ob** . . . *u tal* or *pakbi tanam . . . utal* **ob** as well as what they did write, *pakbi tanam . . . utal*.[4]

In versified language, overt plural marking is inordinately common, sometimes occurring several times in a single clause. The recurrence of the morpheme *-ob* not only reinforces the grammatical parallelism of the lines but also contributes to rhyme, and may be further extended in alliterative series as well. This is another example of the selective elaboration in verse of a grammatically optional feature of nonverse language. It is typical of Yucatec formal language that it achieves aesthetic intensity by expansion and elaboration, not by contraction and restriction of linguistic resources. No single structure type, such as the couplet, will provide an adequate basis for Maya poetics.

The most noteworthy parallelism is in Yaxkukul document 1 and the letters of February (version 1) and March 1567. These originated from northern and western provinces, especially Ceh Pech, and display what appears to be an emblematic verse construction consisting of mutually reinforcing repetition of the plural morpheme (*ob*), quantitative equivalence of lines (six, seven, or eight syllables), alliteration, syntactic parallelism, and semantic parallelism (complementarity, near equivalence, part-whole relations). The discourse preceding and following this construction may or may not be marked by noteworthy poetic parallelisms, but in each case there is a relatively clean onset and coda to the verse series. In the letter of February 11, 1567, the parallelisms carry over six lines, and can be reasonably read as a couplet followed by a trip'let and an isolated (dissimilar) line, or AABBBC (Hanks 1986:734).[5]

Example 2. Excerpt from letter to Spanish king, February 11, 1567 (Zimmermann 1970:32).

2.1 lai tah oklal
Dm Part RN
That reason
For that reason

2.2 c-ech ah tepal e
Part-Bpro Agt N Trm
you majestic one
You who are Majesty,

2.3 bail-cun a tum-tic
V trns Apro V trans
make it thus you provide
would that you provide

2.4 ychil au-ahau-l-il-ob
Prep Apro-N-sf-sf-pl
within your realms
within your realms

2.5 y-ah bebeç-ah-ul-ob,
Apro-Agt V-sf-sf-pl
the guides
the ministers

2.6 ca utz-ac u-tich-kak-t-ic-ob
Comp V-opt Apro-V-N-sf-sf-pl
that they hold forth fire
in order that they might illuminate

2.7 y-et-el u-çaç-cun-ic-ob
Conj Apro-N-caus-sf-pl
and they make light
and enlighten

2.8 y-et-el u-cam-beç-ic-ob
Conj Apro-V-caus-sf-pl
and cause to learn
and teach

2.9 himac ma-bal y-ohmah-ob e
Part Neg-N Apro-V-pl Trm
whosoever nothing has known
whosoever knows naught

In example 2, beginning with line 2.4, there is a series of six lines, all measuring between six and eight syllables, all ending in *ob(e)*. The first two lines in the series (2.4–2.5) form a couplet on the basis of their identical ending *lob*, and of grammatical parallelism, both being possessed N stems with Vl suffixes (*-il*, *-ul*). The end rhyme in *-ob* is carried through the next three lines (2.6–2.8). Looking at the beginning and middle of each line, 2.6–2.8 form a triplet distinct from the preceding couplet. Rather than possessed N's, they are all transitive verb stems inflected for third person plural transitive incompletive, [*u*–STEM-*ic-ob*]. Each is preceded by a connective. The final line in the series still shows *-ob*, in the same metrical position (seventh syllable in the line), but this time followed by the isolated terminal particle *e*. The particle brings the series to an abrupt close. The March 19, 1567, letter also breaks into verse at lines 52–53 and 54–55. The former is a single sentence stated in five lines, and the latter is four sentences

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[4] A singular interpretation is also possible in which *tanam* is read as a mass term, and 'bundled mantle' is like "stacked firewood" or "canned ham." In this case, the verb could not be pluralized and the equivalences cited would fail to obtain.

[5] This example and the analysis of it come from Hanks (1986:734ff), where it is more fully discussed.

in four lines, all bound by verse parallelism, but analyzable as two couplets, AABB.

What makes these examples special is the degree of verse parallelism they show. Phonological, grammatical, and semantic redundancies are common in Maya discourse, but they often fail to establish a clear poetic phrasing. Patterns of recurrent structure at different levels may fail to coincide, or do so only in part, and no single verse series dominates the others. Edmonson's observation that semantic couplets in Maya are usually not accompanied by syntactic parallelism is a special case of this point. It is relatively rare that parallelisms at different levels coalesce into a unified construction. Rather than encountering a single clear scansion, one is forced to recognize a range of possible scansions, corresponding to the different parallelisms in play. Based on the recurrence of particles, we get one phrasing; on the recurrence of morphological structures, another one; and on the semantics, yet another. Much of the discourse in the chronicles, letters, and surveys lacks significant parallelism and must be phrased on the basis of defaults such as the ones proposed above (see example 1). Thus, when a stretch of discourse shows foregrounded parallel syntax, semantics, and sound structure, all coinciding in a dominant phrasing, it is noteworthy. Although it will take considerably more research to demonstrate, it is likely that these compact verse constructions are unique to the early letters and surveys. They may represent early experiments in the use of indigenous rhetorical devices to address Spanish officialdom.

Prose Cycles in the Yaxkukul Documents

Within prose language, there are various stylistic alternatives, of which one is particularly noteworthy: cyclic description.[6] Cyclic description is relatively free of the line to line parallels that sustain verse. Instead, the dominant device is periodic repetition, mostly in fixed order, of selected grammatical forms. Any short stretch of cyclic discourse in isolation can appear to be merely linear description, but when placed within the larger text, it emerges as part of a recurrent series of lines. More like a periodic refrain than a poetic parallel, this pattern can be represented as {ABCDE . . . ABCDE . . . ABCDE . . . n}. In the following example, taken from the Yaxkukul document 1, lines 186–190.2 and 191–194.2 constitute single cycles. This cyclicity organizes the second half of the Yaxkukul document 1 (lines 111–284) exhaustively. New cycles begin at lines 114, 119, 124, 131, 137, 143, 154, 163, 168, 175, 181, 186, 191, 195, 199, 203, 208, 216, 221, 230, 235, 240, 244, 248, 253, 259, 263, 267, 275, and 279 (Barrera Vásquez 1984:22–34).

Looked at as a whole, Yaxkukul document 1 has three well-defined parts, (1) a declaration of the nature of the document itself as an authentic *información [de] derecho* "report of rights" (Barrera Vásquez 1984:line 17; part 1 is lines 1–110); (2) a detailed account of the lay of the land and its subdivisions relative to landmarks (water sources, hills, trees, *tzuc* markers) around the Chacnicte well (lines 111–308); and (3) a public declaration of solidarity among the signatories (lines 309–483). The style of the language in each of these three parts of the document is different, with occasional verse constructions in the first and third, but cyclic prose description in the second.

Example 3. Excerpt from *Documentos de tierras de Yaxkukul*, document 1 from Barrera Vásquez (1984: 27–28). Line numbers retained from Barrera Vásquez; breaks adjusted to reflect structural parallels; analysis and gloss by Hanks; ## inserted to mark end of cycle; /in original; [chh] stands for "barred ch," the glottalized affricate.

186-7 lakin-tan u-bin-el layli nolo yn lak e
Adv-Adv Apro-V-sf Dm N Apro N Trm
Eastfront go still my Nolo others
Eastward they continue, my companions from Nolo

187-8 tzol tun bi/nel t-u-lac-al
V N V-sf Adv
count stone going all
stone counting all the way

188-9 ca kuchh-uc y-ok chhen Kanpepen
Comp V-opt Apro-RN N Name
until arrive over the Yellow Butterfly well
to Yellow Butterfly well.

190.1 ti y-an mul/tun i
Part Apro-V N N Trm
There is stone mound there.
There is a boundary stone there.

190.2 ca man-ac ##
Comp V-opt
that they passed
And they passed by it.

191-2 lakin-tan u-bin-el lay ti nolo yn lak e
Adv-Adv Apro V-sf Dm Part N Apro N Trm
Eastfront go still Nolo my others
Eastward they continue, my companions from Nolo

192-3 latulah u-kuchh-ul
Adv Apro V-sf

[6] This section draws heavily on Hanks (1987:674–75, 680), where the Yaxkukul documents are analyzed and a relation is posited between cyclic style and persuasive rhetoric. The generalizations made here about the texts are the same, but the examples are different.

until they arrive
until they arrive

193 y-ok-ol chhen cacabil utzte
Apro-RN N Name
above well of village utzte [uncertain]
at the Utzte village well,

194.1 ti y-an pictun i/
Part Apro-V N-N Trm
there is a boundary marker there.
there is a boundary marker there.

194.2 ca man-ac ##
Comp V-opt
that they passed
And they passed by it.

195 lakin-tan u-bin-el layli nolo yn lak e [. . .]
Adv-Adv Apro V-sf Dm N Trm
Eastfront go still Nolo my other [. . .]
Eastward they continue, my companions from Nolo [. . .]

Although the cycles are clearly identifiable, they are not all identical, varying somewhat in length, exact content, and order of elements. Each cycle begins with a statement of the direction of motion, as in 186, 191, 195, followed by description of the subjects conducting the survey—the Nolo people. The internal composition of cycles is fairly regular throughout the survey, but particularly so in this segment: (1) (inter)cardinal direction of motion in which the representatives of the narrator ("I") are said to be proceeding while counting boundary markers (lines 186, 191, 195); (2) name of the next goal or landmark at which they "arrive" (lines 189, 193); (3) the assertion that there is a *multun* 'mound of stones' or *pictun* 'boundary stone' at the landmark, presumably authenticating the accuracy and propriety of the survey as conducted.

There are variations in the text on this general cyclic pattern. For example, in line 187 within the first cycle shown, the description of the surveyors' motion is elaborated in a second partly parallel phrase, 'Eastward they go, . . . counting stones they go'. This detail is passed over in the following cycle, where we find 'Eastward they go, . . . until they arrive over Cacabil Utzte well'. Similarly, in some cycles, in addition to the stone marker at the landmark, there is said to be a cross. The two are simply conjoined, as in 'Sicipach, dependent of Yaxkukul, where there is a cross and a mound of stones' (Barrera Vásquez 1984:26, lines 166–167). Naturally, the combination of cross and stone marker was not found in all places, and, therefore, this verbal elaboration is not typical of all cycles. The variation in such cases indicates that there are different degrees of elaboration on a single cyclic pattern. A survey of the other cycles in this text indicates that there are several patterns, not just one. As is often the case in Maya discourse, we find a range of different stylistic finalizations combined and sequenced within a single work.

The order of appearance of the (inter)cardinal direction terms in this survey provides another example of variation within a pattern. Between lines 111 and 284 there are thirty prose cycles, each beginning with the directional term. If we list the thirty terms in the order of their appearance, the pattern is clear: the surveyors started off heading westward (119–136), then proceeded south (137–174), then east (175–220), then northeast by north (221–235) then they 'returned' (*sutnac*) to the west (240–258), then north by northwest (259–274), then west (275–282) until they completed the perimeter by returning to their point of departure. Just as one finds in Maya ritual performance (Hanks 1984; Love 1986), this is a counterclockwise progression ending in the center from which it starts. Unlike ritual, the point of outset is westward rather than eastward.[7]

The stem *tzol* in line 187 is familiar from the calendrical system called *tzolkin* 'day count' (see MacLeod, this volume). It is a commonly encountered stem in both Colonial and modern Maya texts and dictionaries, with a range of meanings both verbal and nominal, including 'count, order, series, succession, chronicle, explanation, explain' (see, for instance, Barrera Vásquez et al. 1980:863). *pictun* are 'boundary markers, regional division markers' (Martínez Hernández 1929:folio 389r). The narrator describes his action, then, as 'I go along counting out boundary markers'.

Cyclic prose style foregrounds the iconic relation between the discourse, moving through a series of regular cycles, and the actual act of walking the perimeter of the area by following a series of boundary markers. This act is what the discourse "counts out." It is not accidental that this section of the document, which *executes* the counting out of boundary markers, is cast in cyclic prose rather than verse. This is a reflection of the more general tendency for all acts of ritually significant "counting" in Maya to be done in predetermined cycles (cf. Fought 1985).

This interpretation implies that the Yaxkukul land document records a ritual (re)creation of social space rather than a simple survey of geographic boundaries. In the other land surveys, the surveyors are said to

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[7] Dell Hymes asked whether the number of elements in a cycle or the number of cycles in a segment were significant, and they may well be. When we count the number of cycles intervening between changes in direction in the survey, we find the following: three cycles westward; five cycles South; nine cycles East; three cycles North by Northeast; four cycles West; three cycles North by Northwest, and two cycles West. The motivation for this sequence is unclear to me.

place, or *put down* boundaries markers in order to divide the land rather than count ones already there. This implies that the "survey" was a means of defining space, not merely describing it, by a process of counting out points on the perimeter in regular cyclic fashion. Barrera Vásquez's glosses reflect this active sense of counting as establishing order rather than merely cataloguing it.[8]

In all of the official documents, there is a recurrent emphasis on truth and the tie between actors and the spaces they inhabit (Chi [1582:231] states that public acts were performed under oath prior to the Conquest). Official documents are grounded in the context of their production, tied through signatures, dates and places to a deictic "we," "here," and "now." This indexical framing is typical of "official" discourse directed toward the Spanish rather than of native prophetic history or ritual curing. The Yaxkukul documents explicitly assert their own authenticity, certifying with signatures that the accounts are in fact what they appear to be (not just vehicles for some hidden agendas) and that what they state is true, not fabricated. (Compare Yaxkukul document 1 [Barrera Vásquez 1984:lines 61, 318, 359, 397, 428, 431]; document 2 [Barrera Vásquez 1984:91, 97]; Chicxulub *documentos*, sec. 40 [Brinton 1882:214–215]; Sotuta documents 2 and 3 [Roys 1939: 428, 430]). Similar assertions of truth are common in the letters of 1567. This concern with *true* description and *authentic* provenience stands apart from the merely descriptive content of the documents. It reflects the uncertainty of the context and the necessity of projecting an image of verisimilitude. It shows, further, that credibility was a form of capital, an unsurprising fact given that the role of these documents was to create the record of Yucatan, a record that could subsequently be used to legitimate claims to land and rights.

Further rhetorical devices which indicate a directive, persuasive, or "authorizing" aim in the Maya documents include the following: (1) inclusion in the document of a testimony of truth by some recognized official(s) other than the primary authors, found in all of the land surveys and the letter of March 1567; (2) signatures of witnesses, implying public consensus on the contents of the document, found in all of the surveys and the March 1567 letter; (3) specificity of reference by naming lists of individuals and locations, displaying accountability to publicly verifiable facts, found particularly in the surveys and agreements, in the Chicxulub chronicle (sections 11, 32, 35, 39), and somewhat less in the March 1567 letter; (4) display of virtuosity in the stylization of the discourse through verse structuring in the letters (Hanks 1986:735), Yaxkukul document 1 (see example 4, above), and the Chronicle of Chicxulub (section 11 and see example 3, above), and cyclicity in the survey of Yaxkukul document 1; (5) the invocation of authorizing powers, both Spanish and Maya, through reference, found in all of the documents under study as well as in ritual language, both Colonial (Roys 1965) and modern.

Additional elements reflect a focus on persuading or securing the "uptake" of a specific addressee (human or divine). In the 1567 letters to the king, parts of the Chumayel, and parts of the Ritual of the Bacabs, imperative verbs and statements in the second person direct an addressee to act in a certain way. The justification for the request may be further spelled out. There is a recurrent appeal to intense affect, both positive and negative, in the addressers' relation to the addressees or to some state of affairs. In the letters, authors confess to past offenses against Catholic doctrine and express heartfelt remorse. Affect, confession, and remorse are also part of modern Maya shamanic prayer.

Looking back to Table 7-1, we can summarize the shared features of these texts. All but the Chronicle of Chicxulub show the following features: date and place of formulation, names of principal author(s) and witnesses are specified in the body of the text, along with signatures or a list of those responsible at the end. All of these works also have formulaic opening and closing routines, separating them clearly from any other discourse. The Yaxkukul and Sotuta land documents contain surveys formulated with iconic signs—cyclic prose in the former and use of graphic representation in the latter. The Yaxkukul documents and the Chronicle of Chicxulub contain historical narratives (of vary-

[8]There are significant parallels between the Yaxkukul survey and the Maya ceremonial circuit in the Chilam Balam of Chumayel (Edmonson 1986:lines 924–938). In the latter, a group of Maya nobles (including ritual specialists) make a walk from place to place along a circuit, stopping at a series of places to name them and perform other ritual enactments. Both illustrate the ordering of space by means of walking a perimeter. In the Chumayel (lines 927–934), this process of *tzol* is attributed also to the Catholic God (*ca yumil Ti Dios* 'Our lord in God') and associated with the creation of the world. However, in the Chronicle of Chicxulub (Brinton 1882:209), Naum Pech is said to have announced the arrival of the Christian God to the people of his area, and instructed them not to resist, by traveling *CuCucenil* 'from *tzuc* marker to *tzuc* marker'. When we view these examples side by side, it seems likely that the paths defined by series of boundary markers served as the channels through which ritually effective and politically authoritative power passed. Whatever the specific circumstances of composition of the Yaxkukul documents, they embody a form of discourse organization associated with the re-creation of space by an ordering process of *tzol* 'counting'. Although it is beyond the scope of this paper to relate these discourse forms to the Maya calendar, it is obvious that a fundamental relation exists, given that stones were placed and counted as markers of time as well as space, and the prototypical exemplars of *tzol* 'counting' are the cycles of the calendar (cf. Fought 1985).

ing length) legitimating the identity of the principles as descended from the founders of their respective areas. Common to all of these documents, despite their generic differences, is the assertion and display of truth.

Sixteenth-century official Maya texts, therefore, show a variety of rhetorical and poetic effects characteristic of speech whose objective is to change reality, not just describe it. These apparently bureaucratic documents display a broad range of distinguishable styles. All of the texts are made up of a combination of unadorned prose description with variably elaborate verse parallelism. The most salient verse structuring of the corpus is found in Yaxkukul document 1 and the letters of 1567, authored by some of the same individuals, but penned by different scribes. In these texts, poetic parallelism is raised to the level of relatively bounded constructions, in which regular length and phonological and grammatical parallelism reinforce one another. Other, less full-blown examples show multiple parallelisms without any integrating structure. This results in discourse cohesion, but without any single dominant phrasing. Cyclic prose is a particularly good illustration of the ritual overtones of the language of the Yaxkukul survey. The fact of cyclicity is itself indicative of the activity of *tzol* 'counting out', analogous to the calendar. Furthermore, the direction of spatial progression obeys well-recognized conventions on ritual invocation. The merely referential appearance of the language in the chronicles is misleading when viewed in this broader context.

Cyclicity as a Rhetorical Device

There is another form of cyclicity attested in the prose of the March 19, 1567, letter to the king. Like the cycles in the Yaxkukul survey, this discourse shows the successive recurrence of an ordered series of lines. We can speak of this recurrence as "cyclic," insofar as the repeated lines form a series that it recapitulated, as in {1, 2, 3, 4, # 1, 2, 3, 4}. Nevertheless, the present examples differ from the cycles of ceremonial counting in several important respects. The most obvious is that the cycles recur just once instead of twenty or more times. This corresponds to the difference in genre between fully consummated *tzol* events in which space and time are constructed and the narrative description in the letters to the crown. Just before the lines in example 4, the March letter describes its purpose as *patcante t a xicin* 'recount to your ear', rather than *tzol*. This may have been a recognized form of advising or merely a way of directing the discourse to its addressee.[9] Whereas the cycles in *tzol* events are immediately adjacent to one another, one picking up where the preceding one leaves off, the cycles in the letter are not immediately contiguous to one another. Instead, they are separated by intervening text (three orthographic lines). Rather than {ABCD, ABCD, ABCD, . . . n} in a continuous revolution, we find {ABCD, . . X . . , ABCD}. Finally, the order of the lines themselves in the letter is apparently not motivated by any iconic relationship to nonverbal action, or to the distribution of objects in space. Rather, the theme of this example is the contrast between the Franciscan friars and the secular clergy. The friars are described first and in a positive light, and the clergy second and in a negative light.

If *tzol* events show the cycle in one of its maximal expressions, this example shows it in its minimal condition. A single, noncontiguous repetition serves as the frame within which two referents can be contrasted. Given this, we do not even recognize the first cycle until it is later recapitulated in the second. The parallelism emerges briefly, then dissipates. Lines 6–10 form the first cycle and, separated by intervening discourse, 13–14 form the second.

Example 4. Excerpt from letter of March 19, 1567, lines 6–14 (Archivos General de Indias, Mexico 356; whole numbers indicate orthographic lines, fractions introduced; transliteration and analysis by Hanks).

6.2 he tun ca-than lae
Dm Part Apro-V Trm
Here then we speak this
Here then we speak:

7.1 hach kanan uuilal uay ti provinçia yucatan
Ints Part Part Dloc Part N Name
Very neededhere in province Yucatán
Truly there is need here in the province of Yucatan

7.2 Sant fran^{co} padre-s-ob toon
N N N-pl-pl IPro
San Francisco fathers for us
of Franciscan fathers for us,

8.1 uchebal y-al-ic-ob u-than-il dios
Comp Apro-Vtrns-inc-pl Apro-N-sf N
in order that they say it his word god
in order that they say the word of God

8.2 heklai doctrina x̃piana u-kaba e
Relpro N Adj Apro-N Trm
which Christian doctrine is its name
which is called Christian doctrine,

8.3 uchebal-ix y-al-ic-ob missa
Comp-conj Apro-Vtrans-inc-pl N

[9] Note that the reference to the addressee's ear raises the question of orality and suggests that this letter was composed to be received aurally. The presence of verse components based on sound structure reinforces this inference.

in order also they say it mass
in order too that they say mass

9.1 ca-chant-e
Apro-Vtrns-opt
we attend
for us to attend.

9.2 ca-ix utz-ac u-tzect-ic-on-ob
Comp-conj V-opt Apro-Vtrans-inc-Bpro-Bpro
that it be good they instruct us
tac uayil than e
Part-AproN-sf N Trm
in our here language
So that they might instruct us in this our language

10.1 u-than-il c-ah-çiçah-ul
Apro-N-sf Apro-Agt-V-sf
their language our born ones
the language of our fellow humans

10.2 heklai evangelio u-kaba
Relpro N Apro-N
which gospel its name
which is called the Gospel

10.3 t-u-men español-es-ob e /
Part-Apro-RN N-pl-pl Trm
by Spaniards
by the Spaniards.

11–

12.3 [. . .]

12.4 ca-ix u-thox-ah ek padre-s-ob
Comp-conj Apro-Vtrns-pst Adj N-pl-pl
then he distributed black fathers
Then he distributed the black fathers

13.1 clerigos ucate u-kaba-ob e
N-pl Apro-N(?)Apro-N-plTrm
clerics [uncertain] their names
clerics, his lesser brothers(?) as they are called.

13.2 ca u-uacun-ah-ob
Comp Apro-V-pst-pl
then he posted them[10]
Then he placed them

13.3 ti-canan-cah-ob
Part V-N-pl
as town guardians
as community priests

13.4 ychil ca-cah-al
Prep Apro-N-sf
inside our town
within our towns

13.5 y-al-ab-ob u-than dios
Apro-V-opt-pl Apro-N N
they say the word of god
(that) they might say the word of God

14.1 toon.
Ipro
to us
to us

14.2 uchebal-ix y-al-ic-ob missa
Comp-conj Apro-V-inc-pl N
in order too they say mass
in order too that they say mass

14.3 ca-chant-e
Apro-Vtrns-opt
we watch it.
for us to attend.

14.4 tamuk u-tzect-ic-on-ob
Comp Apro-Vtrans-inc-Bpro-pl
while/whereas they instruct us
Whereas they instruct us

15.1 t-u-me y-ah-tzol-than-ob
Part-Apro-RN Apro-Agt-V-N-pl
by their speech-counters
through their interpreters

15.2 y-okl-al ma-il y-oh-el-ob
Apro-RN-sf Neg-sf Apro-V-sf-pl
because not they know
For they do not know

15.3 uay-il than e
Dloc-sf N Trm
of here language
the language of this place here.

The first cycle in example 4 occurs in just the same position in the March letter as does example 2 in the February one: right after the opening address frame of the letter. Like the February excerpt, this one provides the rationale for the letter as a whole; both letters request that the crown send more Franciscans in order that they convert the natives, and this request is justified by the great love and beneficence which the friars are said to share with the Maya.[11] Starting at line 8.1, the Franciscan mission in Yucatan is described in a triplet—"In order that A, in order that B, so that C." The first two members of the triplet have the same

[10] The precise meaning of *uacunah* 'place' is uncertain. The Cordemex (Barrera Vásquez et al. 1980:908, 958) shows 'guide, accompany, substitute for, perform a role'. My gloss reflects the hypothesis that what is being described is the placement of the secular clergy, either in substitution for Fransciscans or in new locations not already serviced by the friars.

[11] The ironies of such a statement and the historical background of the letters are explored in Hanks (1986).

complementizer, followed by identical verb complexes (*yalicob* 'they say it') and distinct but semantically related direct objects, 'the word of God', 'Christian doctrine' and 'mass for us to attend'. The third line is partly parallel grammatically as well as semantically, but has a different purposive complementizer (*ca utzac* 'in order that', still used in modern Mayan), a different transitive verb of communication with same subject (*utzecticonob* 'they instruct us'), and a different but still related direct object, 'the language of our fellow humans which is called the Gospel by the Spaniards'. Overall then, this block of text presents the Franciscan mission in a series of three transitive predications linking the Maya to the friars by communication. In example 2, lines 2.6–2.8, the February letter also presents the friars' mission as a triplet, 'in order that they illuminate and enlighten and teach'. Semantically, the first two parts of this triplet are more similar, focusing on the metaphor of light, than either is to the third. Hence, all three strips of discourse illustrate triplets in which the third line is dissimilar, a pattern noted by Tedlock (1983) in Quiche verse.[12]

It is worth noting, in both of these cases, that the Maya texts show a fusion of apparently indigenous Maya literary style, with Franciscan metaphors. The triplets read like alternative *difracismos* of the Franciscan role in the conversion of the natives, showing a familiar range of parallel features found elsewhere in Mayan literature. These metaphorical descriptions of their practices, however, are stated in Franciscan terms. The Franciscans defined their role in the New World as bringing light to the darkness and teaching by way of *doctrina*, the sacrament of mass, and the study of the gospels. Under Franciscan guidance, the Indians would become perfect children of God, God of light (Phelan 1970). This new message is traditionalized by the verse form in which it is embodied.

In the lines intervening between the first cycle and the second one (beginning at 13.2), Bishop Francisco de Toral is said to have arrived in Yucatan, as ordained by the king, and to have brought and distributed 'black fathers clerics' in Maya towns. The second cycle is thematically equivalent to the first, in that it describes the mission of the church ministers as 'saying the word of God to us, saying the mass for us to attend and instructing us'. At a gross level of structure, the triplet is the same as the one describing the Franciscans; two instances of the verb "to say" with coreferential subject markers, the same set of three referents as direct objects. However, this overt sameness is only a framework within which to oppose the so-called "black fathers" and the Franciscans.

Much of the letter is devoted to a harsh and relentless criticism of the seculars, formulated as the negative opposite of the benevolent, loving, enlightened friars. One recurrent theme in this critique is the inability of the seculars to speak Mayan, to communicate with the natives at all, contrasted with the Franciscan virtuosity at Mayan language. This passage is the first introduction of this theme, in lines 9.2 and 14.4–15.1: the Franciscans instruct the Maya in 'this our language', whereas the black fathers instruct 'through their interpreters'. The contrast is foregounded by the parallel between the two cycles up to this point, as in the pattern {ABC, . . . ABD}. The unstated but unmistakable message is that the seculars don't speak Mayan. As of line 15.1, this is an inference based on the rhetorical contrast with the Franciscans, along with the assumption that if they did know Mayan language they would teach in it.

Hence, Franciscan practice, as viewed by the friars themselves, provides the standard against which the seculars are judged. This judgment is executed in a description of their conduct and relation to the Maya, as the point-by-point opposite of the friars. The device of cyclic parallelism, with three lines per cycle, is used to foregound the opposition in its first introduction. From the perspective of the range of contructive principles in Maya discourse, what is most interesting about this example is that the parallel series are nonadjacent. This illustrates a general characteristic of Maya style: namely, that parallelism *emerges* at different "rates" as different texts unfold. Otherwise discursive segments of prose commonly turn out to be elements in parallel constructions, but this becomes obvious only later in the discourse when they recur in altered form. Similarly, immediately adjacent lines may bear no obvious syntactic or semantic parallelism, but be woven together in a series of alliterations or purely superficial similarities, as in the vowels in lines 13.2–14.1: au, wa, u, a, o // i, a, a, a, o // i, i, a, a, a // ya, a, o, u, a, yo // o.

ORGANIZATION OF A RITUAL PRESCRIPTION

The final example to be presented here is taken from Roys's (1965:99) Ritual of the Bacabs. This represents a distinct genre of discourse, with a distinct style and tact. Roys calls these texts "incantations," but it would be more accurate to say that they consist of a numbered series of "episodes," each of which describes the cure for a specific illness. Many episodes do in fact contain incantations in the form of quoted speech which is to be performed by the curer as part of the cure. Unlike

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[12] This implies that a block of verse, such as a triplet, can be repeated at selected intervals in a discourse, thus embedding it in a kind of minimal cyclicity. Verse forms like the couplet and triplet should be viewed in relation to prose forms like the cycle, since they obviously combine in the discourses under study.

the sixteenth-century official documents, these do not describe any addressee, nor any speaker (aside from the generic one of the reported speech), nor a "here," nor any specific human actors. There are no signatories. These obvious contrasts in format reflect the distinct frameworks and goals of the discourses. Whereas the official documents made specific claims to representing, or creating, space and time in Colonial society, the ritual texts are anonymous, timeless, and made to be spoken by any qualified reader. The power of the ritual discourse is in its ability to assimilate the specific condition of an ill person to a scheme of generalized axiomatic categories, including typologies of illnesses, spirits, cardinal directions, and body parts. The official discourse works in the opposite direction, making specific that which is general, by fixing the coordinates of space, time, and recent experience. Official language expresses the limited perspectives of interested parties, its authors, whereas ritual speech is universal and anonymous, or at least presented that way.

Example 5. Section 24, Ritual of the Bacabs (from Roys 1965:99; p. 143 in original ms. Line numbers introduced by Hanks).

1 he ca bin lub-uc tancas y-ok-ol uinic-ce
DM Part Aux V-opt N Apro-RN-sf N Trm
the will fall paralysis upon human
When paralysis befalls a person,

2 ca chha-b-ac ye ci y-an ych lum tam-il e
Comp V-psv-opt N N Apro-V Prep N Adv-sf Trm
be taken thorn of sisal it is in ground deep
a sisal thorn is to be taken from deep in the ground,

3 ca tok-ok ti can-ppel ye bin
Comp V-opt Prep Num-NC N Part
be lanced with four thorns, it is said,
u-xay u-chi
Apro-N Apro-N
its corner his mouth
the corners of his mouth are to be lanced with four thorns by custom.

4 taban-tac t-u-bac-el u-pach
Part-Part Prep-Apro-N-sf Apro-N
[uncertain] at its bone his back
Along with his spine

5 luk-ul t-u-theth-e
V-sf Prep-Apro-N-sf
leaving at his hip
from his hip

6 luk-ul t-u-pukzik-al
V-sf Prep-Apro-N-sf
leaving at his heart
from mid chest,

7 luk-ul t-u-ni y-oc
V-sf Prep-Apro-N Apro-N
leaving at its tips his leg
from the tip of his foot.

8 he ca bin dzoc-oc u-tok-ol e
Dm Part Aux V-opt Apro-V-sf Trm
the will finish he be lanced
When he has been lanced,

9 ca man-s-ab-ac y-ok-ol
Comp V-trans-psv-opt Apro-RN-sf
be passed over him
let there be passed over him

10 hun-ppel chac-bi ha y-ok-ol
Num-NC V-prt N Apro-RN-sf
one boiled water over him
one (container of) heated water over him

11 y hun-pul zil/ tun-t-ab-il y-al-il
Apro(RN) Num-NC ? V-trans-psv-opt-sf Apro-N-sf
Conj one pour moderated water
and one pour of tepid water,

12 pay be ti y-oc uinic
Adv Prep Apro-N N
initially/before on his leg person
first on the person's leg.

13 he u-than-il lae
Pres Apro-N-sf Trm
Here its speech
Here is what is said:

14 la tun bacin lub-i hadz u-hol tancas e
Part Part Part V-pst V Apro-N N Trm
Oh! enough then! fell down strike his head
paralysis
Enough then! Paralysis struck down on the head.

15 lub-i y-ok-ol sac uinic tun
V-pst Apro-RN-sf Adj N Part
fell down upon white person then
down upon the white person.

16 sac-al yk y-ik-al lub-ic
Adj-sf N Apro-N-sf Vb-perf
white wind its force has fallen[13]
White wind was the force in which it descended.

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[13] If we compare this line to lines 20, 23, 25, 26, 27, and 30, it appears that a spirit causing illness has at least five identifying components: an *ikal* 'force, momentum, wind', a *wayasbah* 'realization, manifestation in a given context', a *che* 'tree (perhaps a perch)', and a *aban* 'bush', and a *sikin* 'undoing'. In line 16, the *-ic* suffix on the verb is glossed as perfective, but may be motivated by the adverbial role of the phrase preceding it. To descend in the force of "white wind" is a manner of descending.

17 dza-ex tun a-than y-ok-ol
V-imp-Bpro Part Apro-N Apro-RN-sf
Give then your speech over him
So place your word upon him,

18 ca c-man-s-ex c-ex can-tul
Comp Apro-V-caus-Bpro Part-Bpro Num-NC
that we-you make it pass you who are four
ti ku
Prep N
of god
that we together might make it pass, you who are Four Gods.

19 c-ex can-tul ti bacab e
Part-Bpro Num-NC Prep N Trm
You who are four of Bacab
you who are four Bacabs.[14]

20 ek-el yk u-uayasba
Adj-sf N Apro-N
black wind its realization
Black wind was its manifestation[15]

21 ca tal-i y-ok-ol ek uinic tun
Comp V-pst Apro-RN-sf Adj N Part
when it came upon black man then
when it descended upon the black man.

22 he tun bacina can-te ynu-al-ic
Part Part Part Num-NC Apro-V-inc
But then better four times I say it
But then better four times I say it

23 ca t-in-hadz-ah max u-che
Comp Aux-Apro-V-sf N Apro-N
then I struck it who its tree
when I struck the one who is its tree

24 max y-aban
N Apro-N
who its bush
the one who is its bush.

25 sac-al copo uy-aban
Adj-sf N Apro-N
white copo its bush
White copo is its bush

26 chac-al copo y-aban
Adj-sf N Apro-N
red copo its bush
Red copo is its bush.

27 lic tun bacin ynu-al-ic u-sikin / hun-ten-ili
Part Part Part Apro-V-inc Apro-N Num-NC-sf
then how so? I say its undoing once and for all
So how then I say its undoing once and for all.[16]

28 bin han-eb-al hu-mac ti kin hun-ten-ili
Aux V-opt-sf Num-NC Prep N Num-NC-sf
it will eat throughout the day once and for all
It will eat throughout the day once and for all

29 bin uk-ul-n-ah-eb-al hu-mac ti akab xan
Aux V-sf-pst-sf-opt-sf Num-NC Prep N conj
it will drink throughout the night also
it will drink throughout the night also.

30 lay u-sikin lae Amen
Dm Apro-N Trm Interjection
that its undoing Amen.
That is its undoing. Amen.

The discourse illustrated in example 5 comprises the entire episode numbered XXIV in Roys's reproduction of the manuscript. A cursory glance at the text indicates some regular recurrences of demonstrative and connective particles in initial position in lines 1, 2, 3, 8, 9, 13, 18, 21, 22, 23, and 30. This is a familiar feature found also in the official documents. Line 13 presents the reported speech directly to the reader, 'Here is what is said', after which it is reproduced as quotation. The quoted utterances continue at least until line 29, which is the second part of a couplet in which two pairs of terms, 'eat-drink' and 'day-night' are combined. I believe that line 30 can be read either as part of the quoted speech, with 'Amen' marking the close of the incantation or as following the end of the quote, which on this

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[14]The epithets in lines 18 and 19 are coreferential, as I understand the text. The Bacabs are well known as the four brothers who hold up the sky, separating the two planes, sky from earth (Morley and Brainerd 1983:465). *ku* can be glossed 'god (class uncertain)' or possibly 'temple (where adoration takes place)' (Barrera Vásquez et al. 1980:416). The epithet *cantul ti ku* is parallel to the well-known *bolon ti ku* 'nine Gods (of the underworld)' and *oxlahun ti ku* 'thirteen Gods (of upperworld)' (Morley and Brainerd 1983:466), with the exception that it has the classifier *tul* (animate) inserted between the numeral and the preposition *ti*. Line 18 then identifies the addressees as "four Gods" and line 19 specifies the class as "four Bacabs." This phrasing is not the standard one for quantified nouns, which would be simply *cantul bacab* 'four Bacabs'. In this context, it is motivated by the phrasing in the preceding line, of which it is a verse parallel.

[15](Barrera Vásquez et al. 1980:917) glosses *wayasba* as '*figura, parábola, opinión o calidad en que uno se tiene*'. In this context, it says that the malady came down upon the sick person in the form of "black wind."

[16]At this point the translation becomes difficult and I am uncertain of the gloss of the sentence initial particles, even though they are all in the dictionaries (Barrera Vásquez et al. 1980:204, 28, 192). Also, the gloss 'undoing' for the term *sikin* is a guess based on *sik*' 'dishevel, tussle' (Barrera Vásquez et al. 1980:728). In this context, I take it to be a reference to the ritual effect of the prayer in curing the illness caused by the spirit.

reading ends with the conjunction *xan*. In the second case, line 30 is part of the larger discourse frame, bringing it to a close by summarizing both quoted and direct discourse: 'that's it'. In the first case, it ends the incantation by a similar reference to prior discourse, but only within the quote.

All thirty lines in example 5 are naturally divisible into blocks introduced by bundles of particles. In the direct portion of the discourse, these bundles occur at lines 1, 8, and 13. That line 8 in fact marks a significant boundary in the text is also indicated by the preceding triplet 'from his hip, from mid chest, from the tip of his foot'. Note that this triplet reproduces the familiar pattern of the dissimilar third line, in this case ending in a nested possessive structure (lit., 'its tip his foot') instead of a simple one. Against this background, the particles in 8 make an abrupt, foregrounded transition. Furthermore, 8 is parallel to 1, which begins the episode: the same three particles followed by an intransitive verb in the optative stem shape begin the lines, and there is partial end rhyme between *yokol . . e* and *tokol e*. Within the first block, the situation is posited to be '*pasmar*' which Roys translates as 'paralysis' (I am doubtful of this gloss, since *pasmar* is also used in current shamanic curing to describe a state of fever or systemic disequilibrium brought on by the shock of hot and cold qualities in the body. Paralysis is not one of its common symptoms). The verticality inherent in the description of *tancas* as descending upon a man is elaborated in the following line, which ends 'deep in the ground'. There is a somewhat minor verse series linking the verb complexes in the first three lines, all in the optative stem with the complementizer *ca*. This is left unreinforced, however, since the last half of each line is distinct.

Lines 3–7 all contain phrases introduced by the preposition (or relational particle) *ti*, and there is a progressive increase in the parallelism as one proceeds through the lines: 4–7 show the reduced form *t-* prefixed to body part nouns possessed by the sick person; 5–7 also begin with the derived form *lukul* 'coming from', in addition to sharing *t-* and possessive structure. Thus, the series of particle phrasing, syntactic parallelism, and lexical parallelism combine gradually to a crescendo at the end of the series, where they all end at once.

Whereas lines 3–7 describe the bleeding of the patient, 8–12 describe how the patient should be bathed in hot and then tepid water. The sequence of lancing and bathing, as well as the serial combination of hot and cold, are common elements in modern Maya shamanic practice. In light of current practices (outlined partly in Hanks [1984]), it is likely that *tancas* '*pasmar*' is a hot illness which is allowed to ventilate through lancing and which leaves the body in a state of dangerous overheat. The hot bath would stabilize the heat, and the tepid one moderate it. Beyond the negligible parallelism of verb complexes in lines 8–9, and some euphony in 11, there is no noteworthy verse structuring in this block. Thematically, it completes the preparations for the performance of the ritual discourse, starting in line 14.

Particle phrasing continues in the incantation as the primary segmenting device at lines 14, 22, and 27, all beginning with the bundle {*la, he, lic*} *tun bacin(a)*. Each of these three blocks displays internal parallelisms. The first creates the addressee of the incantation, by overt second person address and directives (17–19). The particles *la tun* (*bakin*) are glossed by Barrera Vásquez et al. (1980:44) as an interjection of pain or admiration, and might be rendered more idiomatically here as '*Aáy! Basta pues!*'. The best overview of particle compounding in Colonial Yucatec Maya is McQuown (1960:242–47). Following the directives, the addressees are honored with epithets 'You who are four gods, you who are four Bacabs'. This dual nomination of the addressees is cast in a canonical couplet, which suggests that the epithets are coreferential, so that the four gods *are* the four Bacabs. Like the description of the illness at the outset of the text, this ritual speech describes the illness of *tancas* as falling down upon the victim, 'the white person', 'struck down on the head'. The opposition between the black of the sickening wind and the white of the victim is undoubtedly motivated by the symbolism of color, in which black is associated with west, death, underside, and so forth, and white with north. Color coordinates recur at lines 20, 25, and 26, but their specific values in this discourse remain obscure to me.

The second block (22–27) presents the incantation itself in the performative formula 'But then better four times I say it', which picks up on the quadripartite distribution of the Bacabs. Lines 23–24 make up a couplet grammatically and appear to reflect the pair 'tree-bush', which may in turn be emblematic of the sickening spirits. The shaman, or curer, strikes the tree and bush as the spirits strike down on the victim. The bush is then said to be 'white copo, red copo'. The couplet in 23–24 shows a familiar elision of the verb complex in the second part (giving 'I struck the one who is its tree, *I struck* the one who is its bush', with the italicized material deleted). In 25–26, however, even the identical material is repeated rather than being deleted. The reason for this discrepancy is probably that elements are prone to elision when in leftmost position in the line and are not deleted when to do so would result in a fragment rather than an entire constituent. Norman (1980:395) derives canonical couplets in Quiche by a copying rule, which takes a single lexical entry consisting of the paired items, say [*sacal copo*$_{N_1}$ + *chacal*

copo$_{N2}$], and copies in the identical material (*uyaban* or *copo uyaban*). This results in Quiche examples like 'It echos in the forbidden tree, *it echos in the* forbidden vine', where the italicized material would be inserted at the left of the second-pair part (forbidden vine) by copying the material to the left of the first part. In the current example, *copo yaban*, is repeated to the right, not the left, of the second-pair part, thus suggesting a different process than the Quiche rule. In any case, identical repetition is generally avoided in Yucatec, as in the nonrepetition of 'when I struck' in the couplet ending at line 24.

The final block begins at line 27 with the framing of the entire invocation as 'I say its undoing' (?), evidently a veiled reference to the effectiveness of the invocation in moving or countervailing the spirits by speaking them. The same expression *usikin* recurs in line 30 as the final framing of the text. Its precise meaning is uncertain to me. Within this outer frame which specifies the category of the invocation, there is an inner couplet (28–29) which describes the event in the intriguing but opaque trope, 'it will eat throughout the day . . . it will drink throughout the night'. The verbs are both optative stems governed by the auxiliary element *bin*, a future whose precise connotations are unclear to me. The pairing of day and night could well be a metonymic emblem of time, and the one of eating and drinking a reference to ritual offerings or other nourishment, but these notions are undemonstrated.

This example adds several more constructive principles to the Maya system of style. The progressively more compact parallelism in lines 3–7, reaching a peak at the very end is a type of construction unattested, to my knowledge, in the official documents from which we began. The appearance of reported speech, in the form of direct quotation, sets this discourse apart from the letters, surveys, and accords. Quotation is encountered in parts of the books of Chilam Balam, and in other historical "chronicles," but not in the official documents I have examined to date. The forms of address embodied in the reported speech reproduce the primary address to spirits verbatim, and therefore provide an objective document of the evaluative characteristics of the spirits. For instance, they are nominated in the 'four Gods, four bacabs' couplet in 18–19, similar to the way the Spanish king is nominated throughout the official letters as *tech cech noh ahau ah tepal* 'You you (who are) great lord, majesty', or some variant of this (Hanks 1986:731 ff). On the other hand, the mode of address in the ritual discourse differs starkly from that in the official documents, in that it starts out in bald directives: 'So place your word upon him, that we together might make it pass', whereas official discourse is less coercive in its rhetoric. The inclusive first person in line 18 really puts the practitioner and the spirit addressees on equal footing in achieving the cure. None of the letters to the king, for instance, shows such an equalizing speech tact.

Interestingly, the means of cure is to lower the spirits' word onto the patient, a description which rests on the same vertical principle shown in the first block above (see also Gossen 1974a, 1974b; Hanks 1984). The word laid down is evidently the one reported in lines 22 and 27, which implies that within the quoted invocation there is a further embedding of quoted speech that belongs to the spirit addressees. The performing curer is in a mediating position linguistically, in that he is the speaker reported to be uttering the word ("*I* say its *sikin*"), which nonetheless gets its effectiveness from the spirits to whom it belongs. A similar two-part definition of the speaker obtains in the surveys, where one group of nobles (primary "we") is said to have published the survey in front of witnesses, who lent their names to the document, and thereby became joint authors in the event. Such events, in which a group of actors shares responsibility and authorship of the act, are what Hancher (1979:12) called "collective." What is distinctive about the ritual invocation is that the spirit addressees are made part of the collective "we," a form of persuasion, whereas in official discourse the indigenous authors remain distinct from their superordinate addressee (crown or the bureaucracy).

CONCLUSION

It may appear ironic that a study focused on early Colonial official documents is used as the basis for proposals bearing on Maya literary history. These bureaucratic documents are all tainted with Spanish and especially Franciscan features, and were all produced in response to events in the Colonial context. But there is no language without style, and historical poetics cannot rule out persuasive, officializing acts, such as surveys and appeals to higher authority, while focusing on more recognizable ritual or narrative genres. In formulating these documents, the Maya adapted and fused stylistic and rhetorical principles from their own cultural tradition with new ones introduced by the Spanish. The hybridization is indigenous even if the addressee and, therefore, much of the rhetoric are not. In the historical study of Maya discourse systems, it is essential to move beyond the standard icons of indigenous myth, prophetic history, and ritual, in order to come to terms with the grounding of the Maya system in the post-Conquest social world. As a matter of principle, the structure of the works themselves takes precedence over the sorting of their features into a Maya and a Spanish pile. When we look at examples of such documents, their clear aesthetic regimentation bears

out the point empirically, and they are recognizably Maya improvisations.

Improvisation is one of the key phenomena in the study of discourse systems. From the perspective of the event of communication, actors must always improvise their utterances, if only to the extent of appropriately adapting available templates to the situation at hand. In early Colonial contexts especially, institutional and conventional structures undergo more or less radical transformations, like the ones announced in the López Ordenanzas for the conversion of Yucatan (Cogolludo 1688:bk. 5, sec. 16–19, Tozzer 1941:71, n318). These changes make it unavoidable that actors manipulate, adapt, and transform conventional resources in the course of action, since the resources themselves are in question. From the perspective of the literary tradition, improvised discourses show the application of constructive principles to new sets of circumstances. As Tynianov (1924) observed long ago, poetic principles are most clearly studied in their minimal conditions, rather than in maximally versified language, in which numerous factors reinforce, coincide with, and obscure the effects of given features. The political and bureaucratic demands of Colonial Yucatan provided a field for the production of such "minimally literary" discourse, along with some maximal examples as well.

Looking across all of the examples, there are a number of immediately recognizable features which are reproduced widely in Maya discourse. These include particle phrasing, the elaboration of syntactic and semantic couplets, triplets and more intermittent parallelism, and the repetition of the plural morpheme *ob* as a phrasing device. More interesting are the features indicative of one-time productions. The iconicity of counting out boundary stones while surveying the land in response to the López Ordenanzas is one example. The unquestionably indigenous activity of *tzol* 'counting', with its inherent cyclicity, is applied to the geography of Ceh Pech province, in accordance with the counterclockwise order of ritual invocation. Yet this is done in response to the legal exigencies of the Spanish government. Whereas other surveys contain lists and some evidence of cyclic enumeration, none that I have seen displays the intensity or regularity of part 2 of Yaxkukul document 1. Cyclic counting in discourse relies on the iconic relation between the text and that which it represents.

In the March 1567 letter, there is another kind of cyclicity which is not iconic, but which consists of the repetition in serial order of a three-part description of the Catholic mission in Yucatan. The cycles are discontinuous, unlike counting, and the images Franciscan rather than traditional Maya. The use of the triplet here may be motivated at least partly by the Franciscan teaching of the sign of the cross and the trinity. The use of verse constructions in the 1567 letters and Yaxkukul document 1 is another improvisation. In these constructions, four, five, or six lines of regular length are unified by mutually reinforcing phonological, grammatical, and semantic parallels. There is ample evidence of rhythm and metrical regularity, as in examples 2 and 4, if not of rhyme or meter as fixed structures.

A final set of apparently new devices resulting from the exigencies of the Colonial context are the serial production of works, the use of a whole range of authenticating devices to display the legitimacy of the authors' identities and expression, and the introduction of a first-person narrator into Maya discourse. The letters of February 1567 consist of two very similar but not identical texts, each of which was sent in multiple copies to the crown—at least four copies of version one, and two of version two, all dated February 11 or 12. Each copy has its own distinct set of signatories. The Yaxkukul survey published by Martínez Hernández (1926) is dated May 8, 1544, and the survey published by Barrera Vásquez (1984) is dated April 30, same year. The texts are thematically identical and purport to survey the same perimeter around Yaxkukul, but the signatories are distinct and so are some of the locations cited as boundary markers. In the Sotuta series, all three from Yaxcaba, the first is considerably longer than either of the following two, and is dated four days earlier than them. Labeled *concierto* and *otro concierto*, the "agreements" bear different names as authors and witnesses and cite different places as constituting the boundaries of "here" (it is unclear to me whether these other boundaries were contradictions or complements to the ones cited in the first survey).

The emerging pattern of producing several responses to a Spanish interlocutor seems to have sustained two modes of collective action. The one most evident in the letters was the display of consensus among a large number of individuals, by multiple signed reproductions of the same or similar discourse. In the surveys, the discrepancies in the accounts seem to indicate that serial production was a vehicle for contradictory or at least contravening voices struggling to assert themselves. In both cases, the cosigners of each individual document displayed their alignment with each other by joining their names in authorship. Thus, it appears that the social field of collective action helped give rise to an apparently new form of intertextuality.

Each of the documents, including the letters, asserts its own veracity and legitimacy as fact. The concern with authenticity is ubiquitous in these discourses, and gave rise to format features such as signatories, witnesses, specification of date and place of promulgation, and the invocation of Spanish officials. All of these anchor the accounts to a determinate event context,

making the texts themselves accountable in the sense of being within the responsibility of named principals. These authorities, and the particular places, events, and relations to which they refer, are all further legitimated by the display of consensus and by the precedent set by the documents. Chi (1582) states that oaths were uttered in public before witnesses as a form of contract in pre-Conquest Yucatan, which suggests a possible precedent for some of the Colonial devices mentioned. Still, the terms of legitimation were in dispute in the new colony, and the way the Maya authenticated themselves and their claims was oriented, at least in part, to the dominant Spanish addressee.

The requirement that official documents be attached to responsible authors in the Colonial bureaucracy is reflected in the emergence in these texts of an explicit "we," or sometimes "I." Although there are noteworthy segments of the Chilam Balam texts, and even the so-called Ritual of the Bacabs, that are cast in the first person, these are, to my knowledge, all quoted speech. Like example 5 above, the "I" may be an empty node representing the role assumed by any speaker who performs the text, in which case it is an anonymous first person. In the *katun* accounts of the Chilam Balam texts, actors are cited by name, and their words sometimes presented in quotation, as in the reproductions of prophetic address (Edmonson 1982:34, line 577ff). Here the quoted speech is attributed to someone quite distinct from the voice of the narrator. The absence of determinate individual speakers "telling" the katun accounts is an important part of their universal character. They purport to recount *What Happened*, not what happened from a defined perspective. The engagement of Maya nobles in the Colonial society entailed the creation of new forms of address and the transformation of linguistic style and practice. That situational innovations were nonetheless fundamentally indigenous is evidenced in the powerful continuities in Maya style, both across the language family and through post-Conquest history. As the embodiment of a discourse tradition, these continuities are not formal structures, but are schematic resources and constructive principles that endure precisely because they do not remain quite the same.

APPENDIX: Abbreviations

Adj	adjective
Adv	adverb
Agt	agentive nominalizer
Apro	A set pronoun (prefixal)
Aux	auxiliary to verb
Bpro	B set pronoun (suffixal)
caus	causative
coll	collectivizer
Comp	complementizer
Conj	conjunction
Dloc	deictic locative
Dm	demonstrative
imp	imperative
inc	incompletive stem shape
infx	infix
ints	intensive
Ipro	independent pronoun
NC	numeral classifier
Neg	negative
Num	numeral
opt	optative
Part	particle
perf	perfective
pl	plural
Prep	preposition
Pres	presentative
prt	participal
pst	past
psv	passive
Relpro	relative pronoun
rflx	reflexive
RN	relational noun
sf	stem formative
trns	transitive
Trm	terminal particle
V	verb
(-)	morpheme boundary
(/)	slash marking line break in original

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8

The 819-Day-Count: A Soulful Mechanism

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INTRODUCTION[1]

In Classic Maya inscriptions the 819-Day-Count is an ongoing cycle which comes to rest at intervals of 819 days. These resting places have often been called "stations" in the literature on Maya epigraphy and calendrics. They are specified via a Distance Number which counts backward from the Initial Series date to a given station, which is named by a *tzolkin* day name with a coefficient of one. Because 819 is divisible by 13, this coefficient always remains the same. The 819-Day-Count Distance Number typically comes after the Initial Series (and Lunar Series if that also is given), and a verbal phrase appears following the *tzolkin* position to which it is counted. The verb is almost always T588, for which a reading will be offered. The actor is God K, and his nominal sequence specifies him as being from a given cardinal color and direction. In some instances the phrase closes with "One-Rodent-Bone," for which a reading will also be suggested.

This paper will consider the mathematical structure of the 819-Day-Count in concert with iconographic and ethnohistorical evidence and decipherment of the opening and closing hieroglyphic collocations in an attempt to shed light on the functions of the formula and its role in Classic Maya religious life.

The legacy left to epigraphers by J. Eric S. Thompson includes, among discoveries far more dramatic, a number of formulae which facilitate Maya calendric computation. That the Maya used some of these formulae themselves may be inferred from the ethnographic documentation of some of them, notably the "footsteps (of the year)" (Thompson 1950:248) and from calendric intervals in the inscriptions involving computational units (Thompson 1950:256). Occasionally an error leaves evidence, as in the one found by Lounsbury on the Palenque Tablet of the Cross involving twenty "computing years" (Schele 1981:57).

The ritual significance of the 819-Day-Count is attested not only by its preeminence in the Classic texts where it occurs but also in its incorporation of Maya sacred geography, notably color and directional symbolism with God K as protagonist of the main verb. Berlin and Kelley (1961) first noted the association between T588 and color/direction symbolism in both the Classic 819-Day-Count and the "offering" texts in the Dresden Codex.

[1] For Mayan words not taken as direct dictionary citations, a standard modern orthography will be employed. For established logographic or calendric hieroglyphic references, a "modified Colonial Yucatec" orthography is used, due to its entrenchment in the literature on Maya writing. Dictionary citations are as given in the sources. The result is a plethora of variants for several consonants. The following paradigm will aid in recognition of these. Inconsistencies may be noted; *mea culpa*.

Modified Colonial Yucatec	Modern Standard	Chol (Aulie & Aulie 1978)	Chorti (Wisdom 1950)
c	k	c	k
k	k'	c'	k'
tz	ȼ	ts	c
dz	ȼ'	ts'	c'
ch	č	ch	č
chh, ch'	č'	ch'	č'
pp, p'	p'	p'	p'
th, t'	t'	t'	t'
x	š	x	š

A PRELIMINARY IDENTIFICATION OF THE 819-DAY-COUNT VERB

One object of this investigation is the verb (T588) of these passages (Fig. 8-1a–f). In its usual collocation the sign is the dog head of the day sign *Oc*; its T520 or occasional T521 infix is topped by a double sprout. Its suffixes are variable, but T178 (*la*) and T181 (*ha/ah*) are frequently present. This pattern suggests a positional root (cf. Schele 1982:charts 84, 92, 101, 104, 109; MacLeod 1987:fig. 29). Although there are a number of non-819-Day-Count occurrences of the verb in the corpus, both



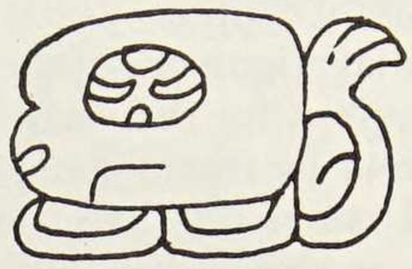
a



b



e



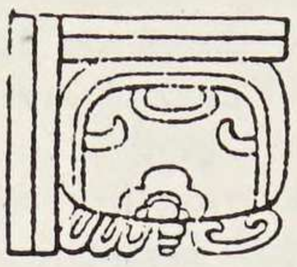
f



c



d



g



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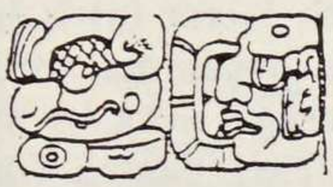

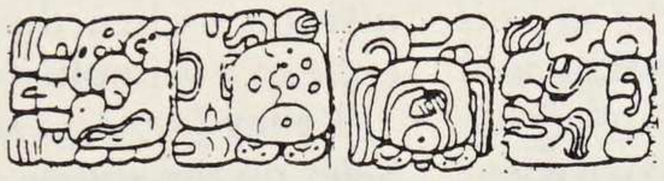

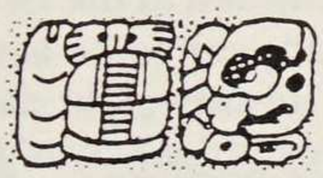

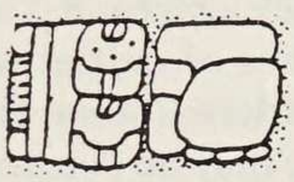

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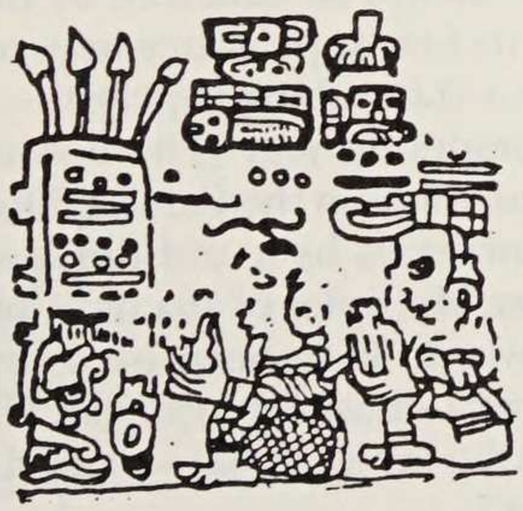



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Figure 8-1. Glyphs of the 819-Day-Count phrase. (a) T588: Classic inscriptions (Thompson 1962); (b) T588: codical form (Thompson 1962); (c) day sign *Oc*: inscriptions (Thompson 1950); (d) day sign *Oc*: codices (Thompson 1950); (e) T588 with *uinal* infix: Quirigua K A7b (Maudslay 1889–1902); (f) T588 with *uinal* infix: Palenque, IS pot MacLeod after Schele 1982); (g) *uinal* : Quirigua (Maudslay 1889–1902); (h) *uinal* : Palenque, Tablet of the Cross (Thompson 1950); (i) *oc* as 'enter' verb: Palenque, Tablet of the Sun (2 examples) (Schele 1981); (j) *acante'*: Madrid Codex 90b (Villacorta C. and Villacorta 1976); (k) *acante'*: Dresden Codex 28c (Villacorta C. and Villacorta 1976).

codical and inscriptional, the focus here will be on the 819-Day-Count contexts, and it is important to consider the potential alignment of the others within any interpretation given for the verb. The one proposed here derives from its resemblance to the day sign *Oc* and suggested values for T520. *Oc* has been read this way elsewhere in the corpus, although with the meaning 'enter' rather than 'foot' as proposed here (Schele 1981:Fig. 11; Grube and Stuart 1987).

The use of numbered *Oc* days in a mythological passage from the Chilam Balam of Chumayel (Roys 1933:116) entitled "The Creation of the Uinal" accompanies images of footprints and of measuring the world by feet. The interval from 12 *Oc* to 13 *Oc* is specified. Thompson (1950:248) cites Byers and LaFarge on the survival among the Jacaltec Maya of a period of forty days termed "one foot of the year." In the Chilam Balam of Tizimin (Edmonson 1982:lines 2887–88), we find the phrase *u chek oc katun* 'pacing the steps of the katun'. In both cases, the interval between the steps is forty days, or two *uinals*. This suggests a computational formula (when denuded of its ritual vestments) which raises the *trecena* (thirteen-day-number cycle) coefficient by one. The structure of this formula may be seen in the following sequence: 1 Ahau plus twenty days leads to 8 Ahau, twenty days more lead to 2 Ahau, and twenty more yield 9 Ahau. Thus, the interval between 1 and 2 is forty days. This "foot" formula serves rather pedestrian computational ends.

The parallel already noted between the 819-Day-Count and the Dresden New Year tables moves to the foreground when the quadrant shrines of the codical scenes, the *acantuns/acantes*, are considered. These *acantes* (Fig. 8-1j, k) are also found in the Madrid Codex, and at least one is known from the Classic period (Fig. 8-2a) on the Camara vase from Calcehtok, Yucatan (Mason 1943). Various elements on these shrines identify them as *ka(a)n* (one 'snake', four 'trees'), as *te'* (*te'* markings on the trunks, the shape of the object with its "woody-stemmed vegetation" sprouts), and as *tun* (*cauac* elements on the trunks, *tun* signs at the base). The Calcehtok example also has *naab* (i.e., 'waterlily') emanations, and here a *Pax* head replaces the Dresden *tun*; *Pax* is also found in the Madrid example (Fig. 8-1j). The "*kan-naab-te'*" of the Camara vase may have another Classic parallel (Fig. 8-2b, c) in the geography of certain anniversary events at Palenque, where a compound with constituents *kan*, *naab*, and *te'* occurs.

These trees also wear, in the codical examples, a cloth strip on which is seen either a footprint or a series of numerals in bar/dot notation. The Madrid example (Fig. 8-1j) shows a sequence which drops by four as do the numbered *tuns* in a katun. This substitution between footprints and sequential coefficients may aid our understanding of the activities of God K, and later God B, as they move in sacred space.

Returning to T588, I find it significant that it takes its shape from the day sign *Oc*, incorporating not only T520 or T521 (*uinal*) but also the aforementioned "sprout emerging from a crack." In the case of the month sign *Pax*, the sprout may refer to the sound of a *tun* drum. Alternatively, as Kelley (1976:135) and others have suggested, the sprout may cue a Yucatec root *pa'x* '*quebrar*' 'break' (Barrera Vásquez et al. 1980:636).

THE 819-DAY-COUNT AS A COMPUTATIONAL FORMULA

Another look at the "soulless mechanisms" of the 819-Day-Count seems in order. Thompson first noted its factors of 9, 13, and 7 (1950:214). Nine and 13 clearly link to the Lords of the Night and the *trecena*, at least for mathematical purposes. The 7 takes on added significance when the fourth factor (4) is integrated; a cycle of 4 is implicit in the directional shift.

Kelley (1976:45) summarizes work by Spinden and Seler on the zodiac of the Paris Codex, wherein intervals of twenty-eight days are demarcated. Barthel (Kelley 1976:83–84) has identified in the Dresden Codex a series of deities which appear to be associated with the sidereal lunar month (twenty-eight days). Whereas there may be controversy over the Mayas' having noted this period, it does interlock with 13 such that 13 x 28 = 364. Whether this is viewed as an archaic alignment of the moon with the *haab* or simply as the computing year (Thompson 1950:256), it is noteworthy that 4 x 819 = 9 x 364. Any invocation of archaic undercurrents in the 819-Day-Count should be balanced by the observation that it makes its first appearance between A.D. 668 and 672 at Palenque (Lounsbury 1978:811).

The 364-day computing year (Thompson 1950:256) permits rapid calculations in the Calendar Round, such that the *veintena* increases by 4 and the *haab* position drops back one day. Multiples of 364 days, particularly 20 x 364, are known to have been used by the Maya (Thompson 1950:256; Lounsbury 1978:772). There is also evidence that 20 x 819 (or 45 x 364) was used in certain contrived numbers.[2]

The 819 days is equivalent to 3 *tzolkins* (or 39 *veintenas*) plus 39 days. The "tag" period functions as a "footstep" with this significant difference: the *trecena* coefficient remains the same, but the day name (and

[2] Lounsbury (1978:807) gives one such contrived number, calculated to link the birth of Pacal at 9.8.9.13.0, 8 Ahau 13 Pop with the Initial Date on the Tablet of the Cross at Palenque. The resulting interval, 9.8.16.9.0, is evenly divisible by 20 x 819 (or 45 x 364 = 16,380 days). Lounsbury believes that the Maya must have kept tables of multiples of 819 to facilitate such computations.



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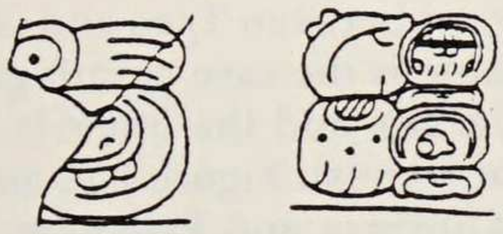

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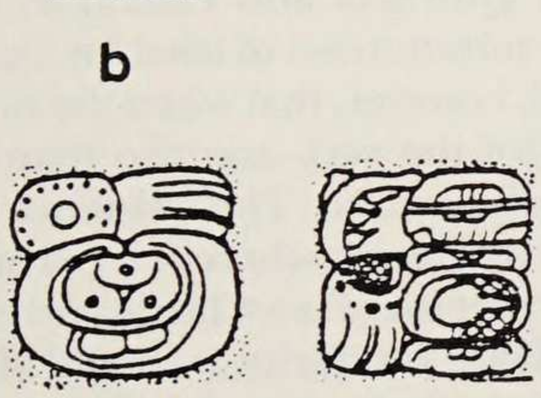

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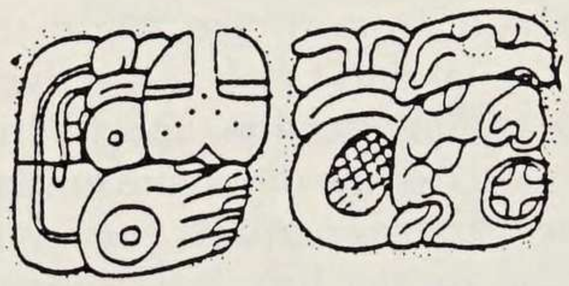

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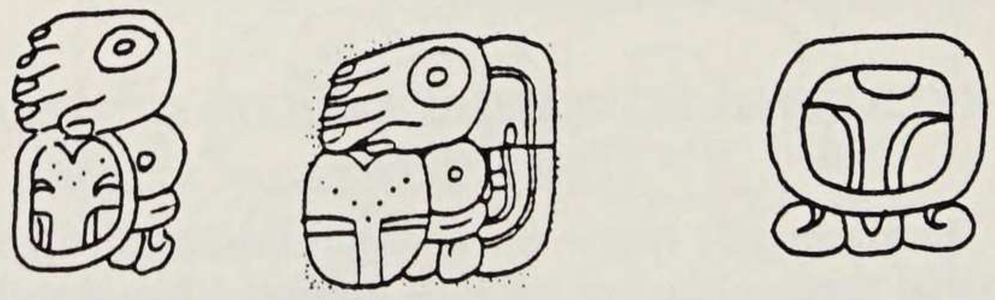

i j

Figure 8-2. Glyphs of the 819-Day-Count phrase. (a) Camara vase: Calcehtok, Yucatan (Mason 1943); (b) anniversary phrase: Palenque, TC *alfardas* (Schele 1981); (c) anniversary phrase: Palenque, TFC *alfardas* (Schele 1981); (d) T520/521 substitution: Naj Tunich D34, 65, 20 (Stone 1982); (e) *uinal*: Dresden Codex 61 (Thompson 1950); (f) *Tzec*: Dresden Codex 46c (Thompson 1950); (g) *Chuen*: Dresden Codex 6c (Thompson 1950); (h) 'made *zac uinic* of the succession': Palenque, Tablet of the Cross (Schele 1981); (i) inverted *zac uinic* compounds: Palenque, Tablet of the Cross (Schele 1981); (j) *Chuen*: Palenque, hieroglyphic stair (Thompson 1950).

consequently the *k'in* coefficient in the Long Count) drops by one. This may be seen in the relation between 1 Ahau and 2 Ahau, which are separated by forty days, as contrasted with 1 Ahau and 1 Cauac, which are separated by thirty-nine days. Thus, thirty-nine steps forward equals one step back, holding the *trecena* coefficient steady. A calculation through three *tzolkins* and thirty-nine days (one cycle of the 819-Day-Count) leaves both the Lord of the Night and the *trecena* coefficient unchanged. The cycle was designed to rest at *trecena* coefficients of one and it has G6 as its Lord of the Night patron.[3]

A RATIONALE FOR THE READING OF T588

The term *uinal* was employed by the Postclassic Yucatec Maya in reference to the twenty-day month of the *haab* (Barrera Vásquez et al. 1980:922), but implicit in the Chumayel "Creation of the Uinal" passage with its advancement from 12 *Oc* to 13 *Oc* is a reference to the twenty-day period of the *tzolkin*. The Classic Maya seem, from the frequent appearance of T102 on the *uinal* sign, to have called that period *winik* as well as *uinal* (Fox and Justeson 1984:43). *Winik* is a widespread Maya word for 'twenty'; its origin is transparent in the Lacandon numerical system wherein hands and then feet are counted to make up a 'man' (*winik*).

In a list of Chol and Tzeltal day names extracted by Lyle Campbell from the *Yajalon Libro de Bautismos y Casamientos* (ca. 1554–68 and onward) are found the entries *ocluc* and *oc* for Tzeltal and Chol, respectively (L. Campbell, personal communication, 1979). This helps to establish the existence of the day name in Classic times, given that these lists are complete enough to permit correlation with the Yucatec lists. It thus seems reasonable to suggest that the *Oc* day name component of T588 be read as *ok* 'foot', 'base', or 'footsteps'. These glosses are widespread in Cholan and Yucatecan languages. The T520 ~ T521 alternation may, in the final analysis, carry semantic content.

OCCASIONAL INTERCHANGEABILITY BETWEEN T520 AND T521

Linda Schele (personal communication, 1986) has raised the substantive issue of noninterchangeability of T520 and *uinal* in all but one restricted Classic environment (the dotted *uinal*). Before the Postclassic, the main sign of the day *Chuen* and the month *Zec* (or *Tzec* from Landa) is always T520. That of the *uinal* in the Long Count and in Distance Numbers is always T521. In the dotted *uinal* (the central component of the *zac uinic* expressions at Palenque), the *uinal* crescents of T521 are often preserved within what appears to be an inverted T520 (Fig. 8-2i,j). This conflation, with its *zac* prefix, precedes a T757 compound in a sequence which Schele reads 'was made *zac uinic* of the succession'. Given its context, this reading seems well grounded. It finds additional support in the lineage histories of the Book of Chilam Balam of Chumayel, wherein lineage founders are called *u chun u uinicil* 'the trunk/beginning of the lineage' in a context linking lineages to the world's four quarters and their associated colors. The Cordemex dictionary (Barrera Vásquez et al. 1980:924) gives *winkil* as '*apellido de linaje*'.

But there are two more restricted contexts wherein some relation appears to exist between T520 and *uinal* in Classic times. One of these is the cave paintings of Naj Tunich (Stone 1982:Fig. 2d), and the other is the 819-Day-Count verb in that context. Figure 8-1e and f provide examples (from Quirigua and Palenque, respectively) of Late Classic substitutions of *uinal* for T520. It should be remembered, however, that when the non-819-Day-Count examples of the verb are also figured in, T520 is overwhelmingly favored. The existence of three (albeit limited) environments wherein T520 and *uinal* interrelate suggests that there is a Classic current of connection beyond surface similarity. It should also be noted that by Postclassic times (Fig. 8-2e,f,g) T520 and T521 have interpenetrated in an inversion which affects (*T*)*zec*, *uinal*, *Chuen*, and T588b. The dotted *uinal* collocation in particular gives a hint that this inversion/conflation had classic roots.

Bricker (1985) reads T1022, a Postclassic skull depiction with a T520 infix (Fig. 8-3a), as *ȼe*. She reads Landa's month sign as *Tzec* (in contrast with *Zec* given by other sources) relative to the well-known *se* value for T520 given by Landa for the third letter of the Spanish alphabet, pronounced *ese*. Epigraphers seem not quite reconciled to bivalence; some favor *ȼe* or *se* for T520 and others favor *se* only. One bastion of the latter view has been the invariant Classic collocation (*T*)*zec*, which conforms precisely to a corresponding month name Cazeu in both Kekchi (or Cholti?) and Pocomchi.

PHONOLOGICAL AND HISTORICAL CONSIDERATIONS IN THE READING OF T520

Campbell (1977) has observed that a simplification of *ȼ* to *s* was under way in both Kekchi and Pocomchi during the Colonial period; this has since developed

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[3] Although there is yet no proof that the Maya did so, it would have been possible for them to use the 819-Day-Count as a means of keeping track of planetary positions within the calendar cycles noted. Following are hypothetical formulae for integrating the synodal revolutions of the visible planets (except for Venus, which does not seem to interlock well here) with the 819-Day-Count:

819 = 780 (one Mars cycle) plus 39 (3 x 13) 819 = 2 x 377 (one Saturn cycle) plus 65 (5 x 13) 819 · 7 = 7 x 116 (one Mercury cycle) 819 · 21 (3 x 7) = 2 x 399 (one Jupiter cycle)



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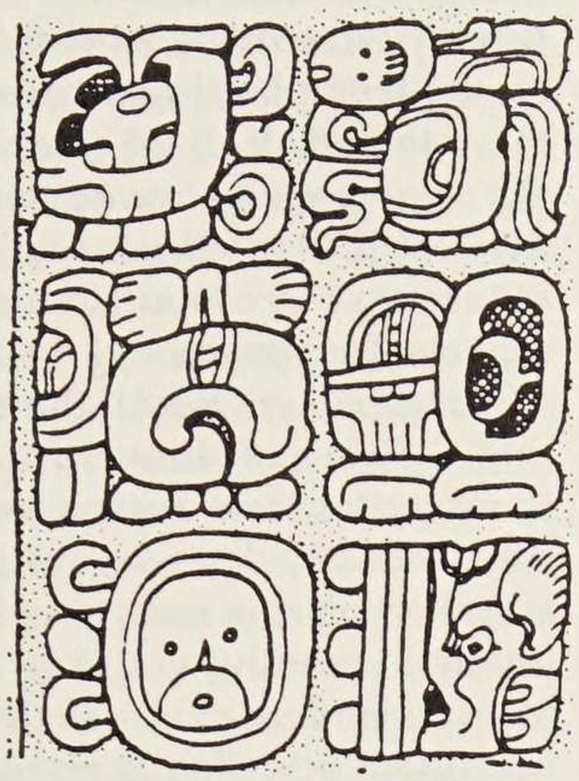

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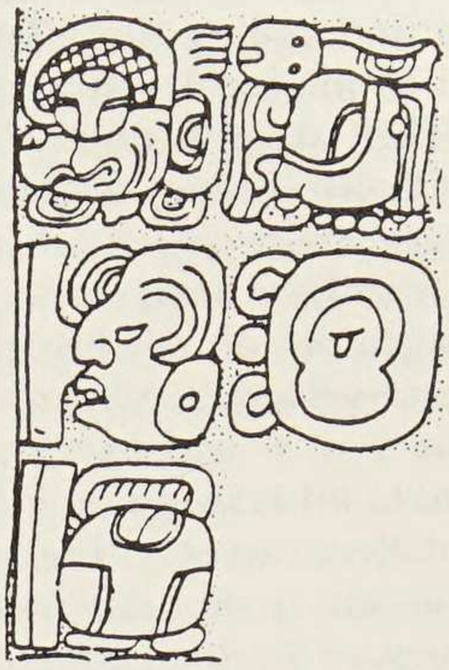

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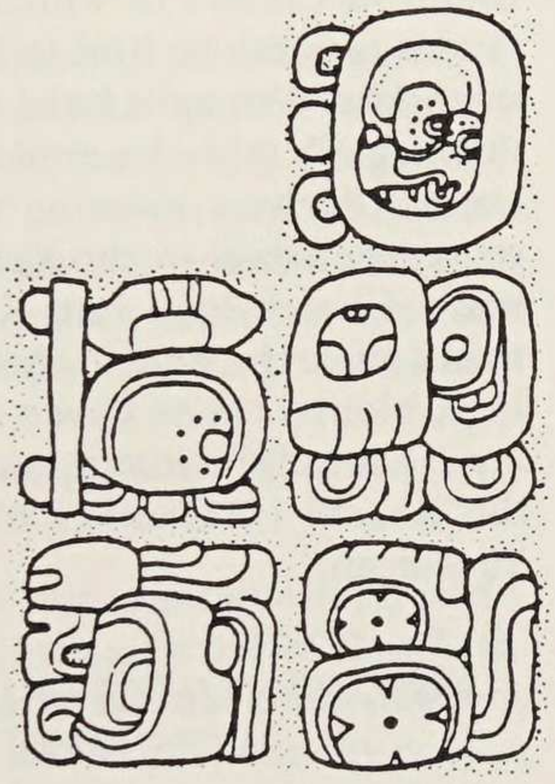

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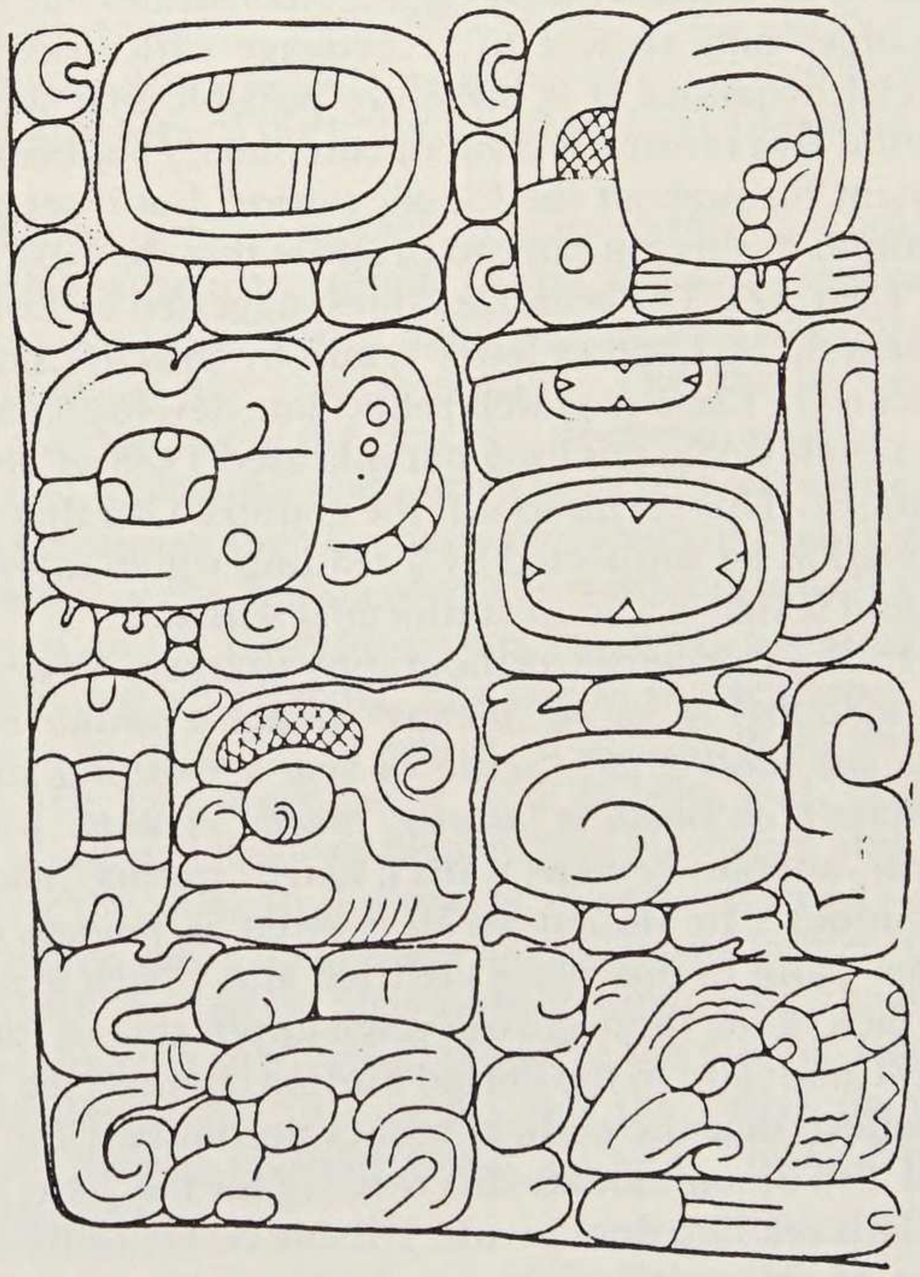

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Figure 8-3. Glyphs of the 819-Day-Count phrase. (a) T1022; (b) Palenque, Tablet of the Cross (Schele 1987); (c) Palenque, Tablet of the Sun (Schele 1987); (d) Palenque, Tablet of the Foliated Cross (Schele 1987); (e) Yaxchilan Lintel 30 (Graham and von Euw 1977).

further. I have also noted many entries in Morán's (1625) Cholti grammar and lexicon wherein it appears that *ɬ'* and *ɬ* were both undergoing simplification to *s*. This points to Cholti as the local instigator in a regional phenomenon. This simplification in Kekchi and Pocomchi (and Cholti) is likely to have affected *Cazeu* in both languages, from which we may infer that **kaɬew* or **kaɬ'ew* may have been earlier forms. Furthermore, an investigation of *ts'-* initial roots in the Cordemex dictionary (Barrera Vásquez et al. 1980) will lead to numerous *ts-* or *s-* initial synonyms. The variation is not limited to initial position in Yucatec. Only a comprehensive dialect survey will reveal whether this variation still proceeds in modern Yucatec. Obviously, it is this phenomenon (limited, apparently, to this set of consonants) which underlies the *Zec/Tzec* ambiguity. The viability of Bricker's *ɬe* reading for T520 (cited above) in a compound she reads *u-pak-ɬen* 'he plants food' on Dresden 15b and 16b suggests that T520 (or the Postclassic merger) is at least bivalent for *se* and *ɬe*. But if the sound change in question also involves *ɬ'*, then we must consider the possibility of trivalence, hitherto unprecedented in the writing system. We might wonder how long this has been going on. Recent research by William Labov (1972) demonstrates that sound changes may recycle in accordance with underlying social dynamics. It is therefore possible that simplification and reintroduction of complexity has been persistent throughout the Classic period, but it seems far simpler at this juncture to propose that the base value of T520 is *ɬ'e*. The *ɬe* and *se* values suggested by Bricker's research, by Landa's letter c, and by Kekchi-Chol and Pocomchi *Cazeu* may well reflect late developments.

Schele (1987) has long paraphrased T588 as 'set (the station)'. This seems to suit the context. Can that interpretation be supported by a reading which interlocks *ok* and which is also in conformity with *ɬ'e*?

In the Cordemex orthography (Barrera Vásquez et al. 1980:163) *eɬ'* or *ets'* means '*afirmar o asentar alguna cosa que quede firme*' ('settle or seat something so that it stays'); *ets'kunah* is '*asentar, fundar, cimentar paredes*' ('seat, anchor, cement walls'); *ah ets'* means '*fundador*' ('founder'). In Mopan, *etz'tal* is given as '*juntarse en un lugar*' ('join in one place') (Ulrich and Ulrich 1976:90). At face value, these glosses seem applicable to the 819-Day-Count and to the Period Ending contexts for T588. I believe that the codical scenes accompanying T588 will also accommodate this reading for the T520 infix.

This reading does invoke syllabic reversibility, a feature of the writing system which may be elsewhere, albeit infrequently, demonstrated (MacLeod, in press). I feel that the split/crack motif may aid in signaling reversibility in this case, by means of a homophonous root.

If we read the T520 infix as *eɬ'*, we may then form a compound stem *eɬ'-ok*. In Yucatec, this is immediately productive; *ets'ok* is '*estribar con los pies afirmándolos*' ('rest on the feet, planting them squarely') (Barrera Vásquez et al. 1980:163); *ets'tal ok* and *ets'lahi wok* are given on the same page as '*asentar los pies, asenté los pies*' ('plant the feet, I planted my feet'). The *-tal* and *-lah-i* suffix sequences correspond to incompletive and completive aspects for positional verbs in Yucatec (MacLeod 1987:Figs. 29, 47). Recall the aforementioned suggestion that T588 is a positional root or stem.

Is any function served by the double sprout? I have considered Kelley's suggestion that for the month *Pax* a similar "sprout emerging from a crack" may cue the phonetic reading via *pa'aš* '*quebrar*'. Even so, there is no independent evidence that the sprout/crack element is a phonetic syllable. Here, I will tentatively suggest that the sprout/crack element cues the reading *eɬ'* via a reconstructible homophonous root **eɬ'* meaning 'split partly open'. In Yucatec we find *es-el* '*cosa comenzada a quebrar*' (Barrera Vásquez et al. 1980:157). No cognate is found in Cholan of which I am aware, but in Kekchi (Sedat 1955:81) we find *its'il* '*rajado*' ('split'), *its'oc* '*rajar cosas duras*' ('to split hard things'), and *its'il ru* '*lisiado*' ('damaged': said of a cooking pot). From these glosses we may derive a meaning 'split incompletely'. Furthermore, the vowel in the Kekchi root *iɬ'* suggests that it was a Cholan loan into Kekchi, of which there were many, since the Kekchi absorbed the Manche Chol during Colonial times. Given our understanding of the *ɬ'* > *ɬ* > *s* simplification apparent in Yucatec, we may use the Kekchi (< Cholan) form to reconstruct **eɬ'* for Yucatecan.

T588: A SYNTHESIS OF ITS COMPONENTS WITH ATTENTION TO CONTEXT

Placing T588 in its syntactic context, we may now read a typical 819-Day-Count phrase as *eɬ'-ok-lah-i lak'in čak-God K*, 'one "rodent-bone" ' (see Fig. 8-3b,c,d,e for comparable sequences). An interpretation of the "rodent-bone" will be offered shortly. In some cases, a sky-center (*pančan*, now just 'sky' in Chol) compound ends the phrase. Schele (1987) has long paraphrased the 819-Day-Count phrase as 'was set up (direction, color) God K in the sky-center'. The 'plant feet' reading offered here for T588 complements that reading; furthermore it fits another non-819-Day-Count context quite well: that of preceding a reference to a monument in Period Ending clauses. Here, using *ok* in the indigenous metaphorical sense as 'base', we can view *eɬ'-ok* as 'plant (a stela) in the ground', 'seat (an altar) firmly'.

Nikolai Grube and David Stuart (1987:4–5) have noted phonetic spellings of *ok* and *y-ok* (the latter

includes the third person possessive pronouns) following T588 on Dresden 31b–34b. Another collocation spelling *y-ok* follows T588 in an 819-Day-Count phrase in the doorway text of Copan Temple 11 (Grube and Stuart 1987). I would read these texts as *eɬ'-ok-lah (y)-ok* 'was foot-planted his feet'. Here we may note that the compound stem behaves as a verb which can then take 'feet' as its subject.

In considering the foregoing Dresden pages (see Fig. 8-5a), we find that God B performs various actions while walking (yet another gloss for *ok* [Barrera Vásquez et al. 1980:595]). In fact, as we shall see, "walking" or "pacing" scenes often accompany codical texts including T588. In this regard, we find that the *haab*, or year of 365 days, is seen to be "walking" (*cu ximbal*) in the Book of Chilam Balam of Chumayel (Roys 1933:40): *he u habil cu ximbal* is translated by Roys as 'this is the year that was current' (p. 119). Bearing in mind that *u uayeyab (u-way-eb u-ha?ab)* and *uayeb*, terms in use in Postclassic Yucatan for the end of the year, mean 'bed', 'resting place' (< Cholan *way-ib* 'bed'), we shall see that gods, like years, walk and rest.

That the T588 verb occasionally takes infixed T521 (*uinal*) suggests that this twenty-day period is embedded in the actions of God K in the 819-Day-Count. *Win* is a root for '(set in) order' (as *winan* '*orden*': Barrera Vásquez et al. 1980:923). We have noted that one turn through the cycle moves the *tzolkin* day name back one position, in accordance with the "footstep" formula.

THE 819-DAY-COUNT IN ITS COSMOLOGICAL CONTEXT

Any attempt to flesh out this computational skeleton is complicated by the esoteric nature of that flesh. The 819-Day-Count itself provides some clues, in terms of the quadrant and color references, the sky-center, with God K as protagonist and the current of lineage blood which flows beneath his manifestation. There is also a day augury—that reached by the thirty-nine-day footstep. Kelley (1976:57) has worked out the distribution through the quadrants of the twenty day names. The result would be a clockwise circle accompanying forward motion in the count. Linda Schele (personal communication, 1981) has suggested that this might link to the forerunners of the modern Maya cargo system, a suggestion which also finds added credence in the aforementioned quadrant distribution of lineages in the Chilam Balam of Chumayel.

POSTCLASSIC PARALLELS: THE CHILAM BALAM OF CHUMAYEL

In the Chilam Balam of Chumayel we find that the 'setting in order of the world', *xoc lah cab oc lae* in "The Creation of the Uinal" is accomplished through the measuring of paces by Dios Citbil (whose grandmothers, maternal aunt, and sister-in-law accompany him on his road) up to the station 12 *Oc*. Thereafter, the world is given life on 13 *Oc*, having now been set in order (*tzolan zihci* 'set-in-order-born'). The following sequential count through one twenty-day period is equated with the creation of all things in the world, each on its appropriate day. The mnemonics of this passage recall Quiche divination using the 260-day cycle (Tedlock 1982:106–30).

In the opening passage of the Book of Chilam Balam of Chumayel (from which the first folio has been lost) is also found the quadripartite cosmogram in association with four corresponding arbors, sacred trees, various cultigens, stones, and lineages.

POSTCLASSIC PARALLELS: RITUAL OF THE BACABS

Turning now to the Ritual of the Bacabs (Roys 1965:12) we find in an incantation a related stage, upon which the arbor, *dzulbal*, is now central, having four doors. There are also four *acantuns* in a relation of identity with *acantes*, plus four lancets, four male genitals, four splotches of blood, all associated with "birth." Roys (1933:170) translates *acantun* as 'stela'. Taube (in press) has equated the *dzulbal* (via *ɬ'ul* 'outsider' as well as the lattice structure of the arbor itself) with the Classic scaffold.

If Taube is right, *dzulbal* appears to have a Cholan cognate *ts'ul* 'skin an animal' (Aulie and Aulie 1978:123; Wisdom 1950:740) and a Kekchi cognate *ts'ulbal* '*trenzar*' ('plait the hair'; Sedat 1955:158). The link between these may well lie in the practice, documented by K. A. Taube, of braiding a scaffold victim's hair to resemble antlers. Scalping then becomes symbolically equivalent to removal of the antlers of a deer victim (this is clearly depicted on the Calcehtok vase: Fig. 8-2a). Scalping is also equated with flaying. The rest of the accession or anniversary rite (all of which is described in detail by Taube [in press:13–20] and Schele and Miller [1986:111–12, 117]) involves dispatching the victim and relocating the ruler to the seat of the transformed scaffold, which he reaches via a cloth-draped ladder. On that cloth he leaves bloody footprints from having waded through the pooled blood of the victim. Taube has further noted (pp. 15–16) that the rulers on the Piedras Negras scaffold stelae all wear "birth frog" headdresses.

POSTCLASSIC PARALLELS: THE DRESDEN AND MADRID CODICES

We have already briefly considered the other notable setting wherein footprinted cloth appears: the

Dresden New Year pages with their *acante?* shrines (Fig. 8-4). The ritual activity depicted on pages 25–28 of the Dresden Codex is usually linked to the four quadrants (register c) and the central house shrine (register b). The top register portrays the march to the quadrant stations, the god being carried by an impersonator of an animal thought to be an opossum.[4]

In these pages there are three foci of activity: the quadrant shrines, the central structure, and the march to the four stations. The latter scenes, I suggest, feature not an opossum but the *Oc* dog. The blackened eye area is a characteristic of *Oc*, which may be seen in some examples of the 819-Day-Count verb (Fig. 8-1a). The ears are like those of the day sign; the tail is ambiguous. Significantly, this animal has human hands and feet. Landa specifically mentions the offering of live dogs and terra-cotta effigies with bread on their backs in connection with the New Year rites. Moreover, unequivocal dogs are featured in the Madrid New Year tables (M34–37); on M36 they perch on disembodied feet (Fig. 8-6). It would serve the argument to find T588 in the Dresden *Oc* (a.k.a. 'possum') register, but that portion of those pages has been damaged. An indirect inference may be made from other Dresden pages. D31b (Fig. 8-5a) shows God B pacing and holding the same hand staff. T588 follows 'east' in the text above. Other Dresden scenes are also supportive; on D35a (Fig. 8-5b) the T588 verb appears above a scene wherein God B is "planted" upon a dais made of two interlocking, footprinted "U" motifs. These suggest that he has just paced the four quarters. On D38b (Fig. 8-5c) God B will rest at the earth-center, as indicated by the text, and he paces with a walking stick. T588 again appears in the accompanying text. Confirmation that this is a walking stick is found on D65b (Fig. 8-5d), wherein God B is said to be 'on the road'; he carries the same stick and walks a footprinted road.

Returning to the Dresden New Year pages (Fig. 8-4), we find in one frame that footprinted cloth and a personification mask replace the four "tree sprouts" of the other *acante?* scenes; this is corroborated in the description of the *Yax-Cheel-Cab* given by Avendaño (Roys 1933:102); his "tree" is a pillar of stones with a table on top, on which sits the mask of a god. The second collocation in Dresden 25–28c reads *yax* (or *cak*)*-am-te?* (the main sign is also found in the name glyph of Itzamna). *Amay(te?)* in Yucatec means '*cuadro*', '*cuadrado*', 'corner (tree)', but it refers also to the first *katun* of a 260-year cycle, which is in turn marked by the placement of an *amaytun* (Barrera Vásquez et al. 1980:15).

Given the aforementioned *te'ltun* relationship, we may infer that the *yaš-am-te?* refers to the pillar or tree in the scene. The verb which precedes it is T68:592(593).181. I have read the main sign as *ɬak* (MacLeod n.d.) due to its substitution for the standard Distance Number Introductory Glyph (DNIG) on Quirigua. There it is prefixed by the fish read by Winters (in press) as *ɬak*. Examples of the standard DNIG with T25 (*ka*) suffixes may be seen in Thompson (1960: Fig. 30 nos. 9, 10). Nikolai Grube has read a collocation including the same T573a:25 sequence as *Bolon Dzacab* (Linda Schele, personal communication, 1987). T592 also replaces (with an additional superfix) the T764 'captor of' glyph in one case, and it accompanies a nearly standard 'capture' glyph in another (Schele 1982: charts 52, 74). And, *ɬak* has meanings appropriate to capture ('capture', 'drive an animal', 'follow in pursuit') in Tzotzil, Chorti, and Yucatec, respectively. T68, the superfix in the above Dresden collocation, has been read *ɬ'a* by Grube (1988) in an independent context. We meet again the phonetic ambiguity created by the simplification of *ɬ'* to *ɬ*; both *ts'ak* and *tsak* mean '*contar*' ('count') (Barrera Vásquez et al. 1980:849, 872). The root is *tsik* in Cholan (Kaufman and Norman 1984:133) and, for that matter, *tsik* also appears in Yucatec (Barrera Vásquez et al. 1980:860).

We are thus left in some doubt as to the initial consonant of the DNIG *ɬ(')ak* reading for a sign which introduces a count of time periods and for which a 'count' gloss would be appropriate. The matter cannot be resolved here, but we may infer that the addition of T68 *ɬ'a* (certainly the value in Classic times, and the reading is supported by codical evidence as well) disambiguates T592/593, yielding a reading *ɬ'ak-ah* 'was counted' for the verb which precedes the *yaš-am-te?*. That the root *te'* (rather than its Yucatecan counterpart *če?*) appears in the names of these shrines is often taken for granted. These facts suggest that we view the *yaš-am-te?* as having been "counted." It has also been "footprinted" in the case of the *čak-am-te?* on Dresden 25c.

Now recall the Madrid *acante?* (Fig. 8-1j), whose cloth bears numbers rather than footprints. If the meaning of counting and footprints still seems elusive, it may be useful to turn once again to the "Creation of the Uinal," wherein we noted the phrase *tzolan zihci* 'set-in-order-born'. This resonates with the incantation from the Ritual of the Bacabs which binds lancets, male genitals, splotches of blood, and birth to activity at the *acante?*. Another "birth" motif was found at Piedras Negras, we recall, in the headdress of the ruler who has ascended to the scaffold throne. Taube (in press)

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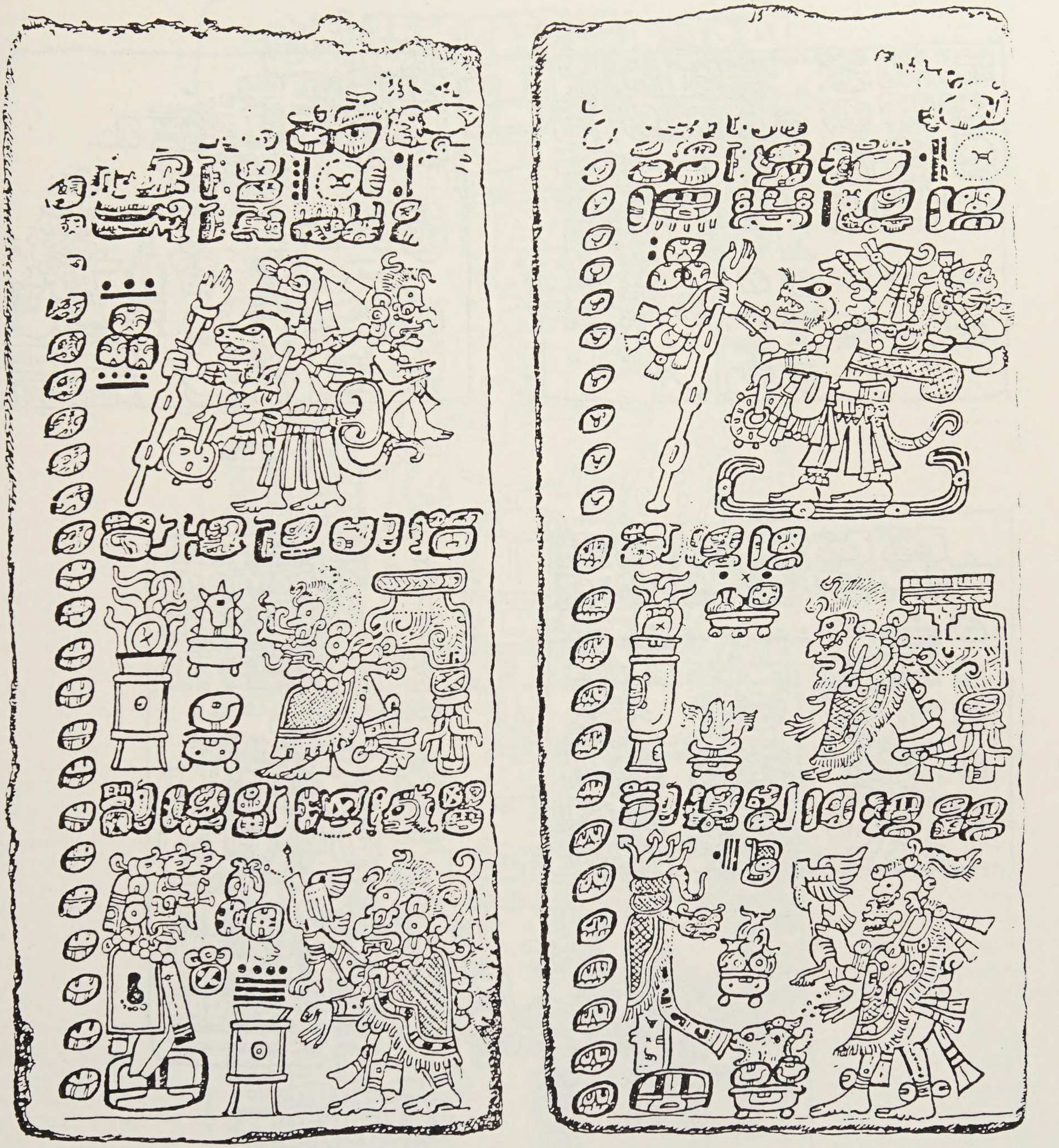
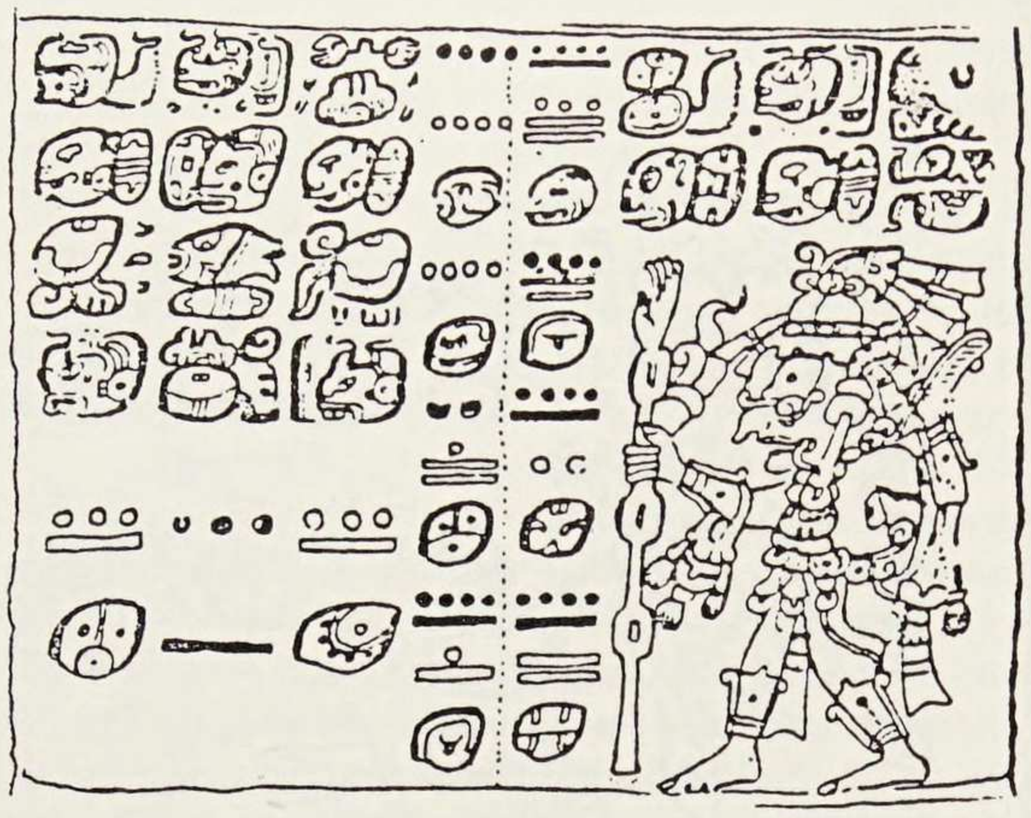
[4] I find the "opossum" identification shaky, however entrenched it may be in the literature. Rather than attempt a synopsis of this complex sequence, I will defer to Landa (Tozzer 1941) and to Thompson (1972), whose narratives shed considerable light, since they are interlocked.



a b

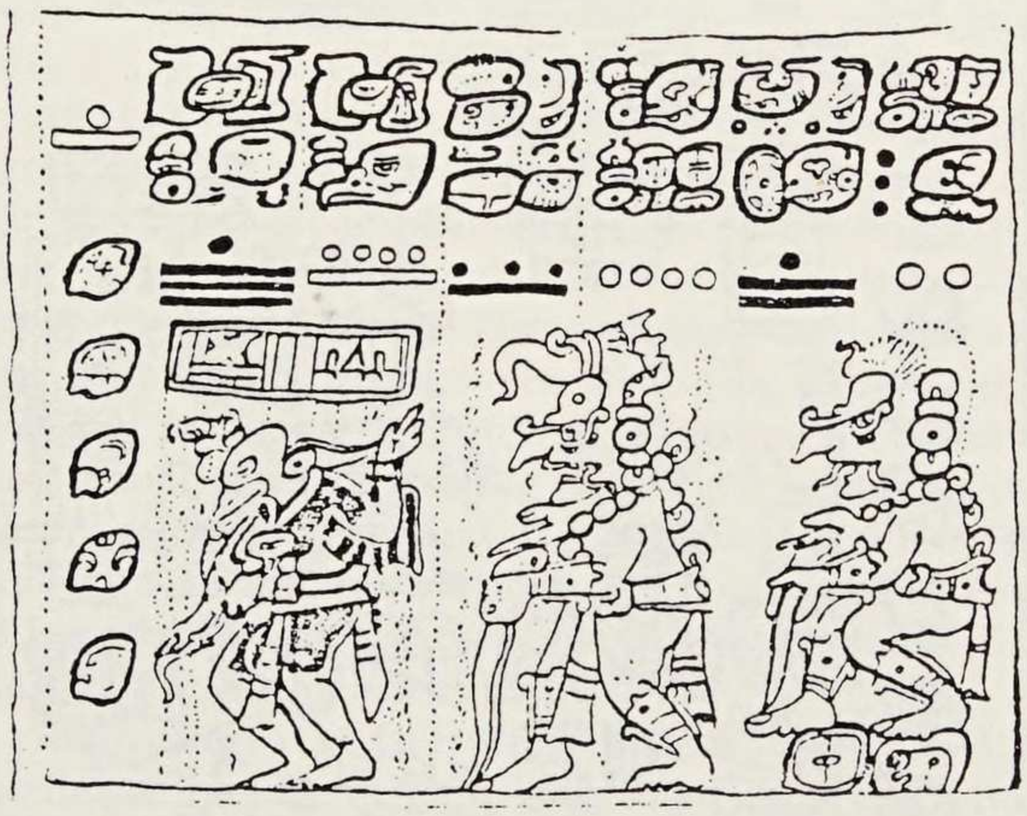
Figure 8-4. (a) Dresden Codex, p. 25 (Villacorta C., and Villacorta 1976); (b) Dresden Codex, p. 27 (Villacorta C., and Villacorta 1976).



a



b



c



d

Figure 8-5. Glyphs of the 819-Day-Count phrase. (a) T588 in context: Dresden Codex 31b (Villacorta C., and Villacorta 1976); (b) T588 in context: Dresden Codex 35a (Villacorta C., and Villacorta 1976); (c) T588 in context: Dresden Codex 38b (Villacorta C., and Villacorta 1976); (d) God B on the road: Dresden Codex 65b (Villacorta C., and Villacorta 1976).

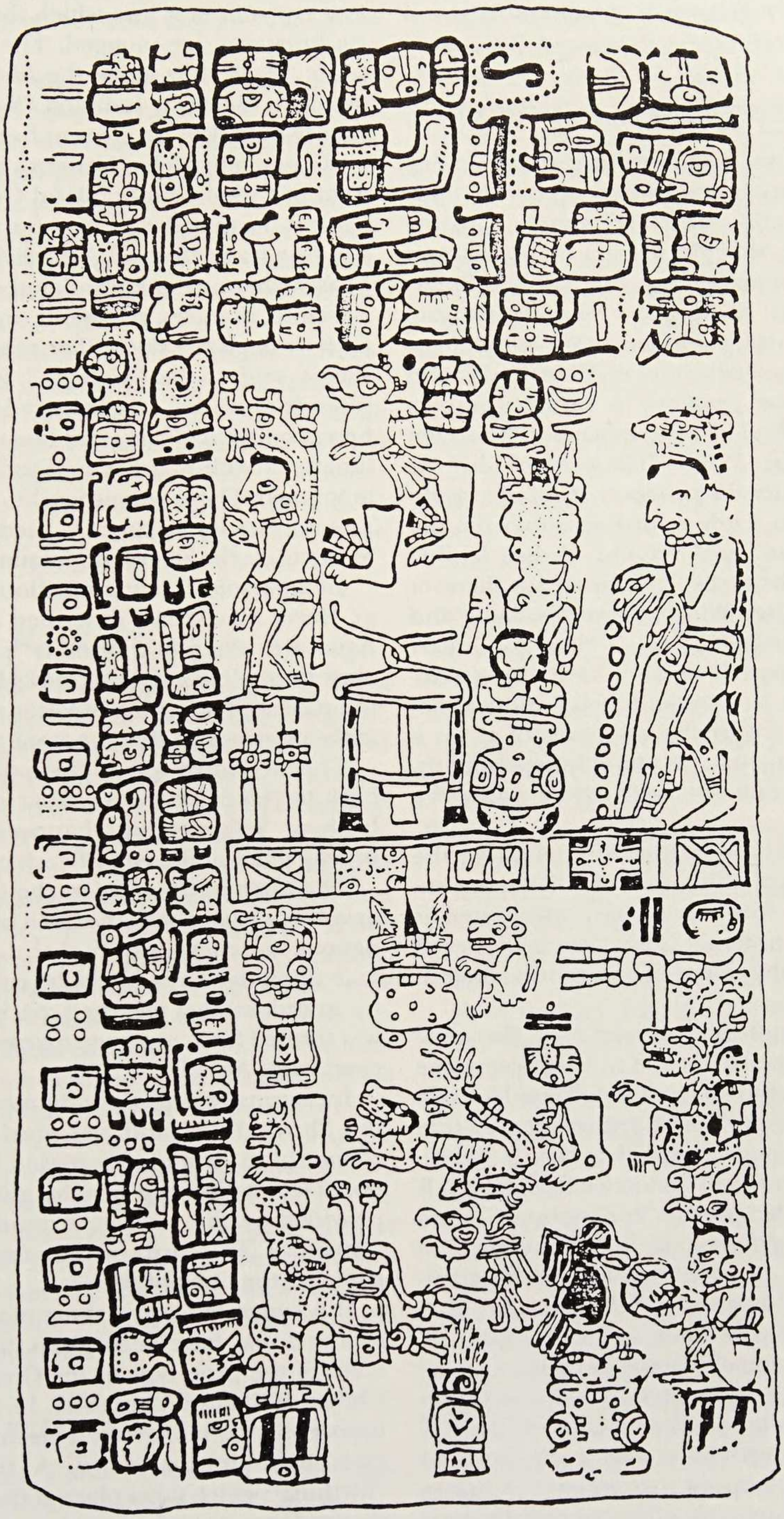


Figure 8-6. Glyphs of the 819-Day-Count phrase. Page 36 of the Madrid Codex: the New Year ceremonies for the East quadrants (Villacorta C., and Villacorta 1976).

has demonstrated beyond doubt that the scaffold (like the *acante*? or *yax-cheel-cab*) is one iconic permutation of the Maya World Tree.

BIRTH SYMBOLISM IN THE 819-DAY-COUNT

Can birth symbolism be found in the Classic 819-Day-Count? Perhaps it can, via an analysis of the "One-Rodent-Bone" collocation which commonly ends the clause. T110, formerly thought to be a bone, has now been deciphered as phonetic *ko* by Grube and Stuart (1987). This persuasive reading led me to investigate words for rodents with complementary phonology, which in turn led to č'o?k 'rat' in Chorti (Wisdom 1950:723) and *ch'o* '*raton*' ('mouse') in Yucatec (Barrera Vásquez et al. 1980:138). The root appears in Kaufman and Norman's (1984) Proto-Cholan word list as **ch'ohok*. An inquiry into the productivity of the resulting *č'ok* (to return to modern orthography) for the T758:110 "rodent-bone" yielded the glosses 'child', 'young', 'immature', 'be born', 'give birth' for the root in Cholan languages (see Wisdom 1950:722; Aulie and Aulie 1978:54–55; Attinasi 1973:259). Grube and Stuart (1987:8), in their discussion of T110, have also assembled valuable data on the "rodent-bone" collocation, among which is the frequent association of it (as a title) with rulers before they take office. Independently, Stuart (1987:46) has tentatively assigned the value *ch'o* to T758a.

These observations support the *č'ok* reading for the "rodent-bone." Triangulation upon the dictionary entries suggests that the root may be best interpreted as 'offspring' when it is nominal. This view is bolstered by the appearance of the title with older individuals at Palenque.

In the 819-Day-Count phrase, we may speculate whether the "one-offspring" refers to God K in some way or whether it refers to the completed 819-day cycle itself. The *č'ok* collocation does appear often in title phrases of GII at Palenque, and GII is clearly identified with God K. Alternatively, evidence from Glyph B of the Lunar Series, wherein the "rodent-bone" or an allograph appears, suggests that it may be the *č'ok* cycle. The "sky-elbow" of Glyph B has been independently read by David Stuart and Judith Maxwell (Linda Schele, personal communication, 1988) as *u k'aba* (*u-k'aaba*? in Yucatec) 'his name'. Thompson (1950:240–43) outlines the relationship between Glyph C and Glyph X of the Lunar Series, wherein the variants of Glyph X conform to certain constituents and coefficients of Glyph C. Glyph D (Thompson 1950:237–39) indicates the age of the current lunation, often counted from its birth or first appearance after conjunction. The "birth frog" is a common variant of Glyph D (see Thompson 1950: Fig. 36, no. 20, 37, no. 11). From Stuart's analysis of the "name" collocation, we may now view Glyph X as a syntactic slot into which the various names of the six lunations are plugged. The whole sequence then reads 'seven days since the birth of the moon, third (variable element) lunation, X-offspring is its name, twenty-nine days (in current lunation)'.

Research by Helen Neuenswander (1978) among the Achi of Cubulco in highland Guatemala supports the suggestion that the Classic lunation may be called a *č'ok*. She states that the Achi divide each lunation into phases wherein "our grandmother (the moon)" is born, is a child, matures, grows old, and dies (pp. 17–19). Her path through the sky is "her road" (p. 18), upon which she is said to be "walking" (p. 13). The Christian calendric overlay has imposed names of saints and fiestas on what clearly had been a practice of naming lunations within lunar half-years (i.e., groups of six lunations). These correspond to rainy season and dry season. The lunar count is used primarily by women to calculate the stages of gestation.

In a personal communication to Neuenswander (p. 3), Harry MacArthur described a practice among the Aguacatec wherein a stone is "planted" at the sacred altar twenty days after a child's birth and is visited by the parents every nine lunations; there they pray and make offerings so that the stone will protect the child.

This detour by way of the moon leads us inevitably back to the figurative sky-altar of God K, where one birth, or "offspringing," happens when he reaches his resting place at the end of each cycle.

The birth of the *uinal* in the Chumayel is also intimately associated with the birth of the *winik* 'man'. Contiguous sentences specify that there was as yet no human upon the earth, upon the road where the god and his grandmothers marched, pacing off the *uinal*. Man was formed from mud one *trecena* after the birth of the *uinal*, on 13 Akbal.

In reconsidering the oft-noted similarity between the "birth frog" and the *uinal* froggie who is the zoomorphic form of that period in the Long Count, a possible relationship may be glimpsed in the mirror provided by this passage from the Chilam Balam of Chumayel. The birth of the *uinal* both precedes and presages the birth of the *winik*.

It is suggested that a stone monument or the effigy of a god may have been given life through a reenactment of the prototype of the Creation outlined in the Chilam Balam of Chumayel. In the latter a count of footsteps is far more than a mechanical formula, for it gives birth to the world. A triangulation on the "birthing" which takes place at the *acante*? (and its Classic predecessors, presumably under the patronage of God K) has been attempted using several vantage points. The current of lineage blood becomes the sap of the living Tree in the contract made between man

and the gods: as the gods once gave birth to man, so must man follow in their footsteps, and give rebirth to the gods.

Recent research by Hanks ("Elements of Maya Style," this volume) on the land documents of Yaxkukul demonstrates a continuation into Colonial times of the practice of ritually pacing off geographic boundaries. The text, expressed in cyclic prose, specifies a counterclockwise counting-and-pacing between boundary markers. Hanks views this as a ritual recreation of social space, one which we might readily relate to the foregoing hypothesis regarding sacred space.

The Books of Chilam Balam have an unequivocal Christian overlay, but in many passages that is only a veneer; it has not penetrated deeply. The names of the gods have been changed to protect the innocent from the wrath of the conquerors, but much of the ancient tradition—the history, myth, and magic which had for fifteen centuries intergrown with the mechanics of the calendar—may yet be descried in these pages.

SUMMARY

We have seen in the preceding investigation that a hitherto murky component of the Maya calendric record can be clarified via the integration of several approaches. The first of these analyzes the structure of the 819-Day-Count itself in terms of its factors and its interplay with other well-understood calendric cycles. A hypothesis is offered concerning ancient computational procedures, and it is supplemented with speculation concerning the astronomical applications of the formula. The second approach is epigraphic. The previously undeciphered verb, T588, is read *eɬ-ok* 'plant the feet', and "One-Rodent-Bone" is read *hun č'ok* 'one offspring'. These readings provide important semantic clues about the cosmological matrix of which the formula is the lowest common denominator. The third approach interlocks iconography, ethnohistory, and cosmology of both Classic and Postclassic sources in an attempt to present a holistic view of the cosmological matrix. It is thus argued that the gods' acts of creation were identified by the Maya at the outset with the inception of measurement in time and space and that it was the task of the Maya elite to re-create these divine acts at fixed intervals.

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9

Twin Gods and Quiché Rulers
The Relation between Divine Power and Lordly Rule in the Popol Vuh

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The problem is one of understanding. How can we make sense of the Popol Vuh, the sixteenth-century Quiché Maya account of origins? What can we learn from any particular analytical approach to the text? And how can insights into the work profit from and lead to understandings in other areas of Maya scholarship?

Within the past two decades, a number of Mayanists have offered their own solutions to these questions and, in so doing, have introduced original insights on the Popol Vuh and ancient Maya culture.[1] Two recent English translations go beyond "merely" interpreting the referential content of the text. Munro Edmonson's translation (1971) was a step toward an understanding of the written form, and not just the content, as bearing cultural significance. Edmonson sees the Popol Vuh as poetry and uses the Mayan convention of semantic parallelism both to present the work in a more culturally appropriate manner and to unpack some of the ambiguities of the original piece.[2] More recently, Dennis Tedlock (1985) has advanced the ideas of just how much culturally relevant material a "mythographer" may compress into a translation, how the translator/medium may enliven ancient texts through consultation with present-day experts, and how written forms can be reworked to present more faithfully the voice of some earlier speaker. A central object of his endeavor, therefore, is to produce a piece which not only is faithful to the existing master text but also actually becomes something more than the "original" manuscript: Tedlock's is an effort to compensate for the losses which the piece now known as the Popol Vuh suffered from being written down, extracted from its context of use, and copied and recopied by outsiders.[3]

Other Mayanist scholars, with primary interests other than the Popol Vuh, have used its contents—its characters and the episodes it describes—as a source of inspiration and the means by which related phenomena are more thoroughly understood. Michael Coe, for example, points to the detailed description of the Maya underworld found in the Popol Vuh and concludes that interpretations of "pottery symbolism and scenes . . . can be traced to this tale" (1982:11).

But what understanding of the Quiché is revealed through the Popol Vuh when one emphasizes not the relations of story contents to contemporary speech forms, ancient ceramics, or architectural iconography but the cultural logic which ties together the several episodes within the piece? The past twenty years, besides being a period of active reexamination of the Popol Vuh, have seen texts from a wide range of cul-

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[1] Readers desiring more background information on the Popol Vuh, in particular, and sixteenth-century Quiché culture, in general, have several sources to call upon. Tedlock (1985) provides a detailed summary of the story line of the work as well as commentary on such topics as the astronomical significance of certain characters and actions and their relation to the Quiché calendar. He and Edmonson (1971) discuss the task of interpreting a text and their efforts to adhere to local linguistic conventions. Comments on the history, location, and condition of the manuscript can be found in the introductions to the translations by Recinos (1975), Edmonson, and Tedlock, while more general background information on the Conquest-era Quiché can be found in such works as Carmack (1973) and Wallace and Carmack (1977).

[2] By and large I refer to Edmonson's version of the Popol Vuh (1971) in this work because it is the translation that I used when I wrote the first version of this paper in 1978. At that point, I found Edmonson's translation interesting because he identified basic but overarching truths about the aesthetic principles guiding the creation of the Quiché text. This encouraged me in my own effort to make sense and bring to light certain summary statements from a very complex text. The numbered lines of the Edmonson translation also facilitate reference to particular passages, and the accompanying Quiché allows investigation into vocabulary and parallel word usage. The line numbers noted in this paper refer to those in the Edmonson edition.

[3] I refer to one other version of the Popol Vuh: the Spanish-language translation by Adrián Recinos, put into English by Delia Goetz and Sylvanus G. Morley in 1975.

tural contexts analyzed according to structural principles. In fact, structural analysis is no stranger to the rich materials of Mesoamerica. Eva Hunt (1977), for example, combines structural analysis with an historical approach in order to reveal the layers of symbolism in a contemporary Zinacantecan poem. In a related manner, Victoria R. Bricker (1981) situates her discussion of ritualized Ladino-Maya conflict (abundantly documented by texts of various sorts) and its historical substrate within a consideration of the structural analysis of myth.

Although by no means the "only" or "best" way to understand myths or myth-histories (the most common labels for the objects of this sort of examination), structural analysis nonetheless has proven itself to be a powerful analytic tool for grasping a "text" as a whole and understanding it in terms of recurrent patterns that are taken to be central to the meaning system of the collective mind of those who created the piece. Furthermore, as Valeri (1985:193) states in his work on ritual in ancient Hawaii:

> In the absence of detailed information on the pragmatic and referential dimensions of the ritual and in the presence of texts that are mostly ideal representations of its different possible realizations, the only sensible analytical choice seems to be to reconstruct patterns that establish relations of substitution and combination between the elements of ritual.

Given that the Popol Vuh is likewise lacking "detailed information on [its] pragmatic and referential dimensions" and, moreover, that it is effectively the sole version of the text and without "different possible realizations,"[4] it is necessary to rely heavily on the patterns formed by elements within the work to yield up insights on the nature of the world which it describes.

The Popol Vuh, however, does not always encourage the analyst to treat the work as a whole. Because portions of the text conform to our notions of the "mythical" and the "historical," because the so-called historical portion alone is paralleled by other, distinct classical sources (Carmack 1977:1), and because the triumphs of the twin gods, X Balan Ke and Hun Ah Pu, can be taken as a story complete by itself, there is reason enough to divide up the work and examine the parts separately as essentially different worlds.[5] However, by taking these seemingly distinct parts and considering them together, it is possible analytically (not to mention necessary from a cultural perspective) to investigate the overarching relationships between the levels of reality within the work: one filled with the activities of gods and animal actors, the other largely reserved for the actions of humans; the first set on a cosmic axis, the second encompassing the geographic plane; the former describing the creation and organization of the nonhuman world, the latter dealing with the structuring of the human universe.

Tedlock's insights into the Quiché Mayan conception of time, in general, and narrative time, in particular, lend support to this view.[6] He writes (1985:63–64):

> To this day the Quiché Maya think of dualities in general as complementary rather than opposed, interpenetrating rather than mutually exclusive. Instead of being in logical opposition to one another, the realms of divine and human actions are joined by mutual attraction. If we had an English word that fully expressed the Mayan sense of narrative time, it would have to embrace the duality of the divine and the human in the same way the Quiché term *cahuleu* or "sky-earth" preserves the duality of what we call the "world." In fact we already have a word that comes close to doing the job: *mythistory*, taken into English from Greek by way of Latin. For the ancient Greeks, who set about driving a wedge between the divine and the human, this term became a negative one, designating narratives that should have been properly historical but contained mythic impurities. For Mayans, the presence of a divine dimension in narratives of human affairs is not an imperfection but a necessity, and it is balanced by a necessary human dimension in narratives of divine affairs. At one end of the Popol Vuh the gods are preoccupied with the difficult task of making humans, and at the other humans are preoccupied with the equally difficult task of finding the traces of divine movements in their own deeds.

By means of structural analysis I hope to contribute to our understanding of Quiché "mythistory" through an investigation of divine power and lordly rule in the Popol Vuh. My aim is to show that, within the text, the seemingly distinct spheres of actors and activities, time frames, and locales come together at a structural level

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[4] As far as other versions go, Carmack mentions his discovery of a document the contents of which closely resemble those of the final, "historical" portion of the Popol Vuh (Carmack 1977:1). Comparison can also be made between the Popol Vuh and *Title of the Lords of Totonicapan* (Chonoy 1953). In both cases, however, I am not sure how much a structural comparison of the various versions will yield. With regard to the "different possible realizations," Tedlock (1985) is quite successful in making sense of parts of the Popol Vuh by relating these to the activities of contemporary day-keepers from Mosmostenango.

[5] A number of authors have gained important insights into Conquest-era Quiché society by focusing on particular parts of the Popol Vuh (e.g., Coe [1982], Federico [1973], Schele and Miller [1986]).

[6] Gary Gossen's work on contemporary Tzotzil Maya speakers of Chamula, a community in the Chiapas highlands of Southern Mexico, makes a related point. He writes (1974:248):

> The Chamula data . . . indicate that true ancient narrative (which some might gloss as "myth") has no special logical discreteness over any other genres. All of the genres respond analytically as different aspects of the same primordial time-space principle, which has different style and content associations at various levels.

to make a key pronouncement on the nature of Quiché society—"the essence of Quiché" (line 8579), as the text itself states.

A TRIPARTITE SEGMENTATION

The different translations of the Popol Vuh offer nearly as many different divisions of the text into parts or what are sometimes labeled "creations."[7] For my purpose, I use a tripartite segmentation and divide the text on the basis of similarities and differences in characters, time periods, places, actions, and so forth. After a short preamble which states the purpose of the text (lines 1–94 in the Edmonson translation), the first segment (Section I) runs from the description of the original void to the defeat of the wooden dolls (lines 95–820); the second (Section II), beginning with Vuqub Kaqix's boasting, closes with the creation of the sun and the moon (lines 821–4708); and the third (Section III) encompasses the creation of human beings and the activities of the Quiché human ancestors (lines 4709–8584).[8]

Section I has as its major, named protagonists the numerous deity couples. The time period is the indefinite past; the setting is a generalized one, including the sea, sky, and, finally, the land; and the action centers on the supernatural creation of natural elements from an original void. The creators are present with the sea and sky when nothing else exists. The animals and the false versions of humans, on the other hand, are created, like the earth which they inhabit. They originated at a specific point in time and they are brought into being and participate in an existing universe.

What is more, in contrast to the later, successful human creations, these early constructions have as their foremost activities those needed to fulfill brute animal necessities: they eat, walk, sleep, and reproduce. Their actions are mere movements and, as such, differ sharply from the activities of the Quiché lords. Whereas the lords fast, continually prostrate themselves, and abstain from women in order to behave in a politically and religiously correct manner, the creatures and false creations lack the ability to convert their base animal needs into meaningful actions addressed to the gods.

Likewise with speech, the animals' attempts are not meaningful utterances directed to the gods, but mere noise:

> . . . they did not succeed in talking like men.
> They just pretended to.
> They just rattled;
> And they just croaked.
> The form of their speech did not emerge.(363–67)

Even when the wooden dolls later succeed in speaking, they cannot remember and, hence, fail to nourish and support their makers. For all of these early creations, neither their words nor actions accomplish what the gods hope they would. Instead, the movements of these first attempts at people remain in the sphere of the meaningless and purposeless.

The gods, by contrast, are able to move beyond the brute level of their acts and perform exceptional work by what they do. This is particularly evident in the creation of elements of the material world by means of speech:

> So then this the earth was created by them.
> Only their word was the creation of it.
> To create the earth, "Earth," they said.
> Immediately it was created. (215–18)

The gods' extraordinary abilities to create enormous and complex objects by means of abbreviated utterances stand in sharp contrast to the minimal "work" accomplished by the noises and actions of the creatures described in this section. They nonetheless hint at the creative powers desired for the Quiché lords in their successful form.

Section II contains the adventures of Hun Ah Pu and X Balan Ke, the young twin gods. The pair is present and active throughout this section, except for a flashback in the middle which relates the story of

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[7] Recinos (1975), for example, divides the text into four major parts. Edmonson (1971) does too, but not into the same four parts or "creations," as he calls them. And Tedlock (1985) labels five parts, the first four being roughly identical to Edmonson's and then a fifth at the end of the text. A related question regarding these divisions is: do they reflect major differences in the content of the translations? No, I would have to say—at least not at the level of major characters, broad actions, and the physical locale of the episodes. Although considerable variation exists in the phrasing, in the selection of roughly synonymous terms and in the specificity of objects (not to mention complete disagreements in the translation of some words or phrases), these differences should not be much of an issue for someone who wants to disagree with my analysis. As for the variations in the divisions of the text, these appear to rest on different individuals' contemporary theories of how the Popol Vuh should be read and understood.

[8] Using the line numbers found in Edmonson's translation, my divisions compare to those of Edmonson (1971), Recinos (1975), and Tedlock (1985) in the following way:

	Edmonson	*Hendrickson*	*Recinos*	*Tedlock*
Preamble	—	1–94	1–94	—
1	1–820	95–820	95–1674	1–890
2	821–1674	821–4708	1675–4708	891–1674
3	1675–4708	4709–8584	4709–6280	1675–4708
4	4709–8584	—	6281–8584	4709–7228
5	—	—	—	7229–8584

I should add that I subdivide the second segment into two subsegments at line 1675, a point where all three translators see major breaks.

their father's and their father's brother's defeat in the underworld of Xibalba, then the twins' supernatural conception and legitimization.

All of the major characters of the second unit are gods or extraordinary beings depicted as active personalities. They speak and act: building mountains, shaking the sky, holding council, and fighting one another. As accomplices they have talking animals: a rat, owl, toad, snake, hawk, and louse, to name but a few. And although animal actors are found in the other sections of the Popol Vuh, they do not have speaking parts, nor do they act as individual characters.

The activity in this middle segment takes place along a cosmic axis—initially on earth, then in the underworld, and finally along a path reaching into the sky. At the end of the section, at the point when Hun Ah Pu and X Balan Ke become the sun and the moon, the twins have already effectively completed one solar and lunar circuit (cf. Tedlock 1985:46). Their adventures, first on a terrestrial level and then on a subterranean one, parallel the journey which the ancient Quiché believed these celestial bodies make each day. The complete path of the twins' movements, seen as a literary image of important astronomical phenomena, is further evidence of the relative autonomy of this unit.

This basic unity notwithstanding, there is a break in the section which, although subsidiary to the aforementioned ones, is nonetheless essential to the overall structure of the message of the Popol Vuh. As mentioned before, partway through the second section of the text there is a shift, not only thematically marked by the temporary absence of Hun Ah Pu and X Balan Ke but also stylistically noted at its onset:

> And now we shall relate
> The name of the father of Hunter [Hun Ah Pu] and
> Jaguar Deer [X Balan Ke].
> Let us drink to it,
> And let us just drink
> To the telling
> And the description
> (Of the bearing),
> Of the engendering
> Of Hunter
> And Jaguar Deer. (1675–1684)

The passage, with its request to the audience, is highly unusual (as Tedlock also points out [1985:33]) and functions to mark a noteworthy shift in the activities of the twins, a shift which has a significant role within the structural framework of the Popol Vuh.

In Section III, there is a return to the creation of human beings and this time the attempt is successful. Quiché men and women dominate this section, and a major theme tying the characters together is the evolution of the Quiché royal lineage, particularly the development of their politico-religious authority.

Place-names quickly make specific a heretofore generalized terrestrial landscape. Tula is the first city and the spot where the people receive the Tohil gods and fire. Later travels bring the Quiché people to a series of named settlements which may be located on a map of present-day Guatemala.

Because the generations of named Quiché rulers and the cities are believed to have actually existed in the definite past, this last section of the Popol Vuh is often referred to as the "historical" part in contradistinction to the "mythology" which precedes it. However, if there is any one point in the text where we need to apply Tedlock's comments on mythistory, the start of Section III would seem to be it. Here, the interpenetration of the divine and human is thorough and the two spheres actively play off of one another, setting the tone for the remainder of the narrative. For example, the four original men and women are made by and initially worship Former and Shaper and the host of other creator deities mentioned in Section III. With time, however, these same ancestors come to worship wooden and stone idols, which are described by a messenger of Xibalba as representations of Former and Shaper.[9]

Such an important shift in the nature of human beings might suggest a further division of the text (Tedlock [1985], for example, divides what I have labeled Section III into two separate parts). However, the reduction in human understanding does not coincide with an immediate cessation of worship of the original gods. Rather, the shifts in emphasis between the divine and human are part of a larger whole and need to be considered structurally as points in the development of the Quiché royal lineage.

STRUCTURAL IMPLICATIONS

The three parts of the Popol Vuh just described can be summed up most simply as in Diagram 1. By this schematization, I mean to suggest that the actions, objects, and characters discussed in the central section (Section II) are instrumental in the creation of Quiché people and their social order.

A further elaboration produces Diagram 2, where the vertical line indicates the textual break marked by an appeal to the audience. I use this as the framework of a discussion of *how*, more precisely, the central section relates structurally to the beginning and end of the text. For, not only do the adventures of Hun Ah Pu

[9] Tedlock translates *k'ex vach* as 'representation', which I use here instead of Edmonson's 'substitutes'. He supports this by reference to a seventeenth-century text of Quiché vocabulary and by a similar reading by a contemporary speaker (1985:301).

Diagram 1

Section I		*Section II*		*Section III*
unsuccessful creation of humans	→	adventures of Hun Ah Pu and X Balan Ke	→	successful creation of humans

and X Balan Ke mediate the failed and successful creations of humans, somehow "allowing" the successful creation to take place, but their various adventures also relate differentially to the other two sections.

THE PIVOTAL CENTRAL SECTION

The central section stands between the unsuccessful and successful creations of humans and links elements from the entire text in a structurally significant manner. The earliest adventures of the twins have to do with their conquest of those beings who try to act like the creator gods in the first section. In their later adventures, the twins' actions and accomplishments serve to introduce, emphasize, and, in essence, "create" those elements and actions which will finally allow humans to serve their gods properly. By "creating" or introducing these elements, Hun Ah Pu and X Balan Ke are "creating" human society, since, without the correct knowledge of how to nourish and support the gods, the Quiché cannot exist as proper human beings.

In the first half of Section II, Hun Ah Pu and X Balan Ke set out to defeat the lords who inhabit the earth and who boast of a status or feats equivalent to those of the gods:

> So that it was only as a way of bragging
> That the sons of 7 Parrot [Vuqub Kaqix] did this.
> "Behold me, I am the sun!"
> Said 7 Parrot.
> "Behold me, I am the maker of the earth!"
> Said Alligator [Cipacna].
> "And it is I who shake the sky
> And sunder the whole earth," said 2 Leg [Kaab r Aqan].
> . . . . . .
> And so this evil the sons saw—
> . . . . . .
> And so their death had to be planned,
> And their destruction by the two sons. (947–54, 957, 961–62)

At this point in the text, the reader is already aware that it is the gods and not the sons of Vuqub Kaqix who make the earth and shake the sky: the divine actions have already been reported. The sun, on the other hand, has not been created in its final form, although, by means of imagery and literary style, we realize that the coming of the sun and the light, which is one of the sun's principal qualities, is closely associated with the actions of the gods and the appearance of man:

> Then they [who are Heart of Heaven] came to Majesty
> And Quetzal Serpent, and then was the invention
> Of light
> And life.
> "What if it were planted?
> Then something would brighten—
> A supporter,
> A nourisher." (1189–96)

Diagram 2

Section I		*Section II*		*Section III*
gods' creation of universe & unsuccessful creation of humans	→	Hun Ah Pu and X Balan Ke's demonstration of skills and knowledge over:	→	successful creation of humans & organization of human society

Subsection A	*Subsection B*
those who falsely boast traits of gods (adventures with Vuqub Kaqix & his two sons)	those who falsely boast traits of humans (adventures in & related to Xibalba)

As this passage and others of the text reveal,[10] light and human existence are necessarily linked for the Quiché. In the third and fourth lines of the preceding quotation, the link is re-enforced and re-created by the use of semantic parallelism. Here 'light' (*zaq*, also meaning 'white, bright, dawn, splendor, peace, lightning, crystal clear water, third or seventeenth month' [Edmonson 1965:158]) is tied to 'life' (*k'azilem*) in couplet form. The lines which follow specify that the life being created will be "a supporter, a nourisher"—that is, humankind.

The connection between light and human life also emerges from the notion of 'brightening' (*zaquirik*, which can also mean 'dawn') as a metaphor for the maturation of corn (Edmonson 1971:12, n193). In the highlands, ears of corn mature fully and are dried before they are used to make corn masa for tortillas, a staple of the Maya diet. Corn masa, furthermore, is the material used in shaping the successful creation of the first human being, a being described as 'born of light,/engendered of light' (*zaqil al,/zaqil q'ahol* (4721–22]) or 'brightened' (*zaqir* [5902]) when the sun finally dawns over the Quiché fathers.

Finally, brightening, in the form of the rising sun, is connected to those humans who are most god-like, namely the Quiché rulers themselves. Upon their death, the first four Quiché fathers have "bright words,/ bright commands" (7113–14) for their sons and the heirs to the lordship. The sons then set off to the east, the direction of the sunrise and the first light of morning, from which they bring the material "signs of authority," "the insignia of the lordship" (7285,7294): the throne and canopy, panther and jaguar claws, the nose bone, parrot-feather crest, snail-shell bracelet, and so forth. Subsequent generations of lords are described as enduring periods of abstinence from food and women, prostrating themselves before the gods, and preparing burned offerings (lines 8151–94), since "this was the price of light/ and life/ and the price of lordship" (8281–83).

In contrast to the creator gods, the Quiché lords, and the true sun (which one of the twin gods, Hun Ah Pu, becomes), Vuqub Kaqix brags of his brightness, but cannot succeed in whitening anything. The Popol Vuh states:

> He was just glorifying himself,
> . . . . . .
> But his appearance was just piercing where he sat there,
> And his appearance was not piercing everything under Heaven. (862, 865–66).

The glory of which he boasts and which is supposed to be made manifest by his various insignia of rank—precious jewels, silver, and brilliant plumage—is, in fact, "mere metal" (920). Although this "metal," or *puvaq*, refers to any precious metal, especially silver, wealth, or money (Edmonson 1965:93), it is "mere metal" by virtue of the fact that it has been used for self-glorification. This practice goes counter to the Quiché belief that silver and other precious objects should be used publicly to glorify and exalt the deities (Edmonson 1971:35, n920). Because that is not Vuqub Kaqix's intention, his appearance (unlike that of the true gods) fails to pierce or enhance anything under heaven.

Vuqub Kaqix's story also emphasizes the impropriety of extreme individual action as opposed to activities sanctioned by the collectivity. This theme of the group over the individual comes out again in the story of Vuqub Kaqix's boastful son, Cipacna, and the four-hundred sons. Cipacna's help in hauling their house-post is seen as evil: "Because it is not good what he does:/He lifts the beam all by himself" (1207–8). Just as Vuqub Kaqix's self-proclaimed status can be seen as hollow and potentially harmful because it does not arise from a larger system which assigns it a positive value and meaning, so too Cipacna's solitary action is cause for alarm. And, in fact, throughout the Popol Vuh, virtually all of the major characters appear and act in twos, fours, or in council: the creator couples, Hun Ah Pu and X Balan Ke, Hun Hun Ah Pu and Vuqub Hun Ah Pu, the lords of Xibalba, the Quiché fathers, and so on. This, I believe, emphasizes the Quiché value placed not on individual actors motivated by their own causes but on those who work in and for a group and act properly within the prescribed social system.

Another point to be made at this time concerns the concept of the house. The four-hundred sons are described as making a *kabal*, or 'house, hut' (Edmonson 1965:54), a word which, I would say from my cursory knowledge of and readings in Classical Quiché, is not commonly used. Perhaps this is because *kabal*, as Schultze-Jena claims, is an Ixil word (Edmonson 1971:43, n1168); and, in fact, Stoll has it in his Ixil grammar as "house, hut (literally: the place in which one resides)" (Stoll 1887:109). Thus, although I cannot explain the choice of an Ixil word or, at least, a less common Quiché word for 'house' in this context—I simply do not know the sixteenth-century connotations of the term—I can suggest that the authors of the Popol Vuh[11] might have associated it with *haa*, which also means 'house', or, more specifically, *nim haa* ('big house'). Big or great houses were the buildings connected with the princi-

[10] For other examples, see, for instance, lines 81–86, 430–32, and 527–536.

[11] Such writers as Recinos (1975) and Edmonson (1971) refer to "the author" of the Popol Vuh, but Tedlock (1985:60–61) presents a convincing argument for the existence of three coauthors in the persons of the Great Toastmasters of the three leading lineages. I accept this argument and, hence, refer to "the authors" of the Popol Vuh.

pal lordly lineages of the Quiché, and the Popol Vuh mentions these, first, when there were only three great houses and, then, when these divided into the final twenty-four (lines 7438, 7634). Carmack (1977:11) supplies us with a great deal more information on big houses in the general context of classical Quiché society:

> From early in Quiché history, the principal lineages were closely identified with the building in which they carried out their affairs. These buildings were called *nim ja* "big houses," and were expressly used for the ceremonial lecturing, bride price giving, and eating and drinking associated with marriages between the lineages.
>
> The physical structures, big houses, became so closely associated with the lineage groups occupying them that the lineages themselves became known as "big houses." The segmentation of the Nima Quiché principal lineages, from 3 at Ismachi to 9 and then 24 at K'umarcaaj, was recorded by the Quiché as the construction of 9, and then 24 big houses. The actual room space occupied by the lineages, its size, location, height, etc., became a major consideration. This was related to the increasingly political functions which the principal lineages were taking on. Just as the political offices filled by the lineages came to dominate their strictly kinship character, so too the buildings in which those political activities took place did the same.

Given this information, we might take the house in the Cipacna episode to stand for the political dimension of human society. Cipacna would then be seen as trying to create humans, in their political dimension at least, all by himself. Another possibility is that Cipacna is not trying to create Quiché man in any symbolic sense, but rather to *be* a Mayan lord by virtue of constructing a (great) house. The evidence, however, leans more toward the former contention. Cipacna's boast that "I am the maker of earth!" (951) is likewise a boast that "I am the maker of flesh" since *ulev*, a word for 'earth', is also a word for 'flesh'.[12]

It is part of the irony of the Popol Vuh that the earth lords who try to act like the gods should die no better off than the first creations which the true gods made. Like the animals or wooden dolls before them, Vuqub Kaqix and his sons are killed, each losing his life as the consequence of being either the hunter or the hunted. Vuqub Kaqix's death is precipitated by a blowgun wound on his jaw (which could be taken as a metonymic attack on his boastful words), and the two sons die as the result of participating in the hunt: Cipacna is crushed by the earth and turns to stone during his scramble for a crab and Kaab r Aqan is defeated when he swallows the earth which covers the body of a freshly killed and roasted game bird. After this, Kaab r Aqan's fate is similar to his brother's: he is buried in earth by the twins. Thus, the earth, created in the first section of the Popol Vuh, is the instrument of death—it kills by swallowing up or being swallowed—and, as if by poetic justice, just as the earth rose to become the mountains in the opening section, the mountains now part and the antagonists fall to become part of the earth in this second section.

The broad themes of hunting—pursuing or being pursued, confronting, overtaking, and killing or being killed—are not confined solely to these early adventures of the twin gods. They recur regularly throughout the entire central section and, perhaps more important, relate more and more to the political and religious themes of human existence as the twin gods confront, first, their cruel stepbrothers and, then, the lords of Xibalba.

Throughout Section II, the authors explain why the deeds of the twins' antagonists are evil and, hence, why Hun Ah Pu and X Balan Ke must pursue a path which will, in effect, conquer and control their opponents. For example, the stepbrothers, despite what seems to be many positive qualities (talents in the arts and their status as "substitutes for their fathers" [2633–34]) are defeated because of their cruel mistreatment of their younger brothers. The lords of Xibalba, on the other hand, are labeled "war people," "owl people" (4599–4600) and their deaths are plotted because they only lust for fighting.

It should be noted that, in these two sets of episodes—one with the stepbrothers and the other with the underworld lords—the authors are also distinguishing between two different types of conflict situations: the first being that of intragroup conflict with a domestic focus and the second, instances of intergroup conflict with primary politico-religious implications. Not surprising, instances of these conflict types are also seen in other sections of the Popol Vuh.

For the Quiché, patrilineages are a central aspect of the social structure. Important kin ties are traced through males[13] since, as the skull of the twins' father proclaims from the gourd tree,

> . . . one's son is like his spittle;
> One's saliva like one's essence.
> Whether the son of a lord
> Or whether the son of a sage or a speaker,
> It is not lost then but goes on,
> It remains whole. (2259–64)

Thus, the older and younger pairs of sons of Hun Hun Ah Pu, though born of different mothers, are considered by the Quiché to be of one "essence." They address each other and are addressed by their father's mother with the terms *atz* ('older sibling') and *ch'ak'* ('younger sibling'); and, within this kinship framework,

[12] In his Quiché-English dictionary, Edmonson (1965:137) further specifies *uleval* (*ulev*+*al* [suffix] as '(human) flesh'.

[13] See, for example, Las Casas (1909:624, 625).

the grandmother judges their actions by the social norms governing sibling behavior:

> "That is not how you should act
> To your older brothers,
> My grandsons,"
> Said the grandmother
> To Hunter [Hun Ah Pu]
> And Jaguar Deer [X Balan Ke]. (2775–80)

From comments by the authors, however, the reader is given the distinct impression that, although the grandmother might express the social norms and wish to have them upheld, her actions and those of her first-born grandsons violate the local standards of proper kin behavior. These violations are expressed in such negative commentary as:

> Their younger brothers were not even allowed
> in the house by them at first;
> They didn't even know them.
> . . . . . .
> 1 Monkey
> And 1 Howler [the stepbrothers]
> Didn't give them food:
> It was all eaten. (2601–2, 2649–52)

For the boys to be denied food and shelter in their father's home is a noteworthy transgression of proper social behavior.

In light of this, the twins' vengeance can be seen as an act against kin who violate the standards of intrafamilial behavior. After all, the two elder brothers

> . . . just boasted
> And mistreated their younger brothers
> According to the manifestations
> Of their hearts. (2893–96)

As a consequence, they, like the ill-fated wooden people made by Former and Shaper, turn into monkeys.

In contrast to the episodes with the stepbrothers, the conflicts involving the lords of Xibalba take on a tribal or state nature (that is, similar to the various Maya tribes or what might be called nation-states). Two important aspects of the relations between the underworld lords and the twin brothers, in particular, parallel those between Quiché extrafamilial groups. These are (1) mutually exclusive territorial domains and (2) mutually exclusive (patri)lineages with the preference to marry out of the community and the necessity to marry out of the family.

With regard to territorial domains, the realm of the lords of Xibalba is the underworld, and the dwelling place of the twins and their fathers is the earth. These two spots constitute distinct domains, related vertically and connected by a hole and a pathway leading from it. In the second half of Section II, both the twins and their fathers are wooed into the underworld, where they wage a symbolic war of ball games and trick challenges: the fathers are defeated, but Hun Ah Pu and X Balan Ke eventually triumph, become the sun and moon, and forever after traverse the two domains during their celestial circuits.

The figures in both spheres are also tied by a wife-giving and wife-taking relationship. Whereas the youths' family forms a patrilineal, patrilocal unit, the members of which are related by an explicitly stated genealogy, the kin relations of the lords of Xibalba are unstated. We know, however, that X Kiq', the daughter of one of the lords, has intercourse with the skull of Hun Hun Ah Pu, becomes pregnant, and goes to live at the home of her mother-in-law. There, her status as daughter-in-law is legitimated by her miraculous ability to fill a net full of corn in a nearly barren cornfield. This legitimation, in turn, means that the girl has been accepted as a suitable marriage partner (or childbearer) for Hun Hun Ah Pu, which also means that she is accepted as being from outside the tribe, family, or kin group, as social rules dictate.[14]

Although, by and large, I have drawn on material from outside the Popol Vuh to support the above claims regarding the social structure of the twins' world, the same relationships are found—but not overly stressed—in the third section of the Popol Vuh. In that unit, mention is made of marrying-out sisters and daughters, taking wives from other tribes (the largely unstated assumption here being that the groups are patrilocal), and occupying different tribal grounds.[15] In this way, the world of the gods and supernatural beings, as it is presented in the latter half of Section II, is organized with a social logic similar to that which is found in the human world described at the end of the myth-history.

At this point, a more detailed schematization will help highlight the structure of the Popol Vuh, as I see it emerging (Diagram 3). So far, I have discussed how Subsection A of Section II relates to Section I by focusing on the qualities and characteristics of the divine, whereas Subsection B links to Section III by emphasizing themes of importance to human society, albeit principally the royal class. Moreover, within B, we find inter- and intragroup conflicts which foreshadow those of the Quiché people. Of these, the intergroup conflicts between "states" (that is, between Xibalba and the twins' kin group) are a major source of narrative action, with the first conflict (B_1) leading to the fathers' defeat and the third (B_3), the twins' triumph. Furthermore it should be noted that this sequence of defeat-then-triumph in the Xibalba portion of Section II is bracketed by epi-

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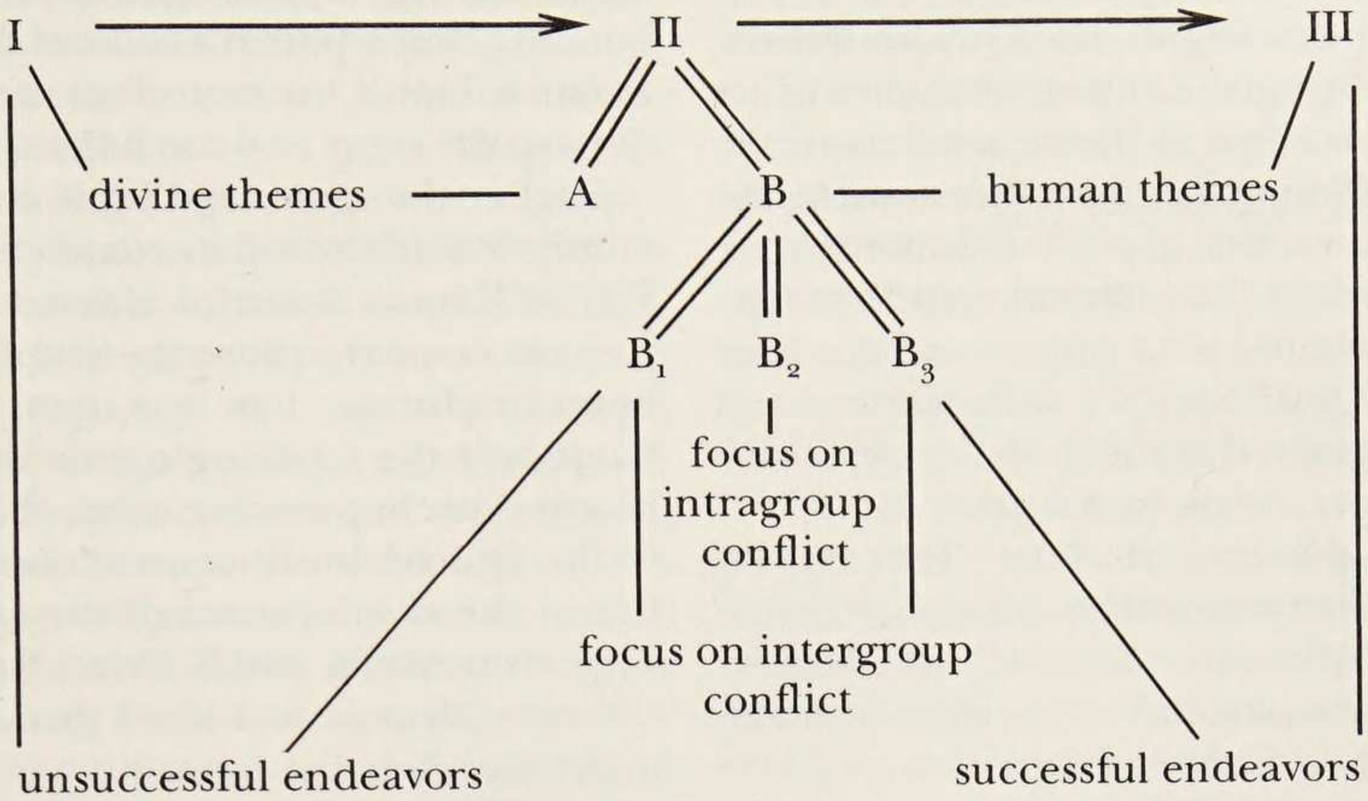
[14] See, for example, ibid.:624.

[15] See, for example, lines 7237–39, 7383–84, 7545–56, and 7617–20 on wife-giving and wife-taking and 5092–114, 5315–22, and 8075–96, which refer to the geographical distribution of peoples.

Diagram 3



B_1 = the fathers' and uncles' defeat in Xibalba
B_2 = the stepbrothers' defeat on earth
B_3 = the twins' triumph in Xibalba
→ = narrative line/sequential resolution of problem
// = subsections of units
/|\ = different units linked by common themes

sodes of defeat first and success afterwards in the creator couples' attempts to make humans in Sections I and III.

Politico-Religious Elements: Divine Acts and Lordly Rule

Although the twins' fathers fail to greet the lords of Xibalba properly, distinguish a bench from a sizzling rock, and keep their cigars and torches lit all night, their twin sons succeed at these and additional challenges and, in that way, defeat the rulers of the underworld. Like the twins, but unlike the earlier attempts at human creations, the Quiché rulers are able to speak and worship properly, control royal paraphernalia, take sacrificial victims, and, not coincidentally, conquer and lord over other highland tribes. Through their acts and accomplishments the twin gods provide a model of authority for lordly rule within Quiché society and, in essence, allow the creator couples' final attempt to survive as true human beings.

The trials of Hun Ah Pu and X Balan Ke begin immediately upon their entering Xibalba. As was the case with their fathers, the boys are presented with a situation in which they must greet the lords, each with his proper name. However, whereas the fathers fail at this—they address wooden puppets, which they mistake for the lords—Hun Ah Pu and X Balan Ke assign the correct social label to the correct individual and, in so doing, show a degree of control over the lords.

The ability to name is also an important skill for the successful human creations to master. Earlier attempts at human beings were destroyed because they could not pronounce the names of their divine creators. The Quiché nobles, however, are successful, in part because they can call upon the deities: theirs is a specialized knowledge which sets them apart from (and, in fact, helps them control) common people and enables them to move closer to the gods whom they can address by name.

The ability to name others is coupled with their being able to afford to announce their own names. For example, the lords of the underworld are tricked into uttering their names when the twins send a mosquito to bite them. Since Hun Ah Pu and X Balan Ke make use of this knowledge to win the lords' challenge, the lords expose themselves to defeat by the telling.[16] The names of the twins, on the other hand, remain unknown to the lords until the very end when the boys have sacrificed the rulers of Xibalba. At this point, the twins face no further challenges, having already established their superiority and control of the situation. Their reaction is to boast their names and those of their fathers.

Instances of naming others and proclaiming one's own name are found in the third, human-oriented sec-

[16] See Schele and Miller (1986:32) for a brief but insightful discussion of the qualities of the hero among the Maya.

tion of the Popol Vuh. In one case, the various tribes gather together on a mountaintop and state their names (lines 5656–69). Just prior to this, the Quiché fathers, the sole possessors of fire, give flames to the other tribes in exchange for the sacrifice of their members to the Quiché god Tohil. Naming done in this context appears to delineate the various groups of a nascent political system. Later, when the political system has developed and all the elements of human society have been introduced, the Quiché rejoice at their privileged position—"for their glory, their majesty" (7539–40)—and name their lineages, tribes, and cities.

Upon successfully greeting the lords, Hun Ah Pu and X Balan Ke are asked to seat themselves on a bench (*tem*). Benches or "splendid thrones," as Recinos (1975:217) calls them, are part of the complex of insignia associated with Quiché rulers. Edmonson explains (1971:70, n2037):

> Etymologically *tem* is a plank bench. Stone ones were built into the *palacios* of the early Postclassic period . . . which appear to correspond to what the Popol Vuh calls "gods' houses" (line 8178), and which served as men's houses. From the seating of the lords of Hell (line 3489 ff.) we may infer that one's place on the bench was rigidly ranked by ceremonial status. The Popol Vuh also uses "his bench, his pillow" as a metaphor for the geographic jurisdiction of a lord (lines 8075–76).

Carmack comments on these seats in connection with his discussion of mats (*pop*, a reference to which is made in the title "Popol Vuh," translatable as "Councillor's Book," where the stem, *pop*, can mean 'mat, assemble, meet, group, form a crowd' [Edmonson 1965:91]) and in the title of the supreme Quiché ruler, *ah pop* ('he of the mat'). As Carmack notes (1968:73), *pop*, in the latter context, is a reference to the skins of the puma and jaguar which are spread on a ruler's bench or throne. Thus, metonymically the mats, along with the benches themselves, are symbols of the highest authority of the Quiché state.

In the account of human-centered events, mention is made of benches (*tem*) in connection with towns that are ruled by the Quiché lords. *Ch'akat* ('pillows'), the word which appears in semantic couplets with "benches" (e.g., lines 7647–48, 8075–60), has the additional meaning, 'capital town', thus reinforcing the tie between the seat and the lord's jurisdiction of which Edmonson speaks. Also on this subject, the authors of the Popol Vuh write that the Quiché sons who venture abroad return from the east with the insignia of the lordship. Among these items is a throne. The term used here is *q'alibal*, which apparently refers to the high, feather-canopy-covered seat where the *ah pop* sits (Recinos 1975:208, n5).

The next of Xibalba's challenges is in the House of Darkness. In this instance, the lords ask that a cigar and a torch be kept lit all night and then returned whole the next morning. The fathers fail at this task, but, by using a parrot's red tail feathers and a firebug as mock flames, the twins fool their guards and appear to keep the cigar and torch lit.

Earlier the notions of light, brightness, and brightening were discussed in connection with the false god Vukub Kaqix's boastful claim to be the sun. In the present context, where the emphasis seems to be less upon brightness than it is upon the constancy of the flame and the unchanging nature of the burning object, it is perhaps better to see the twins' flame related to the Quiché lords' control over fire and the role of fire in the development of the Quiché political state. That Hun Ah Pu and X Balan Ke can keep a torch lit (albeit with a false flame) throughout the Xibalban night parallels the later, human-oriented episode in which Tohil maintains a flame throughout the great rainstorm. The consequence of the latter act is that the Quiché people have fire even when the other tribes do not. The twins' episode with the flame also recalls the Quiché belief that the sun spends the nighttime journeying through the underworld only to emerge on earth at sunrise, still whole and burning brightly.

Because they can perform such special feats, both the twin gods and the Quiché are recognized as being different from the others with whom they interact. For example, after the episode with the cigar, the lords of the underworld ask about the twins:

> Who are they?
> Where did they come from?
> Who sired them
> And bore them?
> . . . . . .
> Different is their appearance,
> And different too is their essence. (3659–62, 3665–66)

After the Quiché lords gain control of fire, the other tribes recognize they are fated to be subordinate peoples and suffer for it. They are puzzled by the evolution of their inferior status and conceive of the distinction between groups not only in terms of the possession of fire but also in terms of languages. Frozen and trembling from a lack of warmth, they cry:

> "Alas, oh we have lost our language!
> How have we done it?
> We are lost!
> Where were we bewitched?
> Our language was all the same
> When we came here to Tula,
> And all the same was our eminence
> And origin.
> It is not good what we have done." (5411–19)

For the Quiché, the possession of fire and the ability to retain the flame concretely mark their power and ability to control the necessities of life. From this point

on, they become both politically dominant among highland peoples and piously devoted to the needs of the gods who provided them with fire in the first place.

After succeeding at the first three Xibalban trials, the twin gods are challenged to a ball game. The match, one of many in Section II, brings two groups of people together in open physical conflict. Teresa Federico (1973) analyzes these occurrences and concludes that, in the Popol Vuh, the ball game is portrayed in terms of (1) its religious aspects (e.g., as a representation of the solar/lunar cycle)[17] and (2) its social aspects (e.g., as a symbolic expression of the existence of different hierarchies of power and the oppositions between these [including those between highland peoples] as well as those within the Quiché state itself). Because she goes into the subject in detail, I will only mention that her conclusions support my contention that the details of the twins' lives parallel those of the Quiché lords in significant ways. In particular, she discusses the social roles introduced by the fathers, the stepbrothers, and the twins. The three different groups are, respectively, warriors; sages, diviners, artists, and agriculturalists of sorts; and, first, members of the lower class who provide for the upper echelon and, finally, priest-warriors. All of these roles find counterparts in Quiché society. What is more, when the divine characters assume these roles and interact in their social world, their conflicts foreshadow those of the human world and allude to key conflicts and contradictions which develop within Quiché society. Finally, Federico sees parallels between the intergroup conflicts of (1) Quiché society and other highland tribes and (2) the twins' underworld conflicts with the lords of Xibalba who, she suggests, can be taken as "*otro pueblo*" ("other people," in the sense of another social unit).

As a consequence of allowing themselves to be defeated at the first of their underworld ball games, Hun Ah Pu and X Balan Ke face another trial at the hands of the Xibalbans. This time they must provide the underworld lords with four pots of flowers: one bunch of red, another of white, a third of yellow, and finally a bunch of big ones. To make the task more difficult, the twins are asked to do so while locked in the House of Knives. In response to the challenge, the boys take command of the knives and, with the help of cutter ants, obtain the requisite flowers.

The colors of the flowers relate closely to the colors commonly associated with the four cardinal directions (red, white, yellow, and black). If we accept the association, the twins' success in the House of Knives can then be understood as an ability to control or associate themselves with the four cardinal points (and, relatedly, with the circuit of the sun). And although color associations do not appear to any significant degree in the context of human events, there is ample outside evidence to indicate that colors tied to the cardinal directions had a significant role in helping to define social space (and its diverse correlates) for the pre-Conquest Quiché.[18] As for other parallels arising from the flower challenge, an argument might also be made for the association between flowers, the sun, Hun Ah Pu (who becomes the sun), and the Quiché lords.[19]

At this point I want to pass up the remaining challenges posed in the houses of Xibalba[20] and initiate a brief discussion of sacrifice, particularly as it has to do with the final series of sacrifices in Xibalba and the creation of sacrifice in the human world.

The sacrifice of the lords of Xibalba is the final means by which the twins show their dominance and control over the underworld. What is more, for the twin gods the sacrificial triumph over opposing forces results in their being able to reassemble their father and, by recalling his name, grant him a life beyond the grave at Dusty Court (line 4676). Thus, although the act of sacrifice is a totally destructive one for the Xibalbans, for the twins and their family it is regenerative and

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[17] I do not discuss the astronomical implications of the Popol Vuh. Tedlock (1985), however, presents a number of interesting readings along these lines.

[18] For a discussion of some of the "on-the-ground" applications of the four cardinal directions in Quiché society, see, for example, Dwight T. Wallace (1977).

[19] In writing about the name of the twentieth day of the Maya calendar (which is *hunahpu* 'hunter' in Quiché), J. Eric S. Thompson (1950:87) states that

> The last day [of the twenty named days] corresponds to the Mexican Xochitl, "flower." Ahau [its name among certain Maya people] means chief or lord.

In turn, Thompson links Ahau to the sun by means of mythical and linguistic evidence and then notes the tie between the sun and flowers: "the usual form of the kin day or sun sign is a four-petaled flower" (ibid.:88)—four because that is the number over which the solar deity rules (ibid.:142). He notes:

> Furthermore, in the list of interpretations of Quiché day names recorded by Ximénez, the Quiché equivalent of Ahau is given the meaning of "flower" (ibid.).

[20] I will not be discussing the remaining underworld challenges to the twin gods, but suggest that the ones in the House of Cold (lines 3877–3900) and the burning house (lines 3921–34) can also be seen as related to the control of heat and fire; that the challenges in the House of Jaguars (lines 3901–20) and House of Bats (lines 3935–4058) may bear reference to Quiché and Cakchiquel tribal groups (see Tedlock [1985:344], for the former, and Edmonson [1971:122, n3935] and Tedlock [1985:327], for the latter); and that the reference to the jaguar, in addition, has myriad associations to the Quiché kingship (e.g., the use of the jaguar parts as royal paraphernalia and the use of the word itself as part of royal names, lineages, etc.).

life-giving. Sacrifice avenges former deaths, gives their father a renewed life, and stages the way for the twins' ascension into the heavens after their travels over the earth and through the underworld.

In the human sphere of activity, the control and domination of other highland tribes develops with Tohil's introduction of sacrifice to the first generation of Quiché lords (lines 5501ff) and then, later, the "creation" and use of sacrifice by the second generation of rulers (lines 7493ff).[21] In addition to learning the brute physical nature of sacrifice, the Quiché receive the special knowledge which transforms the act from a mere killing to an event of supreme politico-religious importance. For both the divine and the human, the death of another (whether political enemy or tribal outsider) through sacrifice has a life-giving aspect. In the case of human sacrifice, the gods are nourished with blood, the sacrificer-lords are glorified and become more godlike through their association with the divine, and their tribe is assured dominancy over others.

In comparing the concept of sacrifice in the god- and human-oriented sections of the Popol Vuh, the similarities that exist should not cover up the real differences between the acts, so labeled, in the two sections. Perhaps the principal difference is that the sacrifices made by Hun Ah Pu and X Balan Ke are not directed toward any sacred recipient, whereas those made by the Quiché fit the classic definition set by Hubert and Mauss (1964), namely that the sacrificial victims serve as mediators between the sacred and the profane.

Quiché Lords: Less Than Gods

Although I have tried to show how the twins' knowledge and actions can be seen as a model for those of the Quiché lords, the Quiché politico-religious hierarchy is not created as a simple reflection of the divine. Because the Quiché lords are less than the gods, they must suffer certain limitations; but because they are more than merely human, the lords can act as mediators between "mere" human beings and the divine.

When humans or, rather, the first four Quiché fathers are finally created, their powers are such that they know and understand everything under heaven. The gods disapprove of this situation and seek to correct it by chipping their eyes—"they were blinded like the clouding of the surface of a mirror" (4999)—and thereby having their vision and understanding restricted. Furthermore, the gods say that their creations will equate themselves with the divine unless they multiply and increase their number before the sun rises. Consequently, wives are given to the first four men and these women bear children in the darkness.

Even the Quiché god-idols are "reduced." In the beginning all highland people have the same language and call upon the divine directly without the aid of stone or wooden idols. But, perhaps because of their now imperfect understanding, the people seek out material signs of the creator deities. The Tohil gods are found and, subsequently, the Quiché pray to the creator couples through them, each tribe with its own distinct language.

Finally, the long-awaited sun dawns in the east. However, it shows its face once and, after that, only its reflection appears. Yet, even the brief heat of this first sun is intense enough to dry out the earth, petrify the Tohil gods, and, in essence, fix the human world. It is in this lessened world that the Quiché lords are the reflections of the divine (albeit imperfect reflections) and serve as mediators between the gods and human society.

CONCLUDING REMARKS

Earlier I quoted Dennis Tedlock as saying that "the presence of a divine dimension in narratives of human affairs is . . . a necessity, and it is balanced by a necessary human dimension in narratives of divine affairs" (1985:64). Up to this point I have tried to explore the "how" behind this sort of claim, not merely in terms of how particular divine and human characters come together in the Popol Vuh, but rather in how their actions are related by structural similarities. For instance, it is not only that the creator couples are intent on making human beings, fail, than finally succeed, but rather that the failures relate in very particular ways to the successful creations which, not coincidentally, relate to a whole set of adventures by the twins Hun Ah Pu and X Balan Ke.

In closing, I now want to push a step further and ask *what* these patterns of interpenetrating activities offer in terms of some unifying message of the Popol Vuh. To answer that I believe we need to recall the central (quite literally) role of the twin gods whose adventures fall between the failed and successful creations of humans. Put a slightly different way, the twins can be seen as demonstrating and, hence, introducing to the larger narrative world those skills and knowledge which the Quiché lords only later acquire. In this way the twins function as a model for the human creations—or more specifically the Quiché lords—who succeed, unlike their predecessors, in ruling the earth and honoring their gods.

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[21] I borrow the concept of "generations" of Quiché lords from Dennis Tedlock (1985:54), who makes a distinction between the first and subsequent generations by further dividing his translation of the Popol Vuh into major parts, one dealing with the former and the other with the latter.

The twins' knowledge is revealed in their solutions to challenges from the various evil forces of the world. However, as we saw, the ill deeds performed in the central section are the same sort as the ones which the gods and Quiché lords themselves ultimately engage in: proclaiming their names, displaying insignia of their status, accomplishing monumental deeds, waging wars, playing tricks on their enemies, and so on. But what, we need to ask, gives the divine and human figures these abilities when other beings fail? I would suggest on the one hand that the gods are fit to perform these deeds simply because they *are* the gods, the ultimate source of all that exists and those beings who define social order by virtue of their role as creators. The Quiché rulers, on the other hand, can perform extraordinary deeds without negative consequences because they are acting within a system which assigns positive values to particular acts executed in a particular manner—that is, actions that are modeled after those abundantly demonstrated by the gods Hun Ah Pu and X Balan Ke and performed with due respect to the creators. In this way, the organization of Quiché lordly power is dependent on a greater existing order in the cosmos and a set of standards for appropriate action, both of which are established and reflected in the Popol Vuh.

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PART II

Representational Conventions of Maya Iconography

Relations between Linguistic and Iconographic Systems
Maya Kingship, Cosmology, and Ritual

Relations between Linguistic and Iconographic Systems

BRIAN STROSS
Olmec Vessel with a Crayfish Icon: An Early Rebus

ROBERT J. SHARER
The Preclassic Origins of Maya Writing: A Highland Perspective

ARTHUR G. MILLER
Comparing Maya Image and Text

DORIE REENTS-BUDET
Narrative in Classic Maya Art

MARVIN COHODAS
Transformations: Relationships between Image and Text
in the Ceramic Paintings of the Metropolitan Master

10

Olmec Vessel with a Crayfish Icon: An Early Rebus[1]

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INTRODUCTION

The ancient Egyptians had a serpent as a forehead ornament in depictions of rulers. This serpent, called a uraeus, served as a symbol of sovereignty. The location of the Egyptian uraeus just above the forehead is appropriate for indicating some valued quality possessed by the pharaoh; and somehow the serpent seems reasonable as a power symbol in such a context, being an animal so deadly on the one hand and symbolizing on the other many important things to people of different cultures around the world. Use by the Olmecs, however, of a shrimp or crayfish as a similarly functioning forehead ornament on a deity (or ruler) as a reference to goodness, nobility, or beauty involves symbolism that is not so readily apparent. The head location is apt for such symbolism, but at first sight the crustacean placed there is not.

Nonetheless, the forehead ornament worn by the deity or ruler shown on an Olmec vessel from Chalcatzingo (Gay 1971: fig. 43) (Fig. 10-1a), appears on visual inspection to represent, tail up, the edible portion of a crustacean, such as a shrimp, crayfish, or spiny lobster (Fig. 10-1b). Although the following argument proceeds from this identification, it is the identification that is supported by the argument and its implications rather than vice versa. Although the visual resemblance might not alone be persuasive in this case, other elements of Mesoamerican iconography support the identification, as do linguistic and epigraphic evidence; and it is this other evidence that contains the most interesting implications.

It will be argued below that Mixe-Zoquean languages, descended from the language spoken by the Olmecs (cf. Campbell and Kaufman 1976), provide lexical evidence to further substantiate the crustacean identification derived originally from visual inspection. In addition, the internal Mixe-Zoquean lexical evidence converges in its implications with evidence of words borrowed by Mayas from Mixe-Zoquean speakers, just as it does with sound values associated with relevant glyphs of the Classic Maya script.

The thesis presented in this paper is in essence that the Olmec forehead ornament depicted on the Chalcatzingo urn is an early version of an icon originally referencing the crayfish that has undergone many transformations in a very long history and that seems to be an ancestral homologue of such Maya glyphs as T58 (ZAC 'white'), T51, T53, and the T59 (TI/TA) glyph found as a forehead ornament on the "TI vulture" glyph, the formal similarity among these being attributable to common origin. The Olmec forehead ornament depicted may also be a homologue of the AHAU ('Lord') glyph found as the forehead ornament of the "AHAU vulture," although here the formal resemblance is not so great.

The Olmec forehead ornament, if I am correctly interpreting the situation, constitutes the earliest attestable rebus representation in Mesoamerica, and it contributes iconographic evidence, linguistically interpreted, to substantiate Campbell and Kaufman's claim that Olmecs spoke a Mixe-Zoquean tongue (1976). Furthermore, in the process of explicating this interpretation, some Mixe-Zoquean loanwords are identified, representing adoption by different Mayan languages of words from different Mixe-Zoquean languages and adoption at different times.

It will be seen, too, that there may indeed be some reasons for picking a shrimp or crayfish to represent nobility, regardless of whether ultimately only a strictly fortuitous similarity between the name of the crustacean and the words for 'beautiful' or 'sacred' could have

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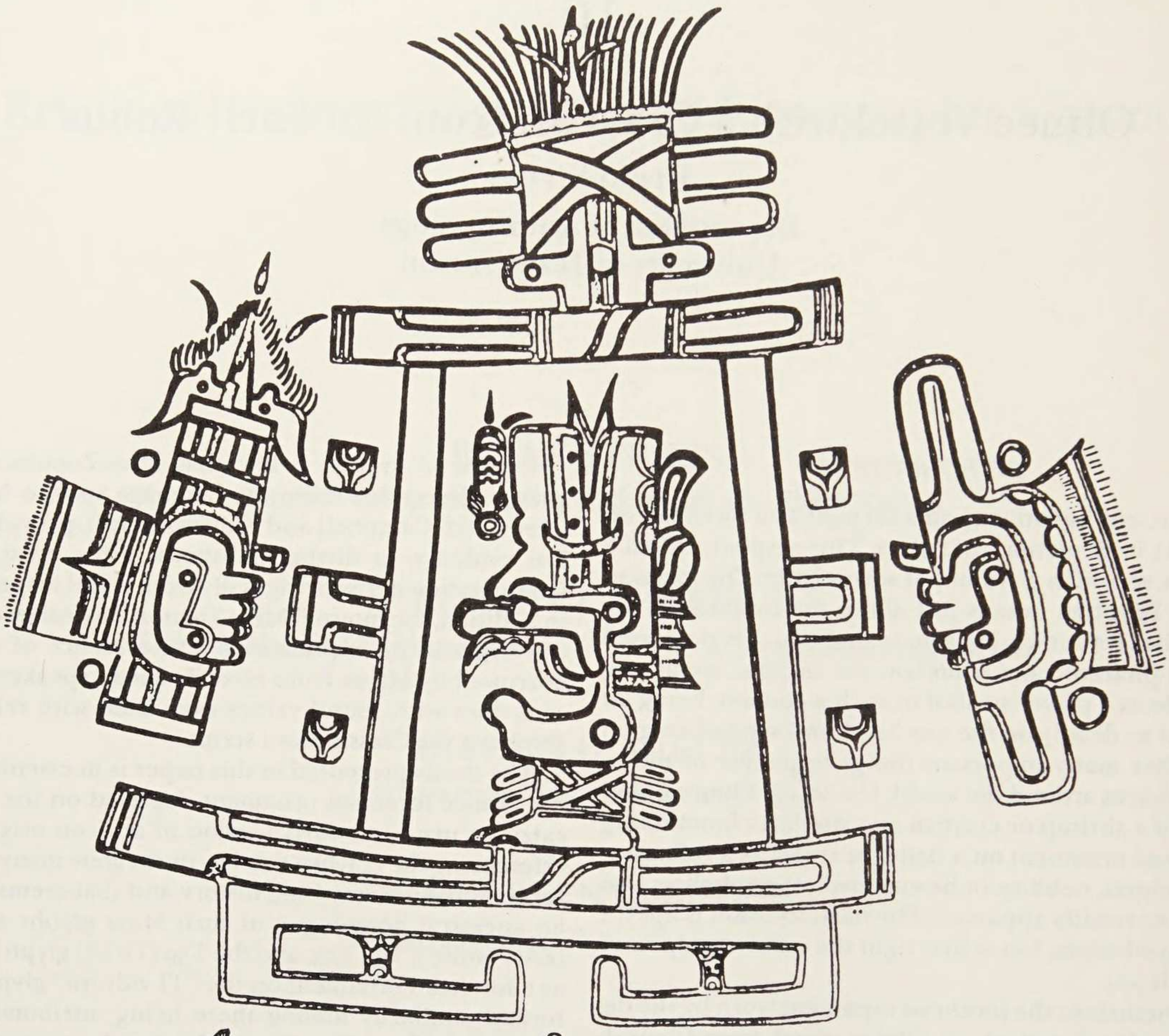
[1]This paper has benefited from comments by Victoria Bricker. Mixe-Zoquean sources utilized in this paper are Clark and Clark (1974), Schoenhals and Schoenhals (1965), Van Haitsma and Van Haitsma (1976) and Harrison et al. (1981). Nahuatl words used here are cited from Swadesh and Sancho (1966). Maya sources include individually cited works and fieldwork conducted between 1967 and 1982.



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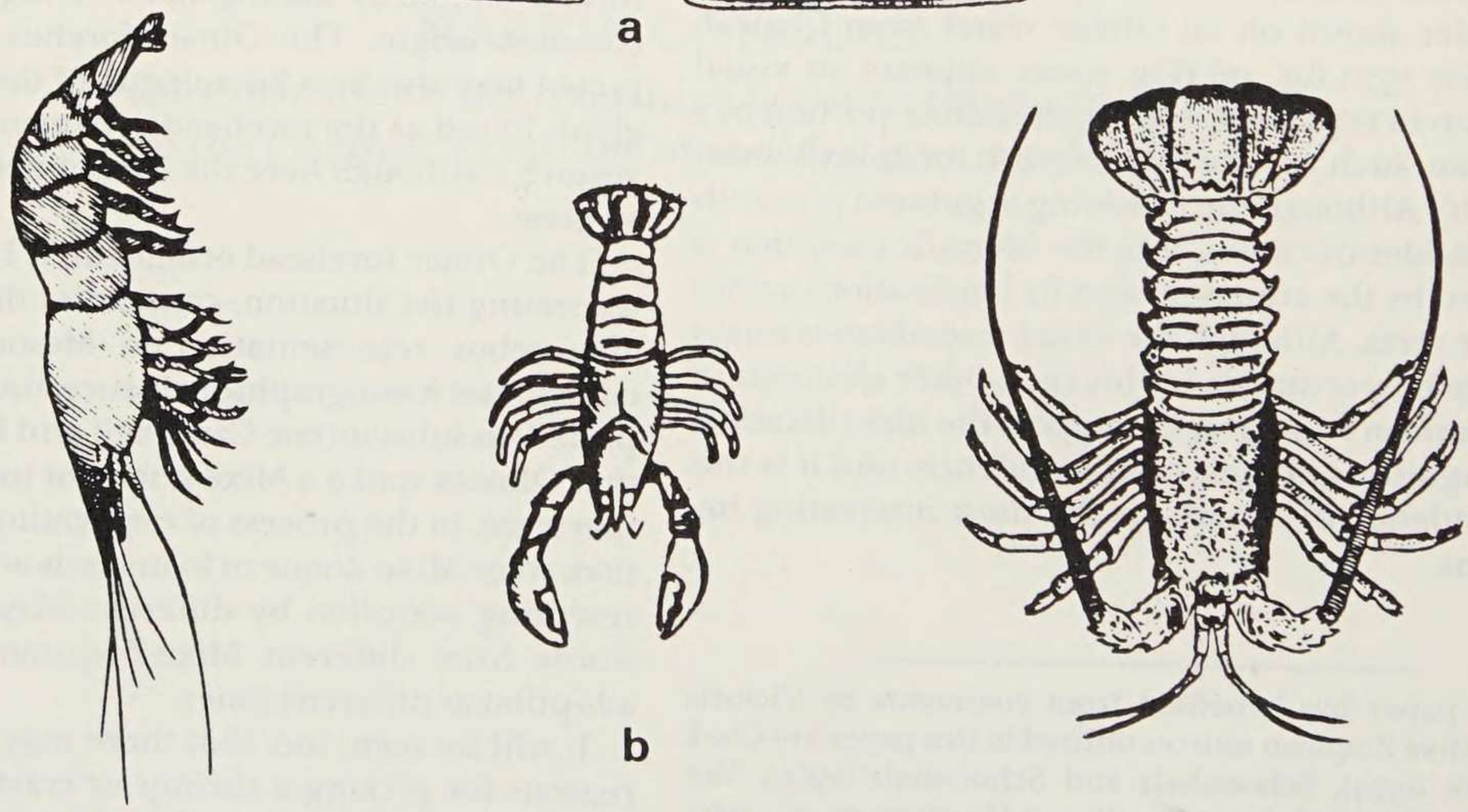

b

Figure 10-1. (a) Olmec vessel from Chalcatzingo with deity head/mask and "shrimp" forehead ornament (after Gay 1971); (b) shrimp, spiny lobster, and crayfish (after Harrison et al. 1981:273).

dictated the rebus usage. It is not, however, simply an icon representing a crayfish that has symbolic content related to nobility based solely on Olmec conventions of value placed on this crustacean. It is proposed here that the shrimp/crayfish representation is in fact a rebus. It is recognized that the notion of rebus is most obviously associated with a writing system; but in the case of the Chalcatzingo urn the rebus is being used in an iconographic rather than a glyphic context, suggesting thereby the context in which other antecedents to glyphic script are likely to be found.

Rebus

A rebus usage is the representation of a word by depicting a homophone of it—that is, by depicting something else labeled with a similar sounding word. Rebus communication takes place, one might say, when something easier to depict is employed for similar sounding words that are more difficult to represent graphically. For example, if we were to use a picture of a chain-saw to represent the past tense of 'to see', the (chain-) saw would be a rebus for the word 'saw'. The Maya script and some attendant iconography is known to employ the rebus principle (Schele 1986).

A well-known example of such rebus use in the Maya script is the glyph known as T59 (TI/TA), the numerical identification of glyphs referring to Thompson's 1962 catalogue of Maya glyphs (Schele 1986). This glyph apparently depicts a torch (Yucatec Mayan *tah* 'torch, pitchpine') and in the Classic Maya inscriptions (ca. A.D. 150–900), it represented a locative preposition of similar sound (*ta* 'to, at, on, into') (Mathews and Justeson 1984). The rebus nature of this glyph is compounded by the fact that it is also found as the forehead ornament of a vulture (Chol Mayan *ta? hol* 'vulture sp.', lit. 'excrement head') named after the excrement (Chol *ta?* 'excrement') with which its head is associated due to its eating habits (Mathews and Justeson 1984:201).[2]

Such use of one word to stand for another that sounds like it occurs in the nonvisual mode as well, in ordinary speech. Here, it is called punning, particularly if the words involved are nearly, rather than exact, homophones. Mayas are well known for punning (cf. Bruce 1979:345–46; Roys 1965:xix–xx; Burns 1983). There is not enough information on Mixe-Zoqueans to know what part punning plays in their speech; but I expect to demonstrate that Olmecs used the visual equivalent of punning, so it might be expected to play a significant role in the speech of their Mixe-Zoquean descendants as well.

The Argument

The argument herein develops from identification of the crayfish on an Olmec terra-cotta vessel, based on formal similarities and on the fact that clear examples of crustaceans can be found gracing the forehead area of images elsewhere in Mesoamerican iconography. It proceeds by demonstrating near homophony of words for 'crayfish' and 'goodness' in languages descended from the language of the Olmecs, which both argues for the correctness of the crayfish identification and shows the rebus potential of a depicted crayfish standing for the concept 'goodness'.

Then some Maya words for 'crayfish' (and related crustaceans) that were borrowed from Mixe-Zoquean are presented to further illustrate that Mayan languages preserve evidence that their Olmec predecessors saw the crayfish as good or noble. Next, a name "shrimp-horn" for the hawk in modern Chol Mayan is seen to be inexplicable unless motivated by some Classic Maya association of a raptor with a crustacean forehead ornament, an association harking back to Olmec times. These data further support the original "crayfish" identification and introduce the notion of a Maya glyphic link to the Olmec rebus.

The argument continues by considering reasons independent of accidental homophony for Mixe-Zoqueans and Mayas to have seen crayfish or shrimp as representative of excellence or nobility, and it is concluded that there are such reasons, including the colors associated with these crustaceans. This part of the argument simply consolidates the association between concepts of 'crustacean' and 'excellence'.

Since it is a forehead ornament that is being identified as a crustacean and since some other Olmec forehead ornaments clearly represent maize, a sonic similarity between Mixe-Zoquean words involving maize and those referring to crustaceans is demonstrated. The conclusion is that depictions either of maize or of crayfish could refer in the same rebus fashion to concepts of excellence.

The next step in the argument is a recognition that in the Maya script the two forehead ornaments of a raptorial bird involve respectively (a) excellence or nobility (the "AHAU vulture") and (b) locatives. This sets the stage for demonstrating that there are strong sonic similarities between Mixe-Zoquean words for crayfish and shrimp and Mixe-Zoquean locatives, which itself suggests that pictorially a crayfish could have stood for a locative in the same way we know a later Maya forehead ornament glyph resembling the earlier Olmec forehead ornament identified as a crayfish in fact de-

[2] These eating habits have earned it the appellation "excrement head" in South America (Roe 1982); and its behavior has found a place in folklore, as, for example, in an Embera tale of the vulture and the basilisk lizard (Stephanie Kane, personal communications).

noted a locative preposition. This, of course, also argues for a connection between Mixe-Zoquean (Olmec) iconographic rebus representation and the Maya script in that we are dealing in both with the same entities and the same functional meanings.

The argument continues with a consideration of the excellence (sovereignty) implied by the raptor on which the AHAU forehead ornament can be found and of the glyph for the color white (T58 SAK 'white') which is almost identical to the locative TI glyph and is named by a word sonically very close to a word for an animal that can be confused with the crayfish. It is shown, too, that although the AHAU glyph is different from the crayfish icon, the Aztecs' glyphic counterpart of the AHAU glyph is very similar in form to it. These considerations provide further evidence of a connection between Mixe-Zoquean (Olmec) iconographic rebus representation and the Maya script in that we are dealing in both with the same formal entities and the same functional meanings.

A discussion section briefly recapitulates the conclusions of the rather involved argument, then compares the Chalcatzingo urn to a posited Early Classic Maya counterpart vessel, identifying the crayfish counterpart on the latter, and finally discusses the notion of rebus. The conclusion outlines the argument of the paper, its conclusions, and its implications.

CRUSTACEAN ICONOGRAPHY

In the Mexican highlands of Morelos, the Olmec site of Chalcatzingo is well known for its huge relief murals on stone, and it is the original provenience of a large urn depicting the disembodied head of a deity, perhaps a maize or fertility deity. This urn from Chalcatzingo provides the most detailed view of a forehead ornament that is found in more stylized versions on other examples of Olmec portable art. The forehead ornament found on this large cone-shaped urn rather closely resembles the edible portion of a crayfish or similar crustacean when compared to other such representations.

A rather less naturalistic depiction of the same forehead ornament is found on an Olmec celt of unknown provenience (Fig. 10-2a). Still more abstract is the forehead ornament on a celt from Tlaltenco (Fig. 10-2b). This version shows the forehead ornament to consist of three essential parts. The bottom is a dotted circlet, the middle is a small number of horizontal lines surmounting the circlet, and the top is a vertically oriented bifurcation. These stylized forms can be seen in more detail and more representationally on the Chalcatzingo urn's forehead ornament, where one can make out both legs and platelets of the crayfish depicted. To sum up, the forehead ornament *looks* like a crayfish.

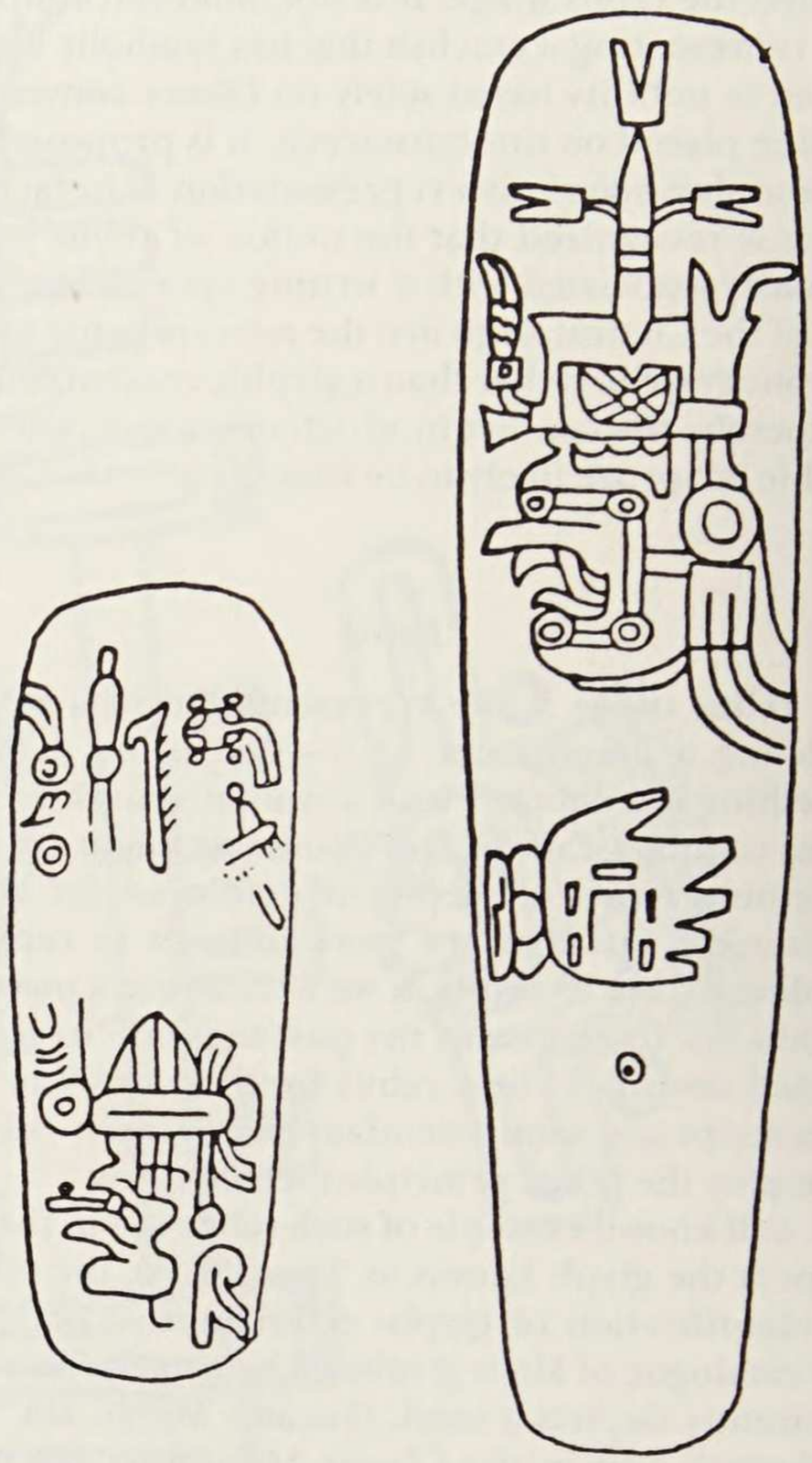

Figure 10-2. Variants of the Olmec shrimp/crayfish forehead ornament. (a) Celt from Tlaltenco (after Joralemon 1971:fig. 34); (b) celt of unknown provenience (after Covarrubias 1957:fig. 33).

There is also even more explicit iconographic evidence of crustaceans pictured in the head area to be found in Mesoamerican iconography. For example, an unmistakable crab is depicted on Bilbao Monument 1 attributed to the Classic period from the Santa Lucia Cotzumalhuapa area of Pacific coastal Guatemala. It rests atop the head of the personage depicted on the monument.

A Late Preclassic zoomorph altar at Izapa, located in the Pacific coast piedmont of Chiapas near the Guatemala border, is identified as a realistic crab by Norman, who interprets it as a fertility symbol, citing Mesoamerican mythic and other references as evidence for fertility associations of the crab (1976:244–45). A jade from the cenote at Chichen Itza in Yucatan, Mexico, depicts a huge crab upon which stands a deity or

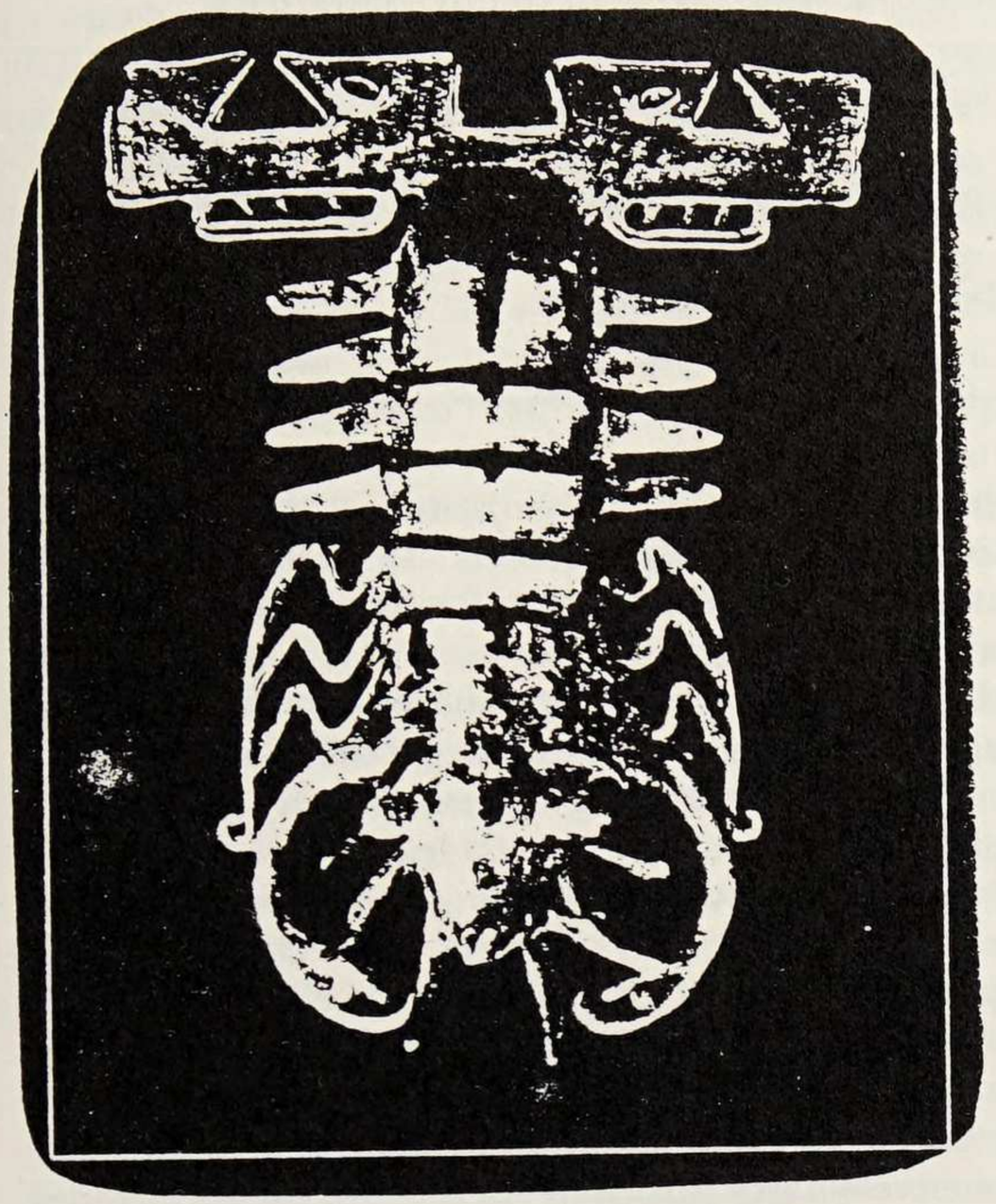

Figure 10-3. Costa Rican gold spiny lobster.

ruler. The jade has been attributed to Terminal Classic times, and is identified as coming originally from the Pacific coast, which is where the Bilbao culture is located (Coggins and Shane 1984:59).

The Classic Maya themselves are known to have had some iconographic interest in crustaceans, as evidenced in the Bonampak murals of Chiapas where human individuals are dressed as crabs or crayfish; and we find Costa Ricans depicting realistically the crayfish and the spiny lobster (Fig. 10-3) in gold. Even up in the valley of Oaxaca, Mexico, the Lapida de Bazan shows "skyjaws" with stalked eyes and crustaceanlike arms suggesting a crustacean model for the representation (Fig. 10–4).

In summary: (a) On the Chalcatzingo urn the forehead ornament looks like a crayfish when compared with other representations of crayfish; (b) The forehead ornament looks like the forehead ornament of what is now seen as a vulture in the Maya script; and (c) crustaceans are depicted elsewhere in Mesoamerica during various time periods and are even depicted as a forehead ornament. The crayfish, one of several crustaceans depicted and eaten by Mesoamericans, could thus have been of considerable significance to the Olmecs, possibly relating to fertility, and is the apparent referent of a forehead ornament portrayed on the Chalcatzingo urn.

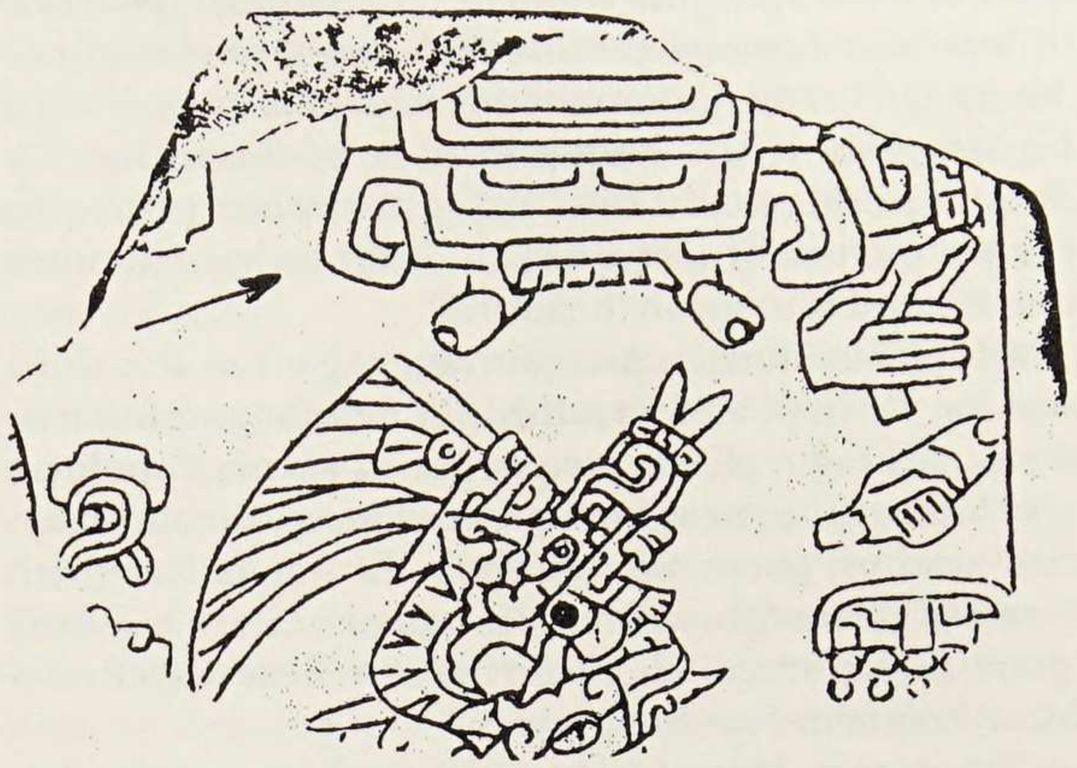

Figure 10-4. Lapida de Bazan, from Monte Alban (after Marcus 1980). Arrow to "skyjaws."

BEAUTIFUL CRAYFISH OR SACRED SHRIMP

Checking the names for crayfish and shrimp in Mixe-Zoquean languages—assumed to be the descendants of the language of the Olmecs—it was found that these names were homophones and near homophones for words designating such concepts as 'beautiful', 'good', and 'exalted', suggesting that the depiction of the crustacean was being used rebus fashion to indicate such concepts as 'sacred', 'noble' or 'beautiful'; and the structural context of its application indicated that the concept was supposed to apply to the ruler or deity depicted on the vessel.

Mixe-Zoquean Languages

Mixe-Zoquean languages include those called Mixe, those called Zoque, and those called Popoluca. Two of the Popoluca languages belong to the Mixean grouping and two belong to the Zoquean. Campbell's classification of the Mixe-Zoquean languages (1979:927) includes four separate groups of the Mixean branch: (1) Veracruz Mixe (including Sayula Popoluca and Oluta Popoluca), (2) Eastern Mixe, (3) Western Mixe, and (4) Tapachultec (extinct). The Zoquean branch includes four groups: (1) Chiapas Zoque (including Copainala Zoque), (2) Veracruz Zoque (including Texistepec Popoluca and Sierra Popoluca), (3) Oaxaca Zoque, and (4) Tabasco Zoque. These languages have diverged from a common proto-Mixe-Zoquean ancestor that existed sometime before 1500 B.C. (Campbell and Kaufman 1976).

Copainala Zoque, of the Zoquean branch of Mixe-Zoquean languages, has the word *sas* referring to the crayfish known in Spanish as the *chacalin* (which is defined as a freshwater shrimp, *camaron de agua dulce*), a

term derived from the Nahuatl term *chakalli* [chacal-l-li] '*especie de camaron que vive en los lagos en el centro de Mexico*').[3] Nearly homophonous with this Zoque word for 'crayfish' is the Zoque word *sa?sa* 'beautiful'.[4] A Zoque speaker could thus, using the rebus principle, draw a picture of a crayfish in order to have another understand it to mean 'beautiful'.

Oluta Popoluca, a Mixean language, has the word *ooyo* for 'shrimp' and 'crayfish'.[5] A near homophone in the same language, *oya*, means 'good'. Sayula Popoluca, also Mixean, has near homophones in *ooy* 'shrimp, crayfish' and *oy* 'good, fine'. Copainala Zoque's cognate form *oye* means 'good, fine'; Totontepec Mixe *Oy* means 'good, fine, correct'. These are in fact reflexes of a Proto-Mixe-Zoquean **oye* 'fine, good'.

Totontepec Mixe *kAA?xm* 'shrimp'[6] has a near homophone in *kAhxm* 'exalted, up above, tall, height'. Given this Mixe sound similarity with respect to a word for shrimp, let me add to that the fact that there are combinations of a "shrimp" or "crayfish" word and a sonically similar word meaning 'good' or 'beautiful' in Popoluca and in Zoque; and this is despite the fact that the different "shrimp" and "crayfish" words are etymologically completely distinct in three representative Mixe-Zoquean subgroups.[7] Table 10-1 summarizes this kind of sound similarity for three different Mixe-Zoquean languages.

Table 10-1. Mixe-Zoquean sound similarities.

Zoque	sas	'crayfish'
	sa?sa	'beautiful'
Popoluca	ooy	'shrimp/crayfish'
	oy	'good, fine, nice'
MIxe	kAA?xm	'shrimp'
	kAhxm	'high, exalted'

It is possible, then, to conclude that Mixe-Zoquean languages reflect some cognitive, symbolic, or semantic connection between 'goodness', 'beauty' or 'nobility' and the shrimp and crayfish (at least between the *words* for "shrimp" and "crayfish"). At the minimum, one can say that there is a punning connection (or rebus capability) between 'crayfish' and 'excellence' in Mixe-Zoquean languages. And that is enough by itself to suggest that a forehead ornament (1) strongly resembling the edible portion of a crayfish, and (2) located on an Olmec vessel in a position—in front of the forehead—where one expects to find iconographic qualifiers (particularly of goodness, sovereignty, or nobility) of the personage whose forehead is represented,[8] and (3) relating to a previous culture whose iconographic conventions show considerable continuity of formal

[3]The orthography employed herein is the same for all languages cited, for purposes of comparison, except when a word in enclosed in brackets. It is a normalized phonemic orthography, deviating from Amerindianist practice in that *A* stands for shwa (the mid-central vowel) and *ch* stands for the dental affricate ʧ. Herein also, *x* indicates the post-alveolar voiceless groove fricative (or sibilant) known as "esh," *j* indicates the voiceless velar fricative that in the IPA is given as *x*, and *N* stands for ŋ (the engma). *O*, employed only for Totontepec Mixe words stands for /o/ (the "open o," a low back rounded vowel) and *U* (also employed only for Totontepec Mixe words) is close phonetically to ɨ (the "barred i," a high central unrounded vowel), which is in morphophonemic alternation with *u* in Totontepec Mixe (Schoenhals and Schoenhals 1965). When enclosed in brackets, a word is given herein exactly as it appears in the source cited for it.

[4]Yucatec Maya has a word *sas* 'light, clarity' that could represent an earlier borrowing from a Zoquean language. Had it been a Mixean language donor, the *s* would have been *x*. Apparent cognate forms referring to brightness, transparency, and clarity exist in the Mopan and Itza languages of the Yucatecan language family, but apparently not in the Cholan family.

[5]Oluta Popoluca and Sayula Popoluca sources give 'camaron' as the meaning for *ooyo* and *ooy*, respectively. These same words, with preposed qualifiers, are given for '*camaron reculador*', which in the Isthmus of Tehuantepec refers to the crayfish.

[6]The Totontepec Mixe live far inland and at a high altitude. It is difficult to be certain about the meaning for this word that is given a Spanish gloss of '*camaron*', although it is true that another, but similar, word is given in the Totontepec Mixe dictionary for '*chacalin*/crayfish'. That word is *kA?Am* '*chacalin, chacal*', which sounds similar to and is perhaps derived from Totontepec Mixe *kA?m* 'in the hand'.

[7]Copainala Zoque has *kAsmA* 'above, tall, high/*arriba, alto*', allowing a reconstruction of Proto-Mixe-Zoquean **kAAsmA* 'high, up above', whereas the Totontepec Mixe word for 'shrimp', *kAA?xm* apparently has no Zoquean counterpart to allow for reconstruction. The conclusion is that the latter is a later innovation, possibly derivationally related to the word for 'high, above'. The semantic difference may seem great between 'shrimp' and 'high, above, exalted', but part of this paper's argument is that these concepts are interconnected, both through sound similarity and through symbolic association, so a morphological relationship (i.e., derivational) may not be discounted.

[8]Maya use of the forehead ornament and other kinds of headdress in iconography and in the script is well documented, and the "sovereignty" by dint of the symbolic (or phonetic) qualities of the ornament or headdress seems to be well established. Of course, the Egyptian example is additional evidence for the correctness of an intuited feeling that things qualify adjacent or connected things and that the iconographic qualifications of a ruler or god are likely to represent positive values and are likely to be placed on or near the head. Maya iconography demonstrates the use of attributive icons in various places on the body that signal rather specific meanings, as, for example, with the triple-knot bloodletting theme.

characteristics with the Maya iconography and script in which we find the rebus principle utilized, and (4) also relating to a culture whose descendants use punning wordplay serves a rebus function in that context.

Two bits of evidence point to *oy* as the most likely reading of the Olmec forehead ornament, although there is room for other conclusions: (1) the root *oy* is found in almost every Mixe-Zoquean language, and it means minimally 'good, fine'; and (2) even though there is today no known Maya reading of *o* or *oy* for the glyph T59 (ti), Landa's "alphabet" has a glyph almost identical to the codical version of T59 to which he gave the sound and letter value *o*. This glyph is visually more like T59, in fact, than is the glyph for which Landa gave a value of *ti* (cf. Stross 1982:97–99).[9] There appears to be no iconographic source in Mayan languages for a sound value of *o* for T59. Huastec's *oy* 'crayfish', referred to below, was surely borrowed from a Mixe-Zoquean language, and they are too distant from other Maya groups to have been involved in development of the Maya script.

Mixe-Zoquean Loans to Mayan Languages

The homophony and near homophony in Mixe-Zoquean languages between a crustacean name and 'excellence' helps to explain why a crayfish or shrimp might be used as a forehead ornament to express the concept of nobility: that is, minimally for its rebus capability. In Mayan languages the words for crayfish and shrimp give substantiating evidence for this conclusion and also point to Mixe-Zoquean sources for the connection between these crustaceans and 'excellence'.

Huastec Mayan, for example, appears to have borrowed its term *oy* 'crayfish/*especie de camaron que vive en los pozos*' from a Mixe-Zoquean language. It is not possible to say which one, although today it is the Popolucan (Mixean) languages that have the shrimp/crayfish words of the appropriate sound value. The word was borrowed long enough ago for Huastec to have developed the derived form *oyiyiil* 'medium red, brown/*moreno o medio rojo*'.[10]

Lacandon Mayan has the word *masaam*, or *Ah masaam*, 'crayfish'. The word would seem to have been borrowed from a Mixe-Zoquean language.[11] Copainala Zoque has, for example, *masan* 'holy, sacred' (cf. Proto-Mixe-Zoquean *maasan* 'holy'). The borrowing would appear to have been accomplished prior to a word final $n > m$ sound shift in Lacandon such as affected also *ayim* 'crocodile', which comes from a previous *avin* 'crocodile'.

Chol is in the Mayan subgroup most likely to represent the language in which the Classic Maya script was written (Justeson et al. 1985); and Chol has the word *xun* 'shrimp/*camaron*', which may refer to the crayfish.[12] Although this word for shrimp is restricted to Chol, its closest linguistic relative, Chontal, has *xun* 'trivet', a word for trivet that is restricted to Chontal. Without drawing any further conclusions at this time, one might note that the three elements of a trivet, associated implicitly with a central fire, have considerable symbolic potential for linkage with the forehead ornament—and other aspects of the headdress—in Olmec iconography, where one frequently finds constituent motifs topped off by three pendants or by a trident form. Fire, flames, and smoke also seem to be connected to titles for royalty and deity in Mesoamerica (e.g., Quiche *tepew* 'king, sovereign, fire'; and recall the origins of the sun and the moon in self-immolation by fire).[13]

The shrimp (or crayfish), like beauty, is intimately associated with the color red, as will be claimed below, and fire has a natural association with that color. Because of this and because of the limited distribution of

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[9] This is the case even to the extent that Mathews and Justeson use one of Landa's "o" glyphs to illustrate T59 instead of the glyph to which Landa assigned the value *ti* (1984:202, fig. 17e).

[10] It is possible that Huastec *oyo?* 'parrot/*loro*' represents a subsequent semantic transfer (with derivational suffixation) based on the parrot's red color, although it could also represent a previous borrowing from a Mixean language of a word like Oluta Popoluca's *ooyo* 'crayfish/shrimp', where the form was applied to a parrot when another word for 'crayfish' came to be borrowed.

[11] There are several reasons for assigning the Lacandon word loanword status: (1) Mayan languages do not in general have disyllabic roots (cf. Campbell and Kaufman 1976); (2) Mopan, also in the Yucatecan family, has *mAsAm* 'shrimp/*camaron*', but the vowels do not correspond as they would if the word were cognate with the Lacandon; (3) Bachajon Tzeltal has *masan* 'shrimp/*camaron*', and Tenejapa Tzeltal has *masan* 'meadow grasshopper' (Hunn 1976:293) and *masan chay* 'crayfish' (*chay* 'fish') (Hunn 1976:253), but the word was apparently not present in sixteenth-century Tzeltal, for it does not occur in the Ara-Guzman dictionary of Copanaguastla Tzeltal; (4) the meanings of the words—Maya 'crustacean species (crayfish or shrimp)' and Zoquean 'holy, sacred'—indicate the direction of borrowing also, for one would hardly borrow a word naming a crustacean and have it mean 'sacred, holy' unless that crustacean were sacred already, in which case a more mundane (and borrowed) word would likely be inappropriate. Even if one were to say that the Zoquean word for 'holy, sacred' was borrowed from a Maya word for 'crayfish' or 'shrimp', the conclusion would have to be that it is the Mixe-Zoquean languages that reflect most directly a connection between the crustacean and excellence, holiness, or sacredness.

[12] We cannot be sure whether *camaron* here refers to crayfish or shrimp without fuller specification from the source.

[13] Note also Quiche *q'alel* 'a title (head of lineage, army, town, etc.)', and Tzeltal *k'alel* 'fire, hearth'.

xun in Mayan languages, it is suggested that the Chol word *xun* 'shrimp' may be borrowed from a Mixe-Zoquean language. In the Mixe-Zoquean language family, there are, for example, such reflexes of the apparently borrowed word's etymon as Sayula Popoluca *xuun*, *xunun* 'red earth/*tierra colorada*' and the derived form *xúnuk* 'fine, precious/*fino*', and Oluta Popoluca *xuhuʔn* 'red ocher, red earth/*almagre*'.[14]

Chol has a construction employing *xun* 'shrimp' that suggests a Cholan awareness—or at least a fossilized linguistic reflection—of both the iconographic use of a crustacean as a forehead ornament and also employment in the Maya script of the forehead ornament on a raptorial bird. This construction is *xun xuluʔ* 'hawk/*gavilan*', in which there is also a variant of Chol *xulub* 'horn/*cuerno*'. The construction thus reads, literally, 'shrimp-horn', saying that this bird has a shrimp for a horn (or forehead ornament).

In the Maya script a "horn" adorns the forehead of more than one animal (e.g., T758, the Xul animal), and that "horn" might easily be used to refer to any forehead ornament (Fig. 10-5). It is also important to note here that the raptorial bird that is represented in the Maya script in two variants (one having the TI forehead ornament, the other having an AHAU forehead ornament) has been seen both as an eagle and as a vulture (Thompson 1950:88; cf. Stross 1983:230–31) and also that the head of an eagle is almost indistinguishable from that of a hawk.[15] Calling the hawk "shrimp horn" is quite analogous to calling the vulture "excrement head" (the linguistic fact, in Chol *taʔhol* 'vulture') and more so to calling it "torch head" (the glyphic practice, based on *tah* 'torch'). In the former case, the hawk name "shrimp horn" could reflect glyphic practice directly,[16] but the name is otherwise inexplicable.

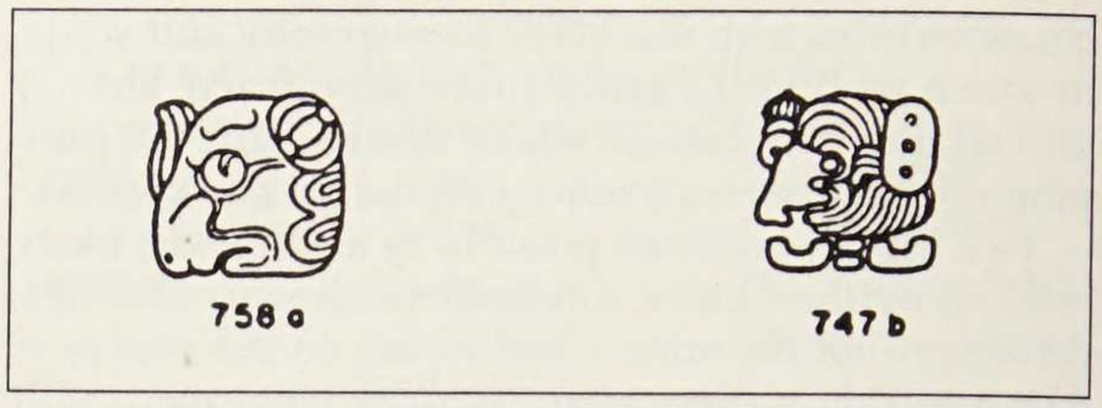

Figure 10-5. T758 the Xul animal and T747b.

If Classic Maya glyphic practice is reflected in Chol *xun xuluʔ* 'hawk' (lit., 'shrimp horn'), this could itself best be explained as derived from an Olmec iconographic source because it is in "Olmec" languages that the rebus association between 'good' and 'crustacean' is best motivated and in Olmec iconography that the association is earliest seen, and seen fittingly in the same forehead ornament location implied by the Chol name for hawk.

It seems at this point that words for shrimp and crayfish in some Mayan languages, seen to be borrowed from Mixe-Zoquean languages in which at least near homophony links the crustacean with the notion of excellence, strongly support—by their direction of borrowing and by the meanings of the donor words—the inference that Olmecs depicted excellence by means of a crayfish or shrimp forehead ornament. The homophony evidence and the loanword evidence also appear to link excellence to crustaceans more strongly than simply through a rebus potential. Some other perceptions linking these concepts may have been involved.

Red and Blue

Evidence from Mayan and Mixe-Zoquean indicates that crayfish, shrimps, and crabs seem to have had a kind of sacredness or beauty, for Mixe-Zoquean speakers at least, that goes beyond simple convenience for rebus usage. Some of this could be a result of earlier rebus usage, but it is possible that certain characteristics of the crayfish (and shrimp) were seen by Olmecs (and Mayas) as beautiful, desirable, noble, or even sacred. Two such characteristics relating to these crustaceans are the colors red and blue.[17]

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[14] Oluta Popoluca *xuʔni* 'dog' may be related here. For the Aztecs a "red dog was the proper companion for the soul on its voyage to the underworld" (Burland 1967:89), and Maya codices show the dog associated with fire, as when darting from the heavens bearing a torch. Copainala Zoque *sun* 'to want' should be cognate with Sayula Popoluca *xuun*, but the meaning appears to be too different to warrant the suggestion. I have argued, however, that in Mayan languages, at least, the concept 'to want' is bound up with notions of 'fire', 'head', and perhaps ultimately 'red' (Stross 1985b;87–89).

[15] There is some confusion in Mayan languages among the vulture, eagle, hawk, and owl, as can be seen when comparing cognates. Perhaps it is because all are raptors, among other things. Both hawk and owl share the same tail markings, making them both candidates for being the mythical "muan bird," and for that matter, though the muan bird is usually referred to as a screech owl, the Cholti word *muhan* means 'falcon, hawk'.

[16] Proto-Mixe-Zoquean **tahpi* 'hawk' has a first syllable sonically similar to that in Chol *taʔhol* 'vulture'. Although the similarity would appear to be fortuitous—on the one hand the Chol name can be explained on the basis of the vulture's eating habits, whereas on the other the Proto-Mixe-Zoquean form has apparently been around for much longer than the Chol one—such a coincidence might well have been noticed and appreciated by the maya glyph makers.

[17] In Mixe-Zoquean as in Mayan languages the colors blue and green are both labeled by the same term. Note also that this term can be used for 'unripe' as well (e.g., Copainala Zoque *tsuhtsu* 'green, blue, unripe'. In Aztec symbolism, blue

Copainala Zoque *masan* '*santo, sagrado*' is a reflex of one of the Mixe-Zoquean words for 'holy, sacred'. Another word, found in the Mixean branch, is reflected in Totontepec Mixe *tsap* 'holy, sacred',[18] which almost certainly comes from Proto-Mixe-Zoquean **tsap* 'sky, heavens', which is in all likelihood related derivationally to Proto-Mixe-Zoquean **tsap(a)ts* or **tsap(a)s* 'red'. Tzeltal Mayan is even more transparent in equating 'red' with 'beauty', for Tzeltal *tsahum* 'beautiful' is derived from *tsah* 'red'. Crayfish, shrimp, and crabs are notoriously red when cooked,[19] implying perhaps that the color of the Olmec forehead ornament is red and that it has heavenly beauty.[20]

Mammalian blood, the color of life, is red when it is exposed to the air and the hemoglobin protein in it is combined with oxygen. It is blue in color when not combined with oxygen, as can be seen where one's veins are close to the surface of the skin. In fact, one explanation of the English term "blueblood," meaning nobility, is that members of the nobility do not spend time in the sun since they do no work and, therefore, their veins show blue through lighter colored skin.

Crayfish, shrimp, and lobsters are truly "bluebloods" in another sense. Their blood is really blue or blue-green when exposed to the air. Their blood contains hemocyanin, a blue, copper-containing, oxygen-carrying protein pigment (analogous to the iron-based hemoglobin in humans and other mammals) that is found in many arthropods (especially crustaceans) and most mollusks.[21] So the crayfish, with colorless or pale yellow blood that turns blue (like the sky) when spilled, is red (like life, and the heart of the heavens) when cooked. These two colors pertaining to the crustaceans, and their relationship to heavenliness, sacredness, and possibly to nobility,[22] may be part of the reason for the use of the crayfish as a forehead ornament on the Olmec vessel under consideration and in some other places as well.

There are other possible reasons, apart from color, for placing high cultural value on the crayfish and other such creatures: (1) They may have represented some kind of staple or highly desired food for the Olmecs. (2) At least among some peoples of the world, certain shellfish, particularly oysters and shrimp, have a reputation (whether justified or not) for increasing fertility and desire. It is possible that the Yucatec's polysemy in *xex* 'shrimp, semen' reflects similar beliefs (Barrera Vásquez et al. 1980:940–41). (3) The crayfish and the shrimp have a basically bifid tail (recall the bifid tongue of a lightning-spitting serpent and the obvious importance that the cleft and resulting bifurcation had for the Olmecs), which actually has a smaller central portion seeming to grow out of the split, resulting in a trident pattern that is also an important Olmec motif.

More information on the cultural and conceptual significance of the crayfish and shrimp in contemporary Maya and Mixe-Zoquean societies is to be desired, but little is available. Bruce tells us that among the Lacandon Maya of today, the crayfish and shrimp seem to have no apparent symbolic associations with deity or nobility. To dream of shrimp or crayfish is a bad omen, representing tree roots in a freshly dug grave (Bruce 1979:245). To be sure, it is from the tree roots in the heaven of Hachakyum (the most important deity-culture hero) that the stars grow; and when we see a star fall, a tree has fallen in heaven (Bruce 1979:333), suggesting a level of interpretation through inference that might give the shrimp and crayfish some heavenly significance; but the fact remains that today these crustaceans are bad omens. Mixe-Zoquean language data

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represents water and red represents blood, alternative forms of the same life-giving intertransformable substance.

[18] As found, for example, in *tsap-tAhk* 'church, temple' (cf. *tAhk* 'house').

[19] In Cuban Spanish a person is called "*camaron*" if they are reddish or orangish of complexion. In Mexican Spanish the term *camaron* refers to one who is or looks sunburned.

[20] Recalling that the Mixe-Zoquean word for 'red' is derived from 'sky', which is also related to Mixean 'holy, sacred', note that Jacaltec *k'ulch'an* 'beautiful, pretty', with its *k'ul* 'good, fine, high quality' (cognate with Tzeltal *ch'ul* 'holy, sacred') and *ch'an* 'only, uniquely', sounds very similar to Tzeltal *ch'ulchan* 'sky, heavens'.

Kekchi *(x)chaq'al ru* 'beautiful, pretty' (1) has a morpheme *chaq'* that is a near homophone of a Cholan and Yucatecan word for 'red', *chak*, (2) sounds like the 'red' portion of a Kekchi word *chakalte?*, borrowed from a Cholan language, that refers to a tree like the *cedro*, the latter being noted for its good scent and its red color, and (3) sounds like the Spanish word for the crayfish, '*chakal, chakalin* [chacal, chacalin]', which is derived from the Nahuatl term *chakalli* [chacal-l-li] '*especie de camaron que vive en los lagos en el centro de Mexico*'; (4) the word *(x)chaq'al ru* could plausibly derive from Kekchi *chaq'* 'cooked, ripe'. It is also found in shortened form as *chaq'ru*.

[21] It is interesting to note in this context that *OchuN* the goddess of the moon and (fresh) water of Cuban *santeria*, derived from a West African deity, takes offerings of copper, which is reddish in color (Alira Ashvo-Muñoz, private communication).

[22] Note that purple and magenta are colors of royalty in the Old World and that purple is a combination of red and blue. In the Maya world, where we have evidence, the predominating red color of the background and the inside and outsides of buildings must have been important, but "blue, a sacred color, became the color for all things divine, sacred, precious—gods, beads, serpents' bodies, feathers, thrones, god's staffs, mirror cartouches, axes of God K, mat motifs, the *le* motif pertaining to accession, as well as divine infants . . . and superhuman persons. . . . Glyph blocks were always blue. Major portions of loincloths were blue" (Robertson 1979:166). Blue is also well known to be the color of sacrifice for Mayas.

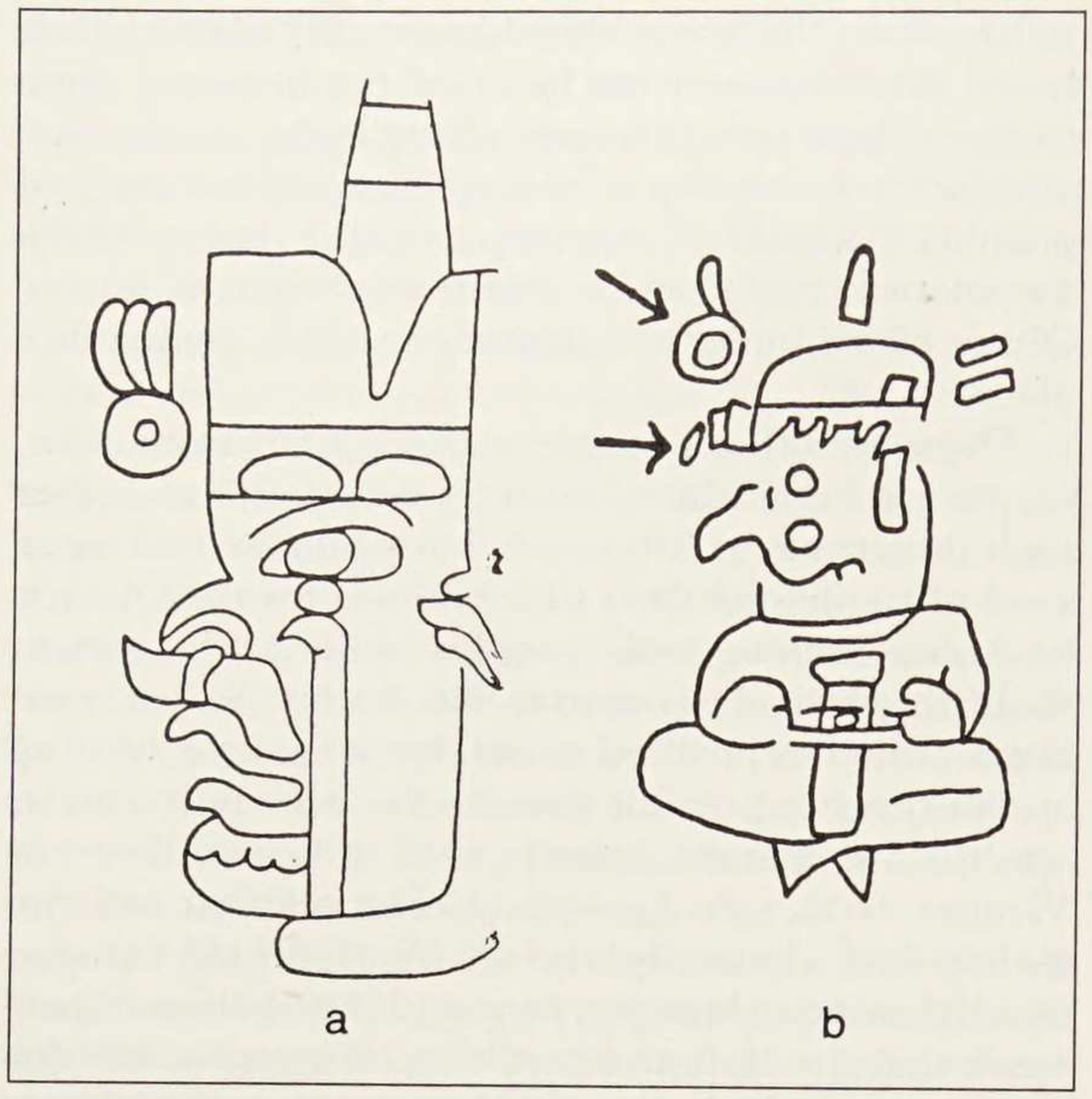

Figure 10-6. (a) Celt from La Venta, Offering 2 (after Drucker et al. 1959:pl. 25); (b) celt from La Venta, Offering 2 (after Drucker et al. 1959: fig. 35).

suggest a great respect for the crayfish and the shrimp even today, and presumably they were well thought of in Olmec times also. We see, then, that there was a strong connection between crustaceans and excellence; and although it is still not completely understood why this should be the case, some possible reasons have been suggested.

MAIZE IN OLMEC HEAD ORNAMENTATION

Olmec iconography depicts crustaceans as head ornaments. This should be clear by now, given the evidence of formal resemblance, similar usage elsewhere in Mesoamerica, Mixe-Zoquean homophony, and Maya borrowing. Crustaceans are not the only kinds of forehead ornaments in Olmec iconography, however. Figure 10-6 shows what Joralemon has called a "seed corn" dot, surmounted in Figure 10-6a by a single featherlike element sprouting from it and in Figure 10-6b by three of these feather elements.[23] It will be noted that a similar circlet within a circlet is at the base of the shrimp/crayfish icon of Figure 10-1a.[24]

If the dotted circlet surmounted by the feather element represents seed corn sprouting, the image is nicely captured in the Totontepec Mixe word *weh* 'to sprout, split open (fruit), germinate' (cf. Proto-Mixe-Zoquean **we?* 'split open'; Copainala Zoque *we-tseh* 'shrimp [*camaron de mar*]'), which, it will be noted, sounds very like the Sayula Popoluca word *ooy* 'shrimp/crayfish', despite the rather different looking letters with which we represent the sounds. In this connection, recall the above-mentioned preferred reading of *oy* for the crustacean variant of the Olmec forehead ornament.[25]

Even if one is not prepared to accept the seed corn dots identified by Joralemon as just that, an easily identifiable ear of maize between two bifurcated leaves occurs as a forehead ornament on a celt/hatchet from El Sitio, Guatemala. It has glyphs on it and is strongly Olmec in style (Coe 1976:117) (Fig. 10-7). In overall form this maize-ear head ornament is quite similar to the shrimp/crayfish ornament, but it is clearly maize from the cornfield. Not easily explained, but nonetheless very suggestive of some sort of casual historical connection, is the fact that the Totontepec Mixe word *kA?Am* 'crayfish/*chacalin*' is quite similar to Mixe *kam* (Proto-Mixe-Zoquean **kama*) 'cornfield/*milpa*'. Compounding the suggestive similarities, we may also compare Totontepec Mixe *xA?Ax* 'young maize ear' to Zoque *sas* 'crayfish' and *sa?sa* 'beautiful' (noting that Mixe *x* corresponds to Zoque *s* and that Mixe lost the final vowels present in Proto-Mixe-Zoquean roots).

Table 10-2 summarizes sound similarities linking "maize" to the "crayfish/shrimp" and to "beauty." An additional near homophony is seen to associate maize (kernels) with fish.

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[23] Note Proto-Mixe-Zoquean **puuh* 'seed', **tAm* '(fruit) seed'. The former is somewhat similar to the *oy* value suggested for the shrimp/crayfish forehead ornament. The latter is somewhat similar to the *ta* sound value of the Maya glyph T59 as argued by Mathews and Justeson (1984). Such slight similarities are too tenuous to be used as evidence, but they may be dim reflections of information that can be useful in the future.

[24] The spiny lobster should be included here along with the shrimp and the crayfish (and perhaps the crab) as likely to have been important to earlier peoples of Mesoamerica. See the Lapida de Bazan from Monte Alban, Oaxaca, where the "sky jaws" that are pendant from the top of the slab have stalked eyes and incurving feeler legs (Fig. 10-4), and for Central America see the gold pendant from Costa Rica (Fig. 10-3) with the spiny lobster hanging from opposed crocodile heads).

[25] Denise Hernandez (personal communication) has suggested that the dotted circlet (sometimes called a "jade bead") of the shrimp/crayfish refers to water, the environment of the shrimp/crayfish, and notes that this bead is absent on the obvious maize-ear forehead ornament that is nonetheless similar in overall form to the shrimp/crayfish ornament. The very early Classic or Proto-Classic Maya Hauberg Stela, however, has what appears to be a maize ear on the ruler's headdress, and it surmounts a very clear dotted circlet or "jade bead."

Table 10-2. Sound similarities linking maize to the crayfish/shrimp and to beauty.

1.	seed corn dot sprouting	
	Mixe weh 'sprout (corn)'	Zoque we-tseh 'shrimp'
2.	cornfield	
	Mixe kam 'cornfield'	Mixe kA?Am 'crayfish'
3.	ear of corn	
	Mixe xA?Ax 'young maize ear'	Zoque sa?sa 'beautiful'
		sas 'crayfish'
4.	corn kernels	
	O. Popoluca Akx 'degrain maize'	O. Popoluca akxa 'fish species'
	S. Popoluca Akx 'degrain maize'	S. Popoluca akx 'fish'
	Zoque Aksi 'maize grains'	Mixe ahkx 'fish'

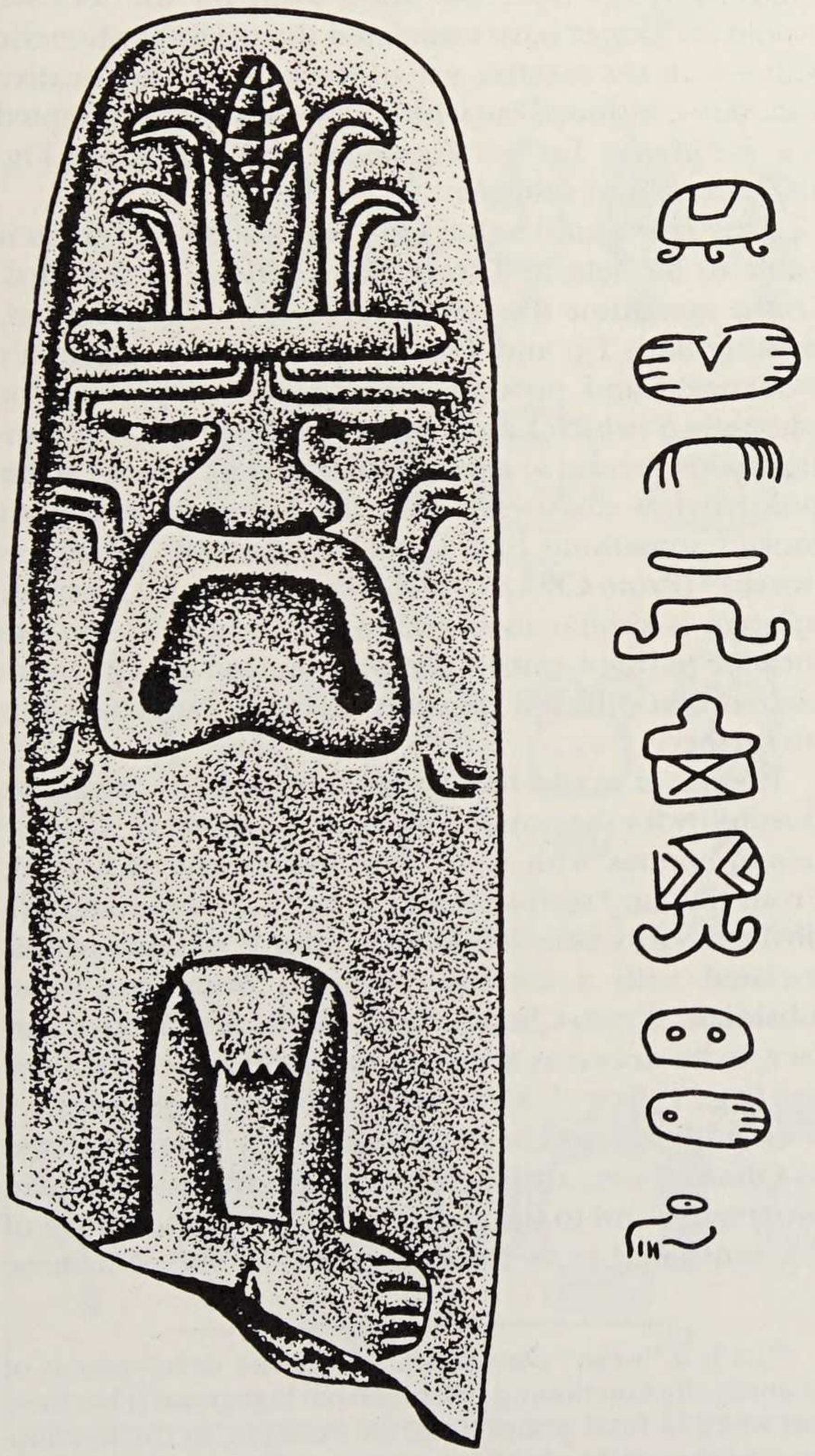

Figure 10-7. *Hacha* from El Sitio (after Navarrete 1971:78–80).

Given the sound similarities between Mixe-Zoquean words involving maize and those referring to crustaceans, I conclude that depictions of one could refer to the other and that depictions of either maize or crayfish could refer in the same rebus fashion to concepts of excellence. Thus, it is not surprising to find unmistakable maize depictions as headdress insignia and forehead ornaments in Olmec iconography. Crustaceans, fish, and maize can all be seen as symbols of fertility, which in turn are symbols clearly related to excellence and royalty (cf. Frankfort 1948; Frazer 1950; Schele 1986:21; Taube 1985).

FOREHEAD ORNAMENTS OF THE MAYA VULTURE

Whereas in Olmec iconography we have identified maize and a crayfish (or other crustacean) as head ornaments—relating them to the concept of excellence—the forehead ornaments that stand out in Classic Maya glyphic iconography are found on a raptorial bird; and the models from which they derive cannot easily be identified, although at least one of them, the AHAU glyph, clearly relates to excellence and the other might be viewed as modeled after a torch. In Maya terms, the T59 TI glyph functions as a locative pronoun and the AHAU glyph means 'lord, master, owner'. In the former we find evidence that a forehead ornament strongly resembling the Olmec crayfish represents a locative preposition in the later Maya script. We shall see that through a rebus principle involving homophony, a crayfish could be used to function as a locative also in Olmec iconography. The coincidence cannot be accidental, of course. It should be clear by now that the case for a causal connection is further strengthened by it.

The raptorial bird of the Maya script, T747, has been identified both as an eagle (Thompson 1950) and as a vulture (Schele 1986; Mathews and Justeson 1984), the latter being more accepted currently. This glyph has

two variants, T747a (the "AHAU vulture") and T747b (the "TI vulture"). The "AHAU vulture" has a forehead ornament that is the glyph T533 (AHAU) and is apparently interchangeable with this glyph. The "TI vulture" has a forehead ornament that is the glyph T59 (TI) (Fig. 10-8). Although T533 is not shown in Bishop Diego de Landa's well-known alphabet of Maya glyphs, there are two candidates for T59 TI, one labeled *ti* and the other labeled *o* (Fig. 10-9).

Landa, in fact, had two glyphs labeled *o*, both very similar. One is likely to represent T59 (although it also looks like T58) and the other resembles in significant respects the glyphs T51 and T53 (Fig. 10-10), which are both believed to constitute a single sign (Mathews and Justeson 1984:187). T51 and T53, seen in suffixed position, for example, on Yaxchilan Lintel 52 at B2 (Fig. 10-11a), are found on a much earlier jade plaque (apparently Maya and in the possession of Dumbarton Oaks) as a prefix at A4 (Fig. 10-11b), and may also be descended from the glyph on the Tuxtla statuette shown in Figure 10-11c. A clearly Olmec carving depicts a forehead ornament similar both to the latter glyphs mentioned in connection with T51 and T53 and to the Olmec forehead ornaments seen here as a shrimp/crayfish (Fig. 10-11d, e).

T59, T51, and T53 have been shown to "substitute for one another as prepositions, and they can substitute for one another on a purely phonetic basis" (Mathews and Justeson 1984:198). They

> appear to represent cognates of pM $*t^{y}i$, and apparently no other preposition. In all other contexts, the use of these signs is phonetic and, in the monuments of the Classic period, can be uniformly explained as representing the syllable *ta*. (Mathews and Justeson 1984:203)

Mathews and Justeson observed (1984:202), in addition, that the T59 TI locative glyph (resembling the Olmec crayfish icon) began its career in the Maya script attached to the raptorial bird:

> from Preclassic times until about 9.3.0.0.0, the only signs representing the locative preposition $*t^{y}ilta$ were T51 [including T53] and the T747b "head variant" of T59, with the T59 form attached at the beak or forehead; the absence of an isolated T59 preposition sign in earlier times suggests the possibility that T59 arose as a stylistic variant in the context of its attachment to the vulture head in T747b.

Summarized, this means that the T59 forehead ornament found on a "vulture head" as well as separately has a phonetic value of *ta* and serves a locative (prepositional) function related to contemporary Yucatecan and Cholan prepositions that have the sounds *ti* and *ta*. The glyph T59, or something exactly like it, has also been given a phonetic value of *o* in Landa's alphabet, but so far there are no known Maya glyphic contexts in which this latter sound value prevails. Furthermore, T59 as a glyph separate from the glyphic bird head functioning as a preposition on which it is a forehead ornament is a later development in the Maya script. The early Maya script saw only T51 alone or else the bird head with a T59 forehead ornament.

It is suggested that a plausible scenario explaining these meanings and phonetic values would include an ancestral Olmec "glyph" or rebus functioning icon with a phonetic value of *o*—or something similar like *oy*[26]—likely used later during the Late Preclassic by Mixe-Zoqueans as a locative or directional "preposition." The developers of the Maya script must have been aware during some period in its evolution of both the phonetic value and the locative function. Because the Mayan language differed from the Mixe-Zoquean language(s) at the time, the Maya word for the locative would no longer have associated the original phonetic value with the locative use of the sign, so the locative function continued but with a new sound value adopted for the glyphs T51 (cv. Fig. 10-10) and T747b (see Fig. 10-8), the sound value *ta*.

This new sound value later was added to T59 as it came to be detached from the forehead of the bird. In the meantime the sound value of *o* or *oy* persisted, making both T51 and T59 (for which there is Landa's evidence)—and possibly also T747b—polyvalent for phonetic *ti* (which Landa assigned to a glyph very similar to his second *o*) and *ta* and phonetic *o/oy*. At some point it was discovered that the forehead ornament looked something like a torch—Chol *tah* 'pitchpine (torch)' (Proto-Cholan **tAj*, Kaufman and Norman 1984:131) is similar in sound to the locative *ti*—so the locative perhaps came to be pronounced *ta*, a pronunciation that diffused into the Tzeltalan languages but no further.

Having *ta* would have been an especially attractive possibility for the pun-loving Maya, because *tah* is nearly homophonous with words for 'excrement' (Chol *ta?*; Proto-Cholan **taa?*)—recall the vulture's reputation (a bird currently believed to be a vulture was already associated with a locative forehead ornament)—and 'obsidian' (Proto-Cholan **tah*), all for a reflective surface, to be drawn as a rebus representative of the locative (e.g., T565a; cf. Mathews and Justeson 1984:203).

In addition, torches had apparently been depicted in Olmec times, although not necessarily as forehead ornaments, and to the glyph T59 as a representative of the innovated *ta* as locative could be added a more

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[26] /y/ is a "weak" consonant, and in the development of phonetically functioning syllables from logograms it has been lost when in final position, as, for example, in the development of the syllable /ka/ from a logograph representing Maya *kay* fish (cf. Bricker 1986:8; Campbell 1984:12; Closs 1986:230).

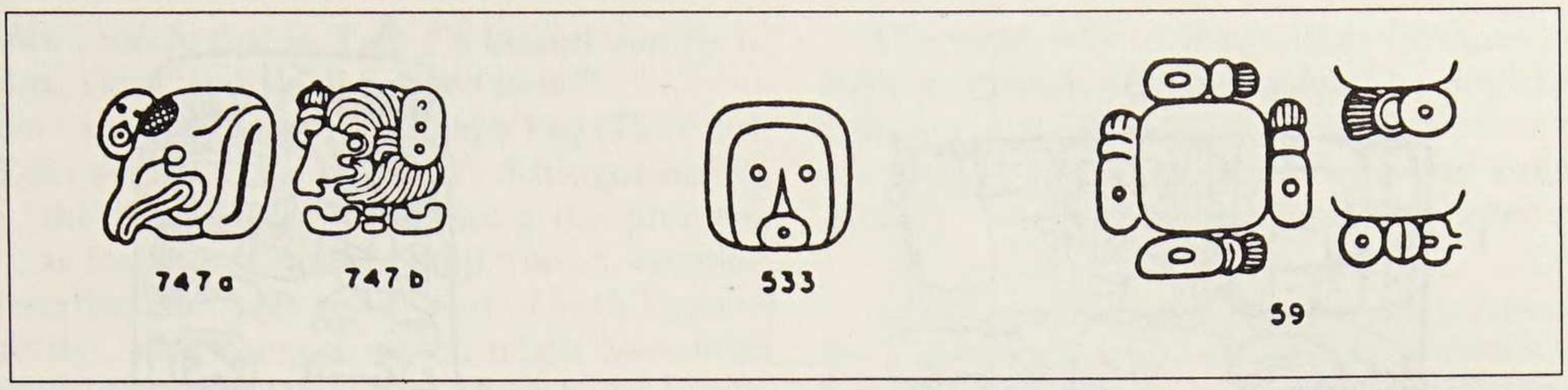


Figure 10-8. Glyphs T747a and T747b and T533 and T59.

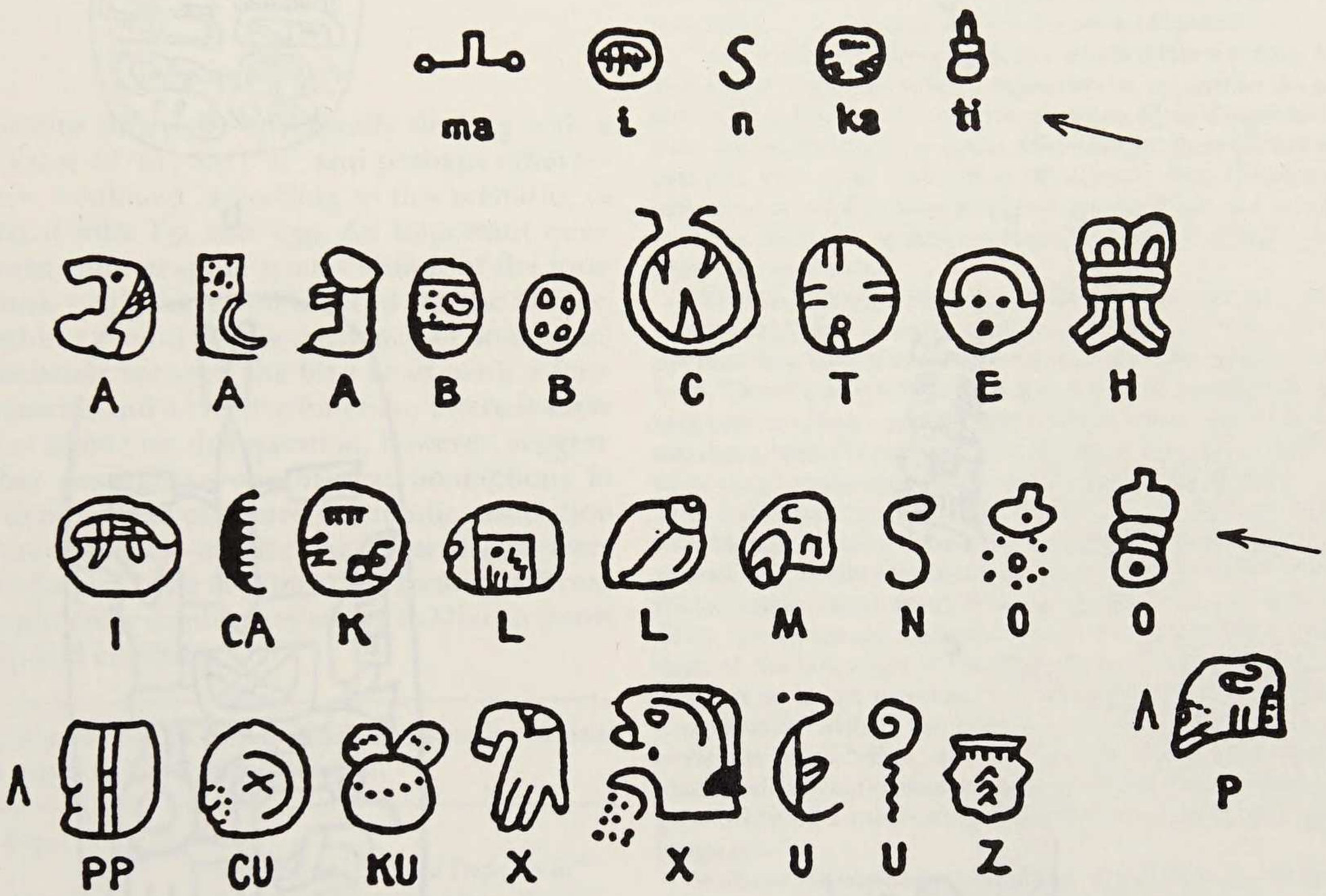


Figure 10-9. Landa's alphabet, with arrows showing *ti* and *o*.

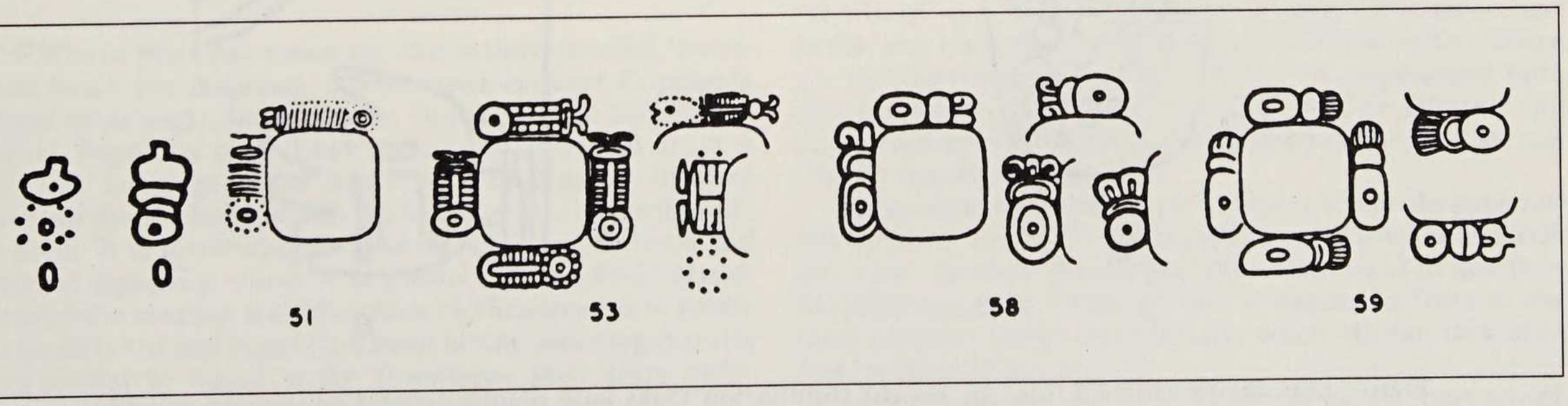
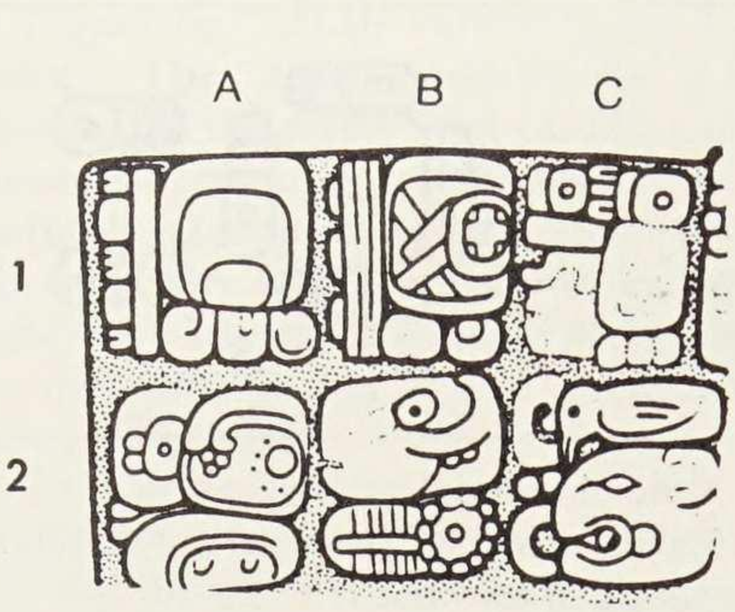
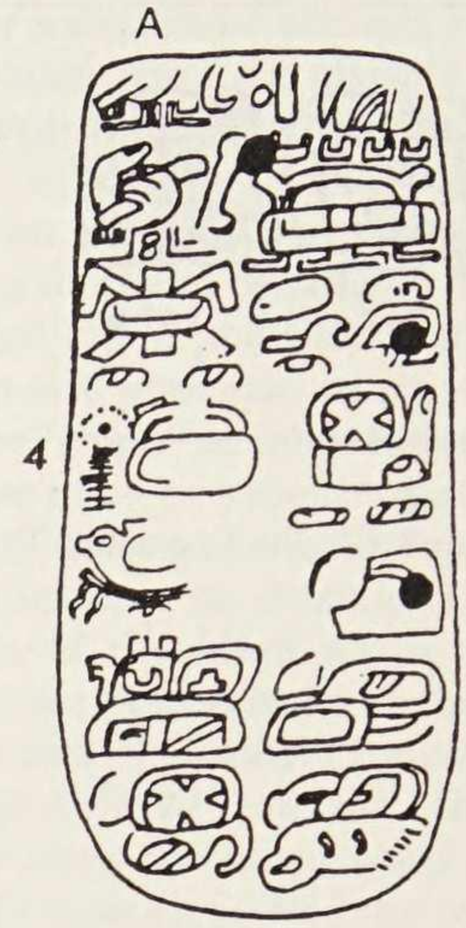


Figure 10-10. Landa's o's, arrayed next to T51, T53, T58, T59.



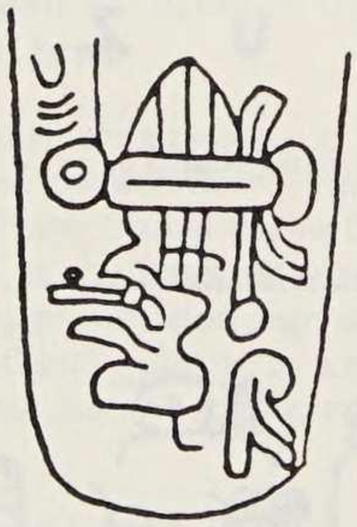
a



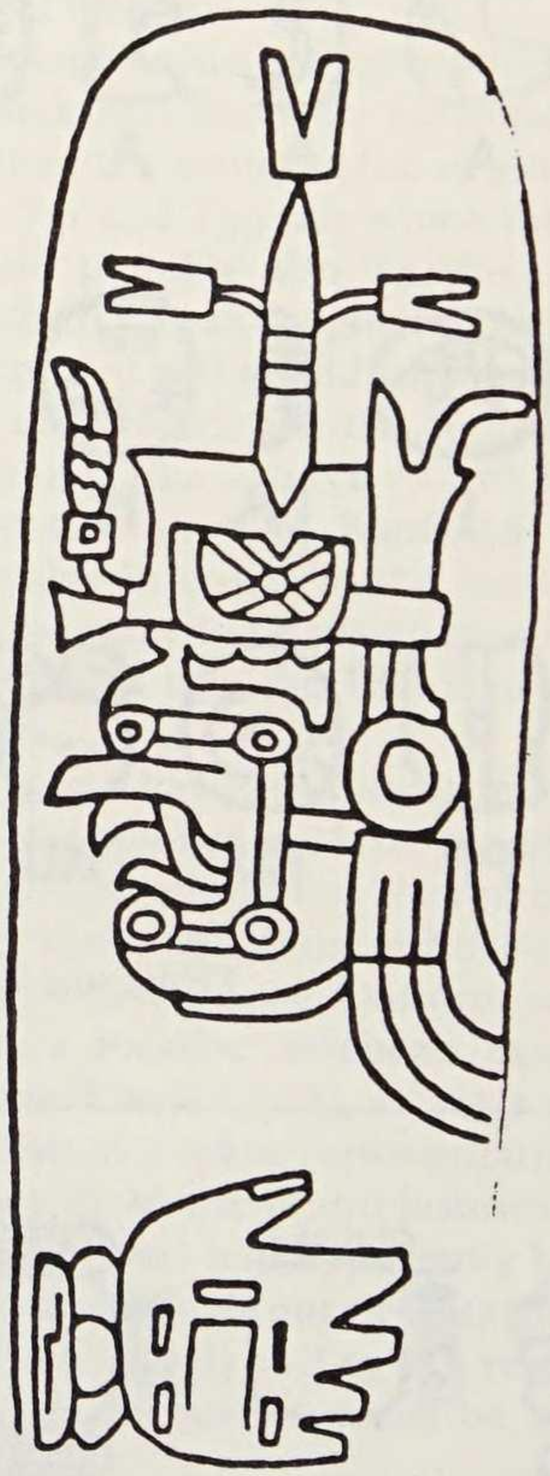
b



c



d



e

Figure 10-11. (a) Yaxchilan Lintel 52, B2; (b) Dumbarton Oaks jade plaque (after Coe 1976:fig. 17); (c) Tuxtla statuette glyphs (after Coe 1976); (d) Olmec celt (after Joralemon 1971:fig. 34); (e) Olmec celt after Covarrubias 1957:fig. 33).

clearly drawn torch: that is, T150 ("a bound bundle of sticks") with T122 ("smoke") prefixed to it.[27]

In a more speculative vein, perhaps T59 (TI 'to, on, at') and T58 ('white') were completely distinguished by this time, the latter possibly retaining the phonetic value *o(y)*, as found in Chol *hoy-* (adj) 'round, circular' (which describes the "jade bead" part of both T59 and T58 perfectly), a meaning to which might have been added the uniquely Cholan *ho?* (tv) 'to wash (the head)'. This *could* have led to the meaning 'white' that we know T58 came to have. But we shall see that two other avenues might have led to the association of "white" with the forehead ornament.

Locative Function

The locative function—specifically dealing with a semantic value of 'in', 'on', 'at', and perhaps others—would have continued, according to this scenario, to be associated with T51 and T59. An important question concerns how graphic symbolization of the locative function might have commenced for the Olmec. One possibility would be the existence of some symbolic association between the bird head (with a forehead ornament) and a locative function. There is some evidence available on this question, however, suggesting another possibility—one of near homophony in addition to or instead of a purely symbolic association between the concepts—and it comes most directly from Copainala Zoque. Table 10-3 illustrates locative suffixes, demonstrating how similar they sound to Mixean words for shrimp and crayfish.

Table 10-3. Similarities in Copainala Zoque locative suffixes to Mixean words for shrimp and crayfish.

Copainala Zoque	*Mixe*
-oyh 'in'	ooy 'shrimp' (Sayula Popoluca)[28]
-kAsmA 'above'	kAA?xm 'shrimp'; kAhxm 'high, exalted' (Totontepec Mixe)
-kA?mA 'below, under'	kA?Am 'crayfish' (Totontepec Mixe)

[27] Where the Chol name for the vulture is *ta?hol* 'excrement head', the Zoqueans call the hawk *tahpi* (cf. Copainala Zoque *tahpi* 'eagle, hawk'; Sierra Popoluca *tahpi* 'hawk'; and Sayula Popoluca *tahp* 'hawk'—perhaps borrowed from a Zoquean language). Note that several bird names in Mixe have *tsin* (homophonous with the word for 'pitchpine [torch]') in them. It is interesting to note the chart in Mathews and Justeson (1984:189) where it is shown that the Proto-Mayan form of the locative was **t'a* which in Huastecan is *ti*, Proto-Mamean is **tsi* and Proto-Quichean is **chi*, meaning that it is very similar in sound to the Totontepec Mixe form *tsiihn*, pronounced *tsii* '*ocote*, pitchpine, candle'.

[28] San Jose el Paraiso Mixe has an apparent cognate form in *-AAy* 'directional-locational motion'.

The table tells us that Olmec locatives could have been indicated in rebus fashion by depicting a crayfish or shrimp.[29] It follows that locatives can be thus associated with the crayfish forehead ornament depicted on the Chalcatzingo urn.[30] In order to appreci-

[29] Sayula Popoluca has an interesting locative suffix, *-huq-um* 'in, within'—the *q* being a morphophonemic alternant of *k*. It is not similar in sound to a word for shrimp or crayfish, but is to the Copainala Zoque word for 'vulture', *hu?ki*, which is also similar to the Copainala Zoque word *huhk* 'to smoke' from which the word for 'fire' is derived. This is once again the use of 'fire' in titles of nobility and power and the 'torch' notion attached in the Maya script to both the vulture (with its forehead ornament) and the locative preposition.

[30] Mixe-Zoquean languages, due to sound similarities, could also make use of a crayfish depiction to represent an auxiliary verb rebus fashion. Whereas many Mixe-Zoquean locatives are suffixed to the noun, Mixe-Zoquean auxiliary verbs precede the main verbs. It is of interest that Olmecs *could have* used a crayfish icon to signal an auxiliary and the Classic Maya *did* use a homologous symbol (the TI glyph) in auxiliary constructions.

There is a frequently employed construction in Chol using the auxiliary (or modal) plus a following *ti* (the "locative" preposition, where its function is not locational) plus a main verb. This Chol construction has a direct parallel in auxiliary constructions of the Classic Maya script, which have an auxiliary verb (T1.757 or T516:103), plus T59 TI or its substitutes plus a main verb (Josserand, Schele, and Hopkins 1985). This construction, although found also in Tzeltal, Kekchi, and Mopan, among other Mayan languages, is more typical of and commonly employed in Chol. The characteristic auxiliary construction, then, linking the Maya script to modern Chol, the language believed to be the most direct descendant of the language of the glyphs, wants explanation, for it appears to be an innovation. Although it can be explained functionally within the context of the split ergative characteristic of Cholan and Yucatecan languages (Barbara MacLeod, private communication), this does not rule out the possibility of a motivating influence from a Mixe-Zoquean language.

Without attempting to construct any scenarios, let us take note here of some coincidences. Note first that Chol, according to the description of Aulie and Aulie (1978:189), has a class of nominalized verbs that are of invariable shape. They are preceded by *ti* (elsewhere a locative) and the intransitive "auxiliary" *woli* 'to be' in the present progressive tense; and in the past tense they are simply preceded by *cha?len*. These are auxiliary constructions. It should be emphasized here that the auxiliary and the "locative" occupy different, although adjacent, positions in the construction. They are nowhere interchangeable.

Totontepec Mixe *oya*, which is similar to the shrimp/crayfish word, means 'to be able to, to fix' and is used as an auxiliary verb. Another Totontepec Mixe word used in auxiliary function is *tsAA?n* 'to go, go out' is similar in form to the Chol auxiliary *cha?len* (particularly when Mixean lack of *ch* and *l* is taken into account).

Sayula Popoluca has an auxiliary *oy* 'to go (past tense), possibly cognate with the Totontepec Mixe *oya* 'be able to, fix' and surely cognate with Oluta Popoluca *oyu* 'went (and

ate the connection being illustrated between the Olmec icon of Middle Preclassic times and Maya glyphs known as T51, T53, and T59, we need only remember at this point that in the Maya script locatives are associated with a forehead ornament greatly resembling the crayfish on the Chalcatzingo urn and that in at least one place it is given a sound value that could once have pertained to the Olmec crayfish.

The Ahau Vulture

With the discovery of the connection between locative function and the forehead ornament in both Olmec iconography and Maya epigraphy, it is time to turn our attention to the other "vulture" glyph with a forehead ornament, the "AHAU vulture." This glyph, sporting a forehead ornament consisting of the *ahaw* 'lord' glyph, carries a semantic value 'lord, master', which may be part of a Maya derived logographic value of *ahaw* 'lord'.[31] The Tzeltal name *aja?-us* 'king vulture' (cf. *us* 'vulture') parallels the "AHAU vulture" glyph by having the word for 'lord, master' in it.[32]

The analogous Mixe-Zoquean expression for 'king vulture' uses the word for 'white' as an attributive instead of the word for 'master'. Copainala Zoque, having the word *hu?ki* for 'vulture', refers to the king vulture as *popo hu?ki*. Totontepec Mixe, having the word *no?op* for 'vulture', refers to the king vulture as *pOO?p no?op*. Both of these names for the king vulture are based on the word for 'white', *popo* and *pOO?p*, respectively. This recalls the fact that T58, which so strongly resembles the T59 TI locative that we have seen may be related to the Olmec forehead ornament, has the meaning 'white'.

Furthermore, not only the meaning is relevant here but also the sounds. The Mixe-Zoquean word for 'white' (cf. Proto-Mixean *po?po*, Proto-Zoquean *popo* 'white') sounds very much like a Maya title meaning 'lord, chief'. The Maya title, perhaps referring to the *petate* 'mat' (Chol *pohp*), a symbol of rulership, is based on the word *pohp*.

Thompson (1971:107) mentions that the extension of the name of the "mat" symbol of Maya authority to a title meaning 'chief' is perfectly natural and points out the colonial Pokomchi dictionary entry *Ah Pop* 'chief'. Mathews and Justeson (1984:203) provided similar information regarding the reading of a glyphic title:

> Lounsbury (1973) argues cogently that the two signs comprising T168 are read **aj-* (T584) and *po* (T687a), and together represent a title roughly meaning 'chief, *cacique*, lord'. Lounsbury suggested that, at least originally, the term represented by this title was (ajpo). He also suggested that this title, documented only in Cakchiquel and Pocomchi sources, was a variant of the title (ajpop) (a cognate of **aj-pohp*), and there is ample evidence confirming that **aj-pohp* was indeed the underlying form of (ajpo) (Justeson and Campbell 1981).

The Mixe-Zoquean word *popo* 'white' representing the attributive that would be 'king' in the Tzeltal name *aja?-us* for the king vulture, also sounds like the root portion of the Highland Maya name for the twentieth day of the *veintena*, corresponding to the Lowland Maya day name *Ahau*, for which a glyphic representation was a depiction of the vulture.

That is to say, the Maya day name Ahau */ahaw/*, whose Classic Maya glyph can be the "AHAU vulture" (Schele 1986; cf. Thompson 1971:88), has a Pokomchi counterpart Ahpu */ahpu/* (Thompson 1971:68) and a Quiche counterpart Hunapu */hunapu/* or */hunahpu/* (Thompson 1971:68), sometimes translated 'one hunter', but just as accurately given as 'one lord'.[33]

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returned)', also used as an auxiliary. It is likely that a Proto-Mixean form **oy* '(auxiliary verb) went and returned' can be reconstructed. A similar sounding but functionally distinct form of interest here is Copainala Zoque *-?oy*, which generalizes the action of the verb root or changes a transitive verb into an intransitive verb.

Copainala Zoque has the form *tih-* 'to go' used as an auxiliary; for example, *tA?Ak tihu pyAhku mok* 'yesterday he went to get maize (and has already returned)', which of course sounds like the *ti* locative that in Chol follows the auxiliary in the present progressive tense. Copainala Zoque also has *sun-* 'to want' which is used as an auxiliary verb (cf. *sunba chAhku* 'he wants to do it'). This Zoquean auxiliary verb, if Mixean, would be *xun*, which is the Chol name for 'shrimp', is itself part of the name for 'hawk'. This could be related to Sayula Popoluca *xúnuk* 'fine, high quality', which may be related to *xuun*, *xuhun* 'red earth' and Oluta Popoluca *xuhu?n* 'red ocher, red earth/*almagre*'. Note that Chol has an unexpected *om* 'to want, desire' (the same meaning as in the Zoque auxiliary sounding similar to Chol's word for shrimp) and that we have a similar form in Copainala Zoque *-ohmo* 'in, within, inside of'.

In considering the coincidences in sound and meaning that we find between auxiliary constructions in Mixe-Zoquean, Chol, and Maya hieroglyphic writing, it should be remarked that the glyphs apparently, and understandably, deal with events in the past tense and/or completive aspect.

[31] The word *ahaw* can be etymologized, though speculatively, as **ah* 'male article' + **aw* '(to plant) seeds'.

[32] Note that Kekchi *ch'ina-us* 'beautiful, pretty' is composed of a word similar to Mixe *tsin* 'pitchpine, *ocote*, candle' (with the initial affricate glottalized as would be expected in parallel Mixean-Mayan words; cf. Stross 1982 and the Nahuatl honorific (and diminutive) term *tsin* (cf. also the Lacandon diminutive *chan*), and note that the Totontepec Mixe words for 'red-headed parrot' and for 'sparrow hawk' include *tsin* as a prefixed form. The meaning 'candle', found in Mixe *tsin*, is *no?a* in Copainala Zoque, which has a root that is similar to Totontepec Mixe *no?op* 'vulture', the bird in Maya script that is apparently carrying a torch as a forehead ornament.

[33] This is a day name whose Lowland Maya glyph can be the "AHAU vulture." Therefore, it is notable to say the least that the Quiche version of the day name sounds similar to

The Aztec glyph for the day Xochitl 'Flower', corresponding to Maya Ahau, strikingly resembles T58 and T59 as well as some of the Olmec forehead ornaments (Fig. 10-12). This might be shrugged off as coincidence were it not for the fact that all the twenty day-name *veintena* ritual months of Mesoamerica are demonstrably descended from a common ancestor (Caso 1967; Stross 1983:216). As it is, we must deem significant the fact that the Aztec day name glyph, whose Maya counterpart is Ahau (meaning 'lord, master'), looks very much like both the Olmec crayfish forehead ornament and the TI forehead ornament on the "TI vulture."[34]



Fig. 10-12. Aztec glyph for day name Xochitl.

Also of interest is the Mixe day name corresponding to Aztec Xochitl and Maya Ahau, which is [Jugwuih] */huk win/*. The *win* part must be related to Proto-Zoquean **win* 'face' or its proto-Mixean cognate **win* 'eye'. The first part of this Mixe day name might be related to Copainala Zoque *huki* 'vulture' (recall the Maya day name Ahau is depicted by the "AHAU vulture" glyph).[35]

Of the forehead ornaments of the Maya glyphic vulture, then, the TI locative glyph resembles in form the Olmec urn's crayfish forehead ornament, and in its locative function it combines a particular form and function in ways that are entirely compatible with the resources of the Olmec language (as interpreted through linguistic resources of today's Mixe-Zoquean speakers). Moreover, the Maya TI locative glyph closely resembles both the Olmec urn's forehead ornament and the Aztec glyph for the day name corresponding to Maya Ahau.

The Maya Ahau glyph, although it doesn't resemble the "crayfish" forehead ornament on the Olmec vase, points unmistakably to a meaning—'lord, master'—that (1) involves sonic resemblances between Maya words for 'lord, master' and Mixe-Zoquean words for both a locative and a crustacean[36] and (2) associates through mediation of Mixe-Zoquean languages the color white—as well as the vulture—with a Maya glyph form (T58) almost identical to the T59 TI/TA glyph.

White

We have seen above that the Mixe-Zoquean qualifier meaning 'white' in the name for "king vulture" corresponds to the 'king, lord' qualifier in the Tzeltal Maya name for that vulture and that the Mixe-Zoquean word for 'white' is almost the same as a Maya title meaning 'lord, chief'. We have also seen that the Classic Maya glyph for 'white' is almost identical to the TI glyph, which is itself very similar to variants of the Olmec crayfish forehead ornament that is shown here to refer to 'excellence, nobility'.

Because of these multiple linkages it is possible to say that in the Classic Maya mind "white" shares some cognitive characteristics with "excellence, nobility." And it is for this reason that a near homophone of the Maya word for 'white' is significant.

Victoria Bricker has brought to my attention the near homophony in Yucatec Maya between *sak* 'white' and *sak'* 'locust, grasshopper'. There is a parallel sonic similarity in Chol between *sAk* 'clean (white)' and *sahk'* 'grasshopper, locust'. Together these suggest an internal Maya connection of sound similarity between a word with meanings conceptually relatable to 'excellence, holiness' and the word for 'grasshopper'. For just that reason a grasshopper depiction has the potential for signaling concepts related to 'white', 'clean', and 'excellent'.

It remains to be shown that the grasshopper or locust is itself conceptually related to 'shrimp/crayfish'.

Proto-Mixean **nu?pu* 'vulture' preceded by the word for 'one' (*hun*), which sounds remarkably like Proto-Mixean **hAn* 'fire'. Recall that the "TI vulture" is supposed to be bearing a torch as a forehead ornament, so there is a certain appropriateness in the sonic parallelism between Proto-Mixe-Zoquean **no?* 'to kindle, to burn' and Proto-Mixe-Zoquean **nu?pu* 'vulture' (cf. Tzeltal Mayan *-nup'* 'to kindle, burn').

[34] There is a notable sound similarity between Totontepec Mixe *ooma* 'flower bud, to bud' and the Proto-Mixe-Zoquean suffixed locative **om* 'in, inside of', significant because Flower is the name of the Aztec day corresponding to Maya Ahau and because the AHAU glyph and the locative glyph TI are linked through association as forehead ornaments of the "vulture" in Maya epigraphy.

[35] It could also be related to Proto-Mixe-Zoquean **huuk* 'to smoke' (cf. Proto-Mixean **hokos* 'hot, warm'; Proto-Zoquean **hukAtA(k)* 'fire').

[36] Since Cholan and Yucatecan languages are the ones usually associated with the Classic and Postclassic Mayas, respectively, it seems significant that Cholan and Yucatecan languages have *yum* 'lord, master, owner' in addition to or instead of the *ahaw* or *ahpo* found in the other Mayan languages. We have seen the Mixe-Zoquean words of the general form *oy* to refer to 'crayfish/shrimp', 'excellence/nobility' and 'in/locative', and Proto-Mixe-Zoquean **om* is another locative, 'in, inside of'. Together these words come close to producing the word *yum* of Chol—particularly when we take into account the Cholan sound shift from *oo* to *u* (Kaufman and Norman 1984:87)—which could have been stimulated by words relating to the Olmec forehead ornament and which may well have been borrowed later from Cholan by Yucatecan languages.

In southern Mexico the word *langosta* means 'grasshopper, locust' in some regional dialects, whereas in others the word means 'lobster', 'spiny lobster', or 'crayfish'.[37] Moreover, this same ambiguity of reference—between grasshopper/locust and lobster/crayfish—can be found in various Indian languages of the region, including Mayan languages. For example, the Bachajon dialect of Tzeltal has *masan* 'shrimp/*camaron*', and the Tenejapa Tzeltal dialect has *masan* 'meadow grasshopper' (Hunn 1976:293) and *masan chay* 'crayfish' (lit., 'grasshopper fish') (Hunn 1976:253). Clearly a conceptual similarity between the grasshopper and the crayfish/shrimp (and between the locust and the lobster) is indicated here.[38]

Bearing in mind that the Maya word for 'white' can be related to excellence and nobility (and thus to the glyph AHAU), consider the fact that the Maya word for 'grasshopper' is so similar to the word for 'white' that a grasshopper could serve as a rebus to indicate the word 'white'. Add to this the fact that a grasshopper is conceptually interchangeable with a crayfish. It then becomes highly significant that glyph T58, with its widely accepted reading of *sak* 'white' and its formal resemblance to T59 (TI), is one of the glyphs proposed in this essay to be related to the crayfish forehead ornament found in Olmec iconography. Without a doubt, here is another way in which the crayfish can be related to nobility and excellence; another piece of evidence to indicate that the crayfish on the Chalcatzingo urn was in fact serving as an icon in use as a rebus referring to the nobility and excellence of the deity wearing the crayfish forehead ornament; another piece of evidence that the Maya script with its functional, symbolic, and conceptual linkages paralleling those inferred for the Olmec would seem to have inherited them from earlier Olmec traditions.

DISCUSSION

A consideration of some forehead ornaments found in Maya script in association with a raptorial bird (currently seen as a vulture), their locative function (the "TI vulture" and its forehead ornament), and their associations with kingship (the "AHAU vulture" and its forehead ornament) has here made explicit a cluster of characteristics, associations, and sonic resemblances shown to have intimate links with both Mixe-Zoquean and Mayan languages, and this in turn suggests Maya use in their script of portions of the Olmec symbol system.

Several loanwords from Mixe-Zoquean to Mayan languages have been identified. Among these, words for crustaceans (specifically, crayfish and shrimp) show that Mixe-Zoqueans apparently placed a high cultural value on these crustaceans, a conclusion resoundingly echoed by the near homophony between names for them and words for excellence in Mixe-Zoquean languages. Some possible reasons for such a symbolic value were suggested.

The similarities between Mixe-Zoquean and Mayan languages with respect to symbolic linkages and the iconography employed by these peoples allow us to speculate that the Maya glyphic elements T51, T53, T58, and T59 (as well, perhaps, as T747a) may have descended, with modifications through time, of course, from head ornaments of Olmec iconography, including the one here identified as a crayfish.

At this point it will be useful to provide more context for the crayfish as found on the Olmec Chalcatzingo urn and then compare it with a homologous icon found on a Maya vessel.

The Chalcatzingo Vase and Bloodletting

This essay has sought to identify the forehead element in an Olmec design found on a vase from the area around Chalcatzingo, Morelos (Gay 1971:fig. 43; Soustelle 1979:fig. 30). Depicted on this vessel is a disembodied profile head with a cleft headdress, framed by three knotted bands. The masked face has a birdlike beak (with recurved serpentlike fangs behind it). The birdlike beak of the mask on the disembodied head suggests bloodletting in an analogy to the birdlike nature—with feathers and "long-lipped" visage—of the deified Maya bloodletter (Joralemon 1974).[39] A

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[37] Any good Spanish dictionary will show that the word *langosta* has long had the dual meanings 'lobster' and 'locust' quite independently of any southern Mexican indigenous interpretations.

[38] Although I am not impressed by similarities of form or habit, there are similarities between the crayfish and the grasshopper that may well have been important to Mesoamericans. Mark Parsons brought to my attention the fact that the grasshopper—like crustaceans such as the crayfish, shrimp, and spiny lobser—turns bright red when cooked. Moreover, many grasshoppers are edible and there is evidence that Mayas of today cook and eat them.

[39] I have argued elsewhere that bloodletting and the number three are related to lightning and a lightning/rain deity among the Mayas and more so among the Mixe-Zoqueans. Birds also appear to be related to the lightning deity in Mesoamerica (recall the birdlike visage of some of the Teotihuacan Tlaloc images). Note also that the chief Huastec rain/lightning deity, *Muxi?maam* used lightning to split open "sustenance mountain" in which maize was stored (Alcorn 1984:62).

The Tzeltal tell a similar tale in which it is *ala wits mut* (or *hala wits mut*) 'holy peak bird' who pecked at the stone mountain with his metal beak until finally it broke open so that

knot with three projecting elements is at the back of the head, and the forehead element is our crustacean, the edible portion of a crayfish to all appearances. On either side of the framed head is a disembodied hand, one with a "knuckleduster," the other with a bound elongated bundle with a pointed top.

It is not unlikely that this Chalcatzingo urn was related to bloodletting ritual. The tri-knot motif suggests this (Stross 1985a, 1986), as does the fact that the head is disembodied and has vegetation sprouting from its top, much like the Maya depiction of a head floating in blood on an Early Classic (or Late Preclassic) Maya vessel from the Tikal area designated the Princeton Plate (Fig. 10-13).[40]

The latter, the lid of a cache vessel containing bloodletting implements and clearly related to bloodletting ritual (with its depiction of three bloodletting implements—an obsidian lancet, a stingray spine, and a flint knife), shows the disembodied head of the maize god on a plate, according to Schele and Miller (1986:195). The headdress of the maize god has a large KAN glyph on it, referring to a maize kernel, from which is sprouting an ear of maize.

The KAN glyph recalls a Late Postclassic depiction of the maize god on a mural at Tancah (Fig. 10-14), a maize god whose head has a cleft atop it, harking back to the Olmec cleft with its sprouting vegetation such as found on the Chalcatzingo urn.

Particularly relevant to the topic under discussion is the fact that the crayfish forehead ornament of the Chalcatzingo urn has its Princeton Plate homologue at the top of the vegetal curls surmounting the latter's maize kernel (see top of Fig. 13), its expected position displaced somewhat by the Princeton Plate's bloodletting implements. Here, on the Princeton Plate the crayfish's homologue looks similar to both the Maya glyph T59 TI and to side views of the AHAU forehead ornament when found on the "AHAU vulture." Here on the Princeton Plate its glyphic or iconographic function is unclear. On the Olmec urn, the crayfish appears to be an icon operating as a rebus reference to 'excellence' or 'nobility'.

Icon and/or Rebus

We have seen that the Olmec language and iconographic system—and no doubt their script, of which

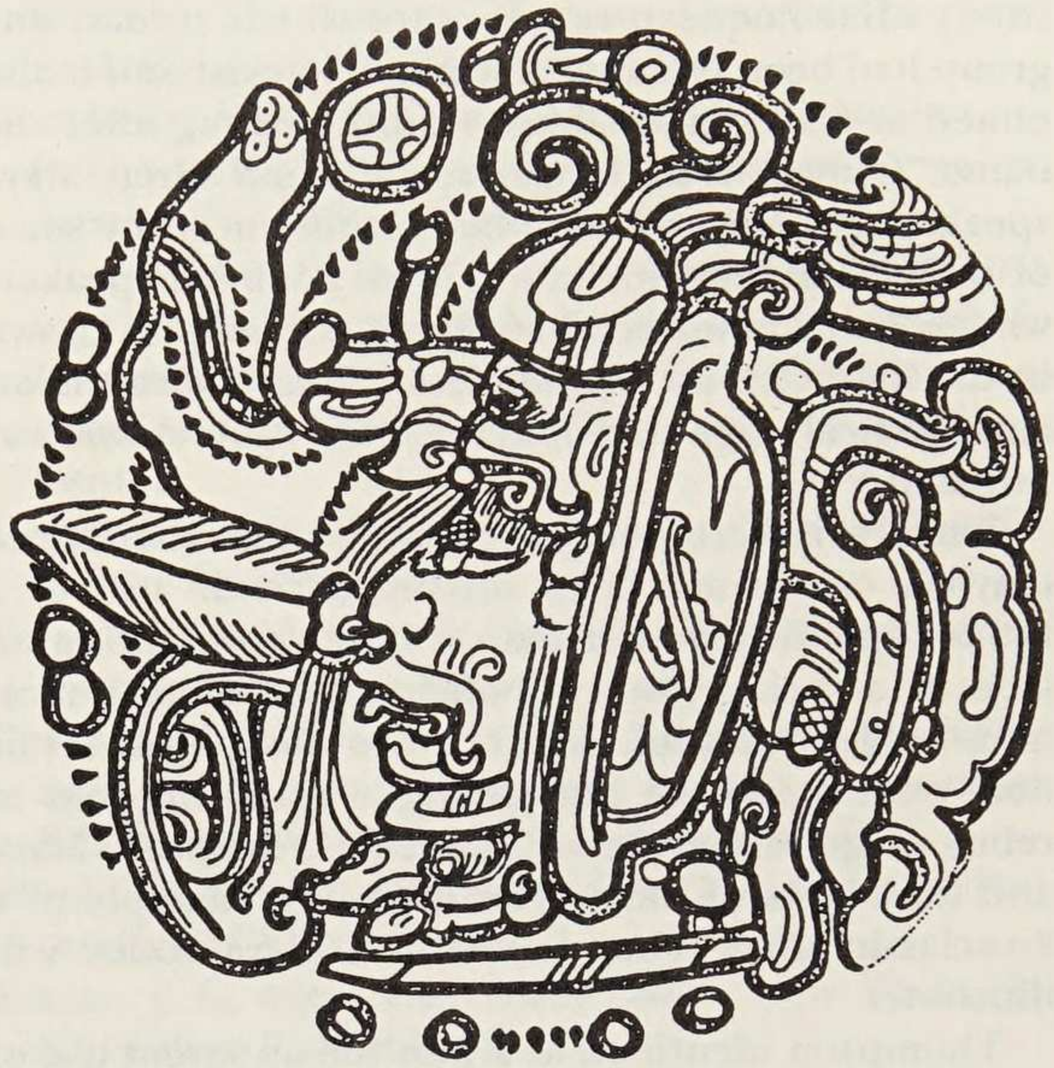

Figure 10-13. The Princeton Plate, featuring a decapitated head (after Schele and Miller 1986:207).

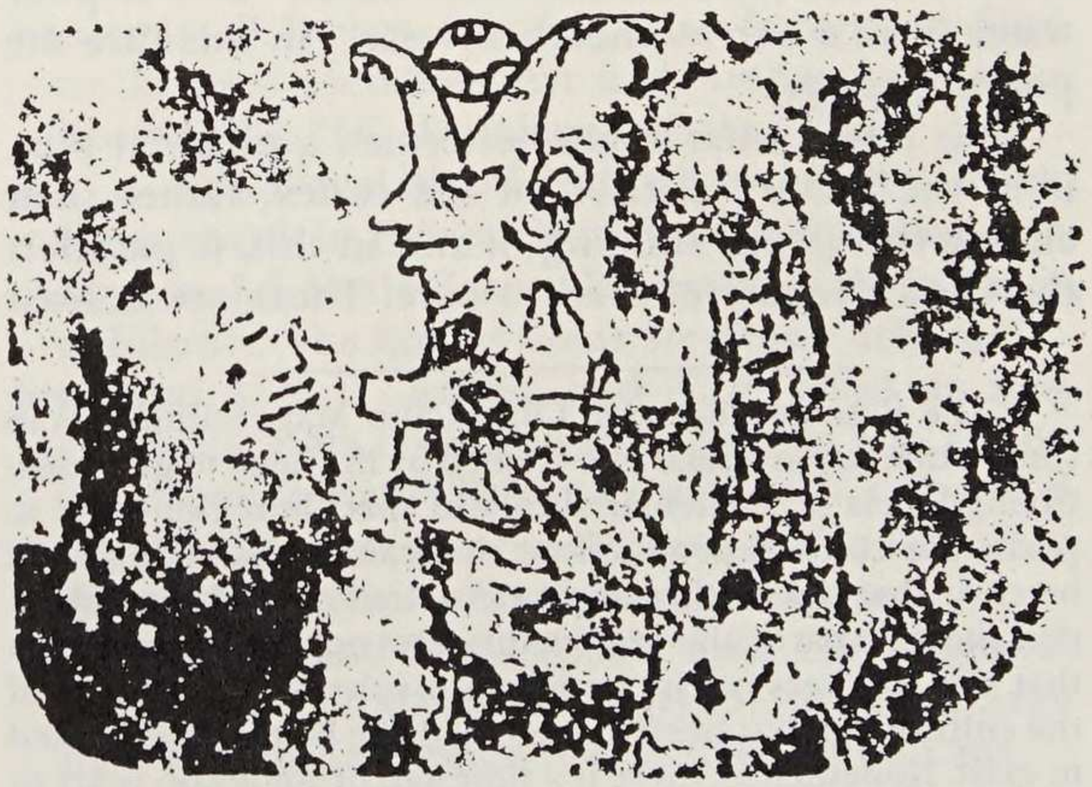

Figure 10-14. Detail from Late Postclassic mural in Structure 44, Tancah, Quintana Roo (after Morley and Brainerd 1983:fig. 13.33).

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man could have maize (n.b. Totontepec Mixe *witsUk* 'lightning' and the possibly derivationally related *wihtsUn* '*aguila, aguila real*eagle, royal eagle'). Then there is the divine weapon of the Aztec deity Huitzilopochtli */witsilopochtli/* 'Hummingbird on the Left', his lightning bolt, with which he slew his sister and many brothers.

Joanne Spero (personal communication) has observed that several different Maya groups refer to the rain/lightning deity as San Juan, as they do with the Chol *Lak Mam* 'our grandfather'. The Huastec *Muxi?maam* (chief of the three rain/lightning deities) is also called San Juan, and Alcorn notes that this saint's day is linked with the passing of the summer solstice, helping to explain the coincidence (1984:58).

[40] The Princeton Plate iconography bears many other similarities, formal, structural, and conceptual, to the Chalcatzingo vase (Stross 1985a).

precious little evidence remains—must have had some sort of influence and impact on the Maya script. Although from the standpoint of archaeological labels the Middle Preclassic Olmecs were separated in time from the Protoclassic Maya by some 500 years, there seems to have been considerable continuity between the earlier and later symbol systems both iconographically and in terms of phonological and semantic values. This is to be expected, perhaps, because surely Mixe-Zoquean speakers (of which at least one group had been Olmecs) continued to exist and maintained at least some Olmec traditions long after the name "Olmec" is no longer applied and surely Maya speakers existed and were being influenced by some of their neighbors, including Mixe-Zoquean speakers who may well have been Late Preclassic peoples known in the literature as "Epi-Olmecs," long before the archaeological stage known as the Maya Protoclassic was initiated.[41]

Since it is here being maintained that the Olmec crayfish or shrimp head ornament made use of a rebus capability, rather than simply representing an icon of a shrimp for symbolizing something important, noble, beautiful, or exalted to the Olmec, let us note once again the importance of punning and of rebus usage to the Classic Maya, the Postclassic Maya and the Mayas of today. The following example of a Postclassic Maya rebus found in a Maya codex will illustrate.

Thompson identified as a pun the apparent use of *bakha* in the Dresden Codex, noting that "the urinators" or "the sprinklers" (*ah hoyaob*) is a general Maya term for the rain deities called Chacs. On "Dresden 37*b* a Chac is making water. The urine terminates in the head of a heron, which is probably one of those Maya puns so often used: *bacha* means both "heron" and 'to pour water from a narrow-mouthed vessel', in this case the penis (1970:253)."

This rebus, what might be termed a pictorial pun, is in the picture portion of the codex, rather than among the glyphs framing it; and in this, it parallels the Olmec rebus referred to here. There are at least two kinds of evidence telling us that it is a rebus on the Chalcatzingo vase, rather than just an icon functioning only as an icon.

First, the phonetic value of the same rebus functioning icon persists through post-Olmec times, through the Classic Maya script (which must have adopted many of the values—both phonetic and logographic—inherent in what would have been an Olmec script or the beginnings thereof), and into Landa's alphabet (reflecting Late Postclassic Maya hieroglyphic script knowledge), where it lodged itself in Landa's two *o*'s.

Second, there is the fact that other icons (or symbols) were employed in Olmec iconography as forehead ornaments. At least one of these can be securely identified as maize, which if interpreted to reflect the word for 'young maize ear' in Mixean languages of today, is nearly homophonous with a word for 'crayfish' in Totontepec Mixe, thus linking maize and crayfish sonically. But more important, it is nearly homophonous with a word for 'beautiful' (thus relating to 'excellence' and 'nobility').[42]

CONCLUSION

These pieces of evidence are part of a large picture implied by the shrimp/crayfish identification of a forehead ornament in Olmec iconography, in which Olmec precursors of writing are seen as likely progenitors of some important hieroglyphic symbols of the later Maya script. Most remarkable, it seems that a phonetic value of *o* was retained until A.D. 1550, attached to a symbol of the Maya script descended from an Olmec icon/symbol with a probable rebus usage indicating an original sonic value similar to *oy*. The Olmec symbol system involved must go back more than 2,000 years before the Spanish Conquest of New Spain.

Conclusions based on the evidence presented can be summarized here as follows:

(1) There is an association in Maya iconography and in Maya glyphic representation of forehead ornaments with (a) nobility/royalty/sovereignty, (b) locatives (in, at, to, on), (c) a raptorial bird (vulture, hawk) and an association in Maya iconography of headdress with maize. There is a similar association in Olmec iconography and/or Olmec descendant languages of forehead ornaments with (a) sovereignty/nobility, (b) locatives, (c) crayfish/shrimp and maize, and (d) possibly a bird

[41] The time gap between Olmec and Maya cultures is to some extent an artificial one created by the need to give identifying labels to particular sites and specific regions and to particular cultural productions that can be dated. It should be clear that if a culture appears to flourish and then abandon sites in a particular region, this does not necessarily mean that the speakers of the language involved, the carriers of the culture that has been named by those labels, have ceased to exist. Nonetheless, there is a time gap of some 500 years or more between the Chalcatzingo urn and the Princeton Plate as established by stylistic dating.

[42] Note that Totontepec Mixe *xA?Ax* 'young maize ear' would in a Zoquean language by **sA?As* or **sA?sA*, which may be compared with Copainala Zoque 'good, beautiful' and with the Mixean Oluta Popoluca *xuuxu* 'locust, grasshopper'.

(bird beak on disembodied maize deity's head on Chalcatzingo urn) and an association in Olmec iconography and Olmec descendant languages between headdress and maize.

(2) Relevant loanwords in Mayan languages imply the importance of crustaceans to the Olmecs and the influence of the Olmecs on the Maya.

(3) Three different and independent sets of homophones (or near homophones) for 'good/exalted/noble' and 'crayfish/shrimp' in Mixe-Zoquean languages indicate some lasting Olmec association between these concepts, due wholly or in part to rebus usage in Olmec iconography, which could have arisen originally either on the basis of an accidental homophony or on the basis of some culturally motivated perceptions by the Olmecs (such as seeing the crustaceans as representative of food, fertility, beauty, nobility, or possibly some other important image).

(4) The rebus was available to the Olmec and employed by them *circa* 700 B.C. on the Chalcatzingo urn, which represents the earliest known rebus usage in Mesoamerica. This conclusion is independent of, though strongly supported by, any demonstrated relationship of the Olmec forehead ornament herein seen as a crayfish to the later Maya script.

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11

The Preclassic Origins of Maya Writing: A Highland Perspective

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It is often said that one of the attributes that sets the Classic Maya apart from other New World civilizations is the sophistication of their writing system. By the same token, our understanding of this civilization is being revolutionized by advances in the decipherment of Maya texts. This progress is allowing scholars for the first time to utilize the conjunction of archaeological and historical perspectives, transforming the study of the Classic Maya from a prehistoric to a historic discipline in the process. The epigraphic breakthroughs of the past twenty-five years have expanded our knowledge of Maya writing from the long-understood calendrical texts to accounts of individual rulers, dynasties, conflicts, and alliances—in short, the stuff of history. This new information has increased our understanding of the Classic Maya far beyond the limits that are commonplace in the rest of New World archaeology. As a result, the study of Maya civilization is taking its place alongside the archaeology of the early civilizations of the Old World, Egypt, Mesopotamia, and China, as a discipline enriched by the combination of archaeological and historical perspectives.

The importance of combining Maya archaeology and history, based on an expanding corpus of deciphered Classic and Postclassic texts, is becoming increasingly apparent. Not only can extant archaeological data be reinterpreted in light of new information gleaned from inscriptions (cf. Coggins 1975) but also archaeological research in the Maya area is becoming increasingly focused on questions posed by the results of epigraphic study (see Sharer 1978a).

Prehistoric archaeology relies solely on the recoverable material residues of human behavior to make inferences about past cultures. The limitations of this inquiry are obvious—some human activity leaves no tangible traces, other material remains do not survive the ravages of time, and some of the evidence recovered by archaeologists cannot be interpreted with any certainty. Fortunately, when historical accounts are available, they may well provide information about the very areas of past behavior that are usually invisible in the archaeological record. At the same time, however, history often ignores whole realms of human activity.

Obviously, therefore, the most complete reconstructions of the past result from combining archaeological and historical data. Each source often complements the other—one discipline's weakness corresponding to the other's strength. For example, Maya archaeology has provided a wealth of evidence about areas seldom documented by history—technology, subsistence, trade, and other everyday activities (see, for instance, Harrison and Turner 1978; Rathje 1977). Historical data from the Classic period have already furnished significant insights into other areas usually beyond the reach of archaeological evidence—ancient Maya political and ideological realms (Haviland 1977; Marcus 1976). In areas of overlapping coverage, as with reconstructions of socio-political organization, each source can be used to test or refine the findings of the other (Ashmore 1981; Coggins 1975; Haviland 1981; Jones 1977; Marcus 1976).

Questions about the foundations of Classic Maya civilization are intimately interwoven with the problem of revealing the origins and early evolution of Maya writing. It is certain that Classic Maya civilization developed directly from antecedents in the Preclassic era. Maya writing, like so many elements that typify the Classic period, evolved from roots that can be clearly traced back into the Late Preclassic, if not before. But, as one might expect, problems of recognition and decipherment increase as examples of writing are followed further back in time—the texts become briefer, are often poorly preserved, and similarities with known Classic forms diminish. Relatively little progress has been made in deciphering Preclassic Maya texts, apart from a few calendrical dates. Many problems remain in our attempts to understand both the origins of Maya civilization and the genesis of Maya writing—and most of these remain dependent upon further prehistoric archaeological research for their solution.

THE ORIGINS OF MAYA CIVILIZATION

The course of Maya civilization during Precolumbian times can be traced from available archaeological evidence in an area that was not only varied but also vast (some 325,000 sq km), and over a span of at least 2,000 years. This interval corresponds to the latter portion of the Preclassic era (the Late and Terminal Preclassic, ca. 500 B.C.–A.D. 200), and all of the Classic (ca. 200–900) and Postclassic (ca. 900–1500) periods. As might be expected from this extensive spatial and temporal distribution, the evolutionary record of Maya civilization exhibits considerable diversity.

Some of the earliest signs of the development of many of the components that would later characterize Classic Maya civilization have been found in the southern portion of the Maya area, at Preclassic sites along the Pacific coastal lowlands and in the highlands of Chiapas, Guatemala, and El Salvador. Here are found monumental earthen constructions, elaborate human burials, diverse arrays of luxury goods, and other remains that archaeologists traditionally see as evidence for the development of socio-political complexity. Of particular significance to the understanding of the origins of Maya civilization are the examples of stone monuments carved in a Maya style, some complete with glyphic and calendrical texts, dating to the Late and Terminal Preclassic, that are found at most of the larger of these Pacific coast and highland sites. These monuments provide the best evidence for the origins of one of the hallmarks of Classic Maya socio-political organization—dynastic rule linked to a precise record of time (the Long Count calendar)—during the latter portion of the Preclassic era (Morley and Brainerd 1983:63–77).

Whereas the presence of these indications of evolving complexity in the southern Maya area anticipate developments several centuries later in the Maya lowlands to the north, and the archaeological record furnishes plentiful evidence of Preclassic highland-lowland interaction, the role of these precocious southern centers and the emergence of socio-political complexity in the lowlands have yet to be articulated. Adding to the problem are unmistakable signs that by the end of the Preclassic, or roughly between A.D. 200 to 300, this precocious southern development experienced a profound decline. The southeastern portion of the southern region was devastated in ca. A.D. 250 by a volcanic eruption of unusually large proportions (Ilopango, located in central El Salvador; see Sheets 1979), and it has been proposed that the consequent economic and social displacements (severing of trade routes, migrations of refugees, and so forth) triggered the southern Maya decline (Morley and Brainerd 1983:81–86). A similar decline has been observed at many lowland sites, at about the same time, at the close of the Preclassic era (Freidel 1979).

The presence of unprecedented monumental constructions and fragmentary plain and sculptured stelae to the north dating to the Late and Terminal Preclassic period, most notably represented at the site of El Mirador (Matheny 1986), indicates that the processes leading to the development of socio-political complexity were also at work within the heart of the lowlands. In general, the reconstruction that best accommodates all available evidence would have the evolution of Classic Maya civilization from diverse and intermeshed origins in both the southern (highlands and Pacific plain) and northern (lowland) settings (Sharer and Sedat 1987).

This paper will explore some of the archaeological evidence for the origins of one of the crucial elements in this evolutionary process—the presence of carved glyphic inscriptions on stone monuments—from the Salama Valley (Fig. 11-1) in the northern highlands of Guatemala (the complete report of the archaeological research in this region is provided by Sharer and Sedat 1987). Although this evidence, as with most archaeological data, is subject to some uncertainties of dating and interpretation, I believe it furnishes important clues to the ultimate reconstruction of the origins of Maya writing and its role in the emergence of socio-political complexity. Furthermore, the geographical setting of the Salama Valley provides significant support for the thesis that interregional interaction played a crucial role in the Preclassic origins of Maya civilization, for this region lies in an intermediate position, astride the natural routes of communication, between the major developing Maya centers in the highlands and Pacific coastal plain to the south and in the lowlands to the north.

THE ORIGINS OF MAYA HISTORY

The roots of the world's early writing systems, cuneiform, Egyptian hieroglyphs, the Indus script, or Chinese characters, are embedded in the dim recesses of prehistory. There are, of course, no historical accounts describing the origins of the first writing systems. The origin of Maya writing is no exception. The Classic Maya script can be traced directly back to glyphic texts on Late and Terminal Preclassic monuments at sites in the southern Maya area. Examples include inscriptions at Kaminaljuyu (Monument 10), Chalchuapa (Monument 1), El Baúl (Stela 1), and Abaj Takalik (Stelae 1, 2, and 5).

More distant antecedents have been proposed for what seem to be even earlier glyphic traditions in the Valley of Oaxaca, indirectly dated to ca. 400 B.C., and on the Gulf coast, the latter associated with the precocious Olmec civilization (see Justeson 1978; Marcus

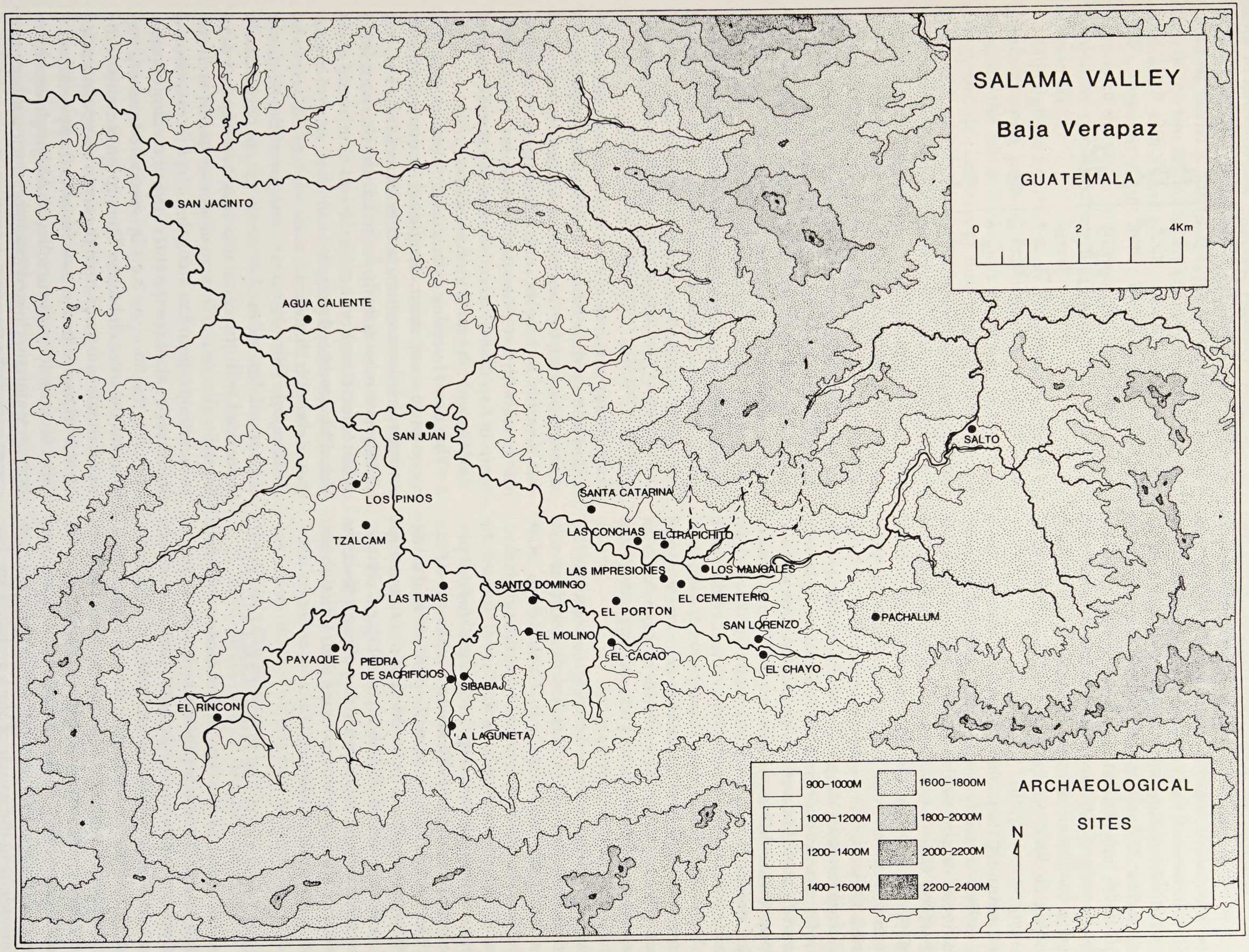

Figure 11-1. Map of the Salama Valley, Guatemala, showing locations of archaeological sites (after Sharer and Sedat 1987:fig 1.2).

1980). The only glyphic inscription from the Maya area that appears to date from this earlier horizon is El Porton Monument 1, to be discussed below. The relationship between these earlier Preclassic scripts and the initial inscriptions in the southern Maya area remains unclear. But at least two southern Maya area sites, Abaj Takalik and Chalchuapa, have furnished archaeological evidence of Olmec-related activity (monuments carved in an Olmec style, but devoid of glyphic texts) predating the local appearance of Maya writing (Graham 1979; Sharer 1978b).

But assuming these developmental links are justified, as they certainly seem to be, the question as to the ultimate origins of this glyphic tradition remains unanswered. One possible answer lies in a series of far simpler, and often cruder, notations found on boulders and rock outcrops throughout much of Mesoamerica. Other writing systems appear to have originated from far older simple notational traditions—for example, cuneiform (Schmandt-Besserat 1978). In fact, the world's earliest known notational system dates to the Upper Paleolithic and consists of simple ticks or similar markings that were seemingly used to record lunar or solar cycles or tally other events (Marshack 1972). A similar, albeit more recent, system composed of "cupulate" or pecked dot and bar notations was used in many parts of the New World in Precolumbian times—a typical example was recently reported from northeastern Mexico (Murray 1985).

But the latter instance and analogous notations rendered in stone throughout Mesoamerica, such as on a series of bedrock "altars" at Chalcatzingo (Gay 1971:73–84), remain largely undated and unexplained. These enigmatic traces of past activity epitomize the difficulty of adequately interpreting some kinds of prehistoric archaeological evidence in the absence of history. The notations are unusually difficult to date because they are engraved on boulders and rock outcrops that are seldom found with an archaeological context. For the same reason, and because they present few close historical or ethnographic analogies, their function and meaning are difficult to ascertain.

EARLY NOTATIONS IN THE SALAMA VALLEY

Several clues to the age and function of these cupulate notations are furnished by evidence recovered from excavations in the Salama Valley, Guatemala (Sharer and Sedat 1987). A small stone shaft (86 x 16 x 13 cm) embellished with simple engraved motifs was excavated under controlled conditions from the early elite mortuary site of Los Mangales in the northern portion of the Salama Valley. Known as Monument 13 (Fig. 11-2), it is apparently a small schist stela of a type thus far unique in the annals of Maya archaeology. The

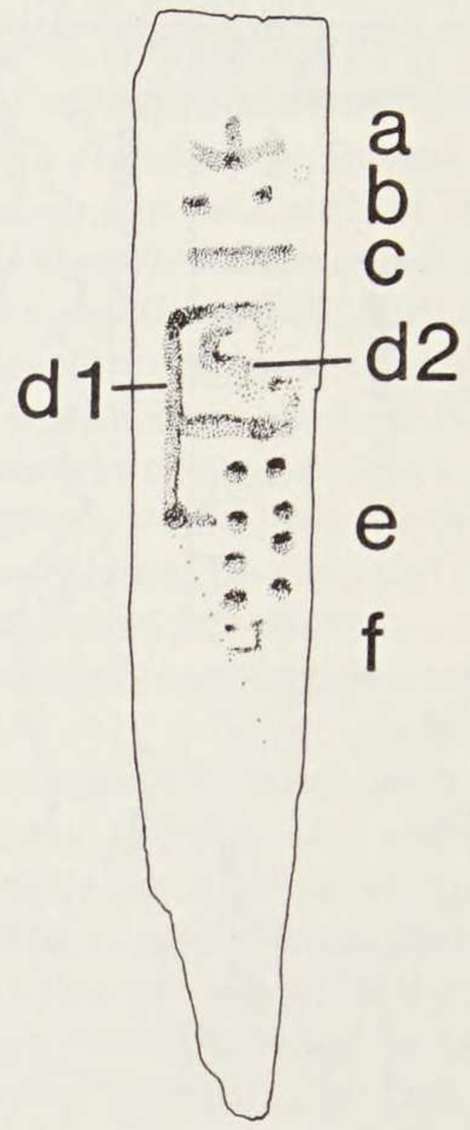

Figure 11-2. Drawing of Salama Valley Monument 13 with engraved motifs: (a) trilobed element; (b, c) two dots above a horizontal bar; (d1, d2) complex linear design; (e) two vertical columns of four dots each; (f) partially erased U-shaped element (after Sharer and Sedat 1987:pl. 18.10).

simple engraved motifs are carved on one face. From top to bottom these are a trilobed element, perhaps a vegetation motif, two horizontal dots with a horizontal bar beneath, a complex linear design, possibly a profile head, with a steplike motif below, two vertical columns of four dots each, and a partially erased U-shaped element with one or more dots above.

The Los Mangales excavations revealed that this stone and a companion, designated Monument 14, with an even simpler notation (a "bar" surmounted by two dots), were subsequently reused as lintels spanning a schist-lined chamber that formed an elite burial crypt dated by associated pottery to the first part of the ceramic complex that spans ca. 500–200 B.C. (Sharer and Sedat 1987). This interment, designated Burial 5, was the second in a series of three elite crypt burials, each associated with the reconstruction and expansion of Str. D6-1, the central feature of a small triadic architectural assemblage at Los Mangales. The first crypt burial in the series, dated to the end of the preceding ceramic complex (ca. 800–500 B.C.) by associated pottery vessels, was the most elaborate. The supine remains of the mature male interred within the crypt were surrounded by at least twelve prone individuals, all apparent sacrificial victims, some dismembered. Although the chamber was apparently looted (probably during subsequent construction or interment activities), it was associated

with an elliptical jade "scepter" and other status goods. Burial 5 was also disturbed—probably during the placement of Burial 2, the final crypt in Str. D6-1. In addition to the two reused schist monuments, Burial 5 was associated with status goods, along with two human skulls, apparent trophy heads. Burial 2, dated to a later portion of the same ca. 500–200 B.C. span, was accompanied by one apparent human sacrifice and eight human skulls.

Although the inscription on Monument 13 may never be understood, portions may record numerical information—the bar and two dots might well be the number 7, and the columns of dots may represent a tally totaling 8, perhaps recording a series of events related to whatever is symbolized by the more complex preceding motif. Regardless, it and its companion Monument 14 obviously date to a period earlier than the time of their reuse in the crypt of Burial 5. At a minimum, the date of the engraving and original use of these stones might be assigned to the lifetime of the elite male buried in the crypt (i.e., ca. 500–400 B.C.), but an earlier date cannot be ruled out. It is reasonable to assume that whatever information is recorded by these monuments refers to the individual interred in Burial 5 or to one of his predecessors.

The second clue to the age and function of this type of notation is provided by Monument 21 (Fig. 11-3), a boulder engraved with a complex series of symbols located in the Sibabaj drainage along the south side of the Salama Valley (Sharer and Sedat 1987). Although it is an isolated feature without architectural association, Monument 21 is not entirely devoid of cultural context, since excavations at its base recovered a few eroded pottery sherds, the sole clues as to its date (ca. 500–200 B.C.). Assuming this evidence reflects the age of Monument 21 (which it may not), this would indicate that it is approximately contemporary with the two more securely dated Los Mangales monuments. Monument 21 is engraved on one face (subdivided into three panels) with a series of small cupules or dots, several much larger cupules, and grooved markings. Many of the dots are grouped, and the most common of these clusters is triadic (nine examples), usually oriented with the apex downward. Less common are four-dot and five-dot clusters. Paired dots (including larger cupules), connected by a bar-like groove, also occur. And a unique symbol composed of a grooved cross with a dot at the apex, plus dots in each quarter, is carved in the lower right portion of the monument.

The meaning of such motifs remains a matter of speculation. An obvious choice would be the dots representing counts of some sort, as mentioned in the case of Monument 13. Alternatively, the prevalent triadic clusters on Monument 21 could be simple representations of the human face, except that not all examples possess the proper orientation ("eyes" uppermost). In fact, a more elaborate motif near the base of the lowermost panel obviously represents a human face, complete with ear ornaments. It is rendered on a more recently exposed rock surface created by an exfoliated area, however, and thus seemingly postdates the remainder of the engravings. The triadic clusters also recall similar motifs in Olmec art (Motif 153; cf. Joralemon 1971:16) and later Maya iconography (cf. Thompson 1962): the glyphs for Ix (T524), Ahau (T533), and the "fire fist" (T672).

The cross motif appears comparable to the pecked cross sign, usually seen as symboling calendrical calculations, with a wide distribution in Mesoamerica (Aveni et al. 1978). Three of these signs are reported from Tlalancaleca, near Teotihuacan, with a proposed dating of ca. 500–100 B.C. (Aveni et al. 1978:273). But the most obvious association for the Monument 21 cross motif would be the later Maya Lamat glyph (T510). The deeper cuplike pits on Monument 21 recall the "defacement" markings on several Olmec monuments (Clewlow et al. 1967:70–83). Similar pits occur on stones without indications of defacement activity, as on Monument 10 at Chalchuapa, dating from the Late or Terminal Preclassic (ca. 200 B.C.–A.D. 200; Anderson 1978:157), and the undated (Middle Preclassic?) Altar 1 at Chalcatzingo; the latter includes the same kind of connecting grooves as seen on Monument 21 (see Gay 1971:75).

Further comparisons could certainly be made between the cupulate notations on Monuments 13 and 21 from the Salama Valley and various similar rock art motifs throughout Mesoamerica. But the importance of these Salama Valley monuments is that they offer rare archaeological evidence as to the antiquity of such notations—dating to an era (ca. 500–200 B.C.) in the Maya highlands that almost surely saw the emergence of the earliest Mesoamerican writing systems, including the Zapotec script in Oaxaca (Marcus 1980). Thus, the Salama Valley evidence suggests that Maya and related scripts may have originated at least in part from such cupulate notational traditions and that the distant roots of Maya writing may be traced as far back as the Middle Preclassic era.

A more direct clue to the early ancestry of Maya writing was also recovered from the Salama Valley. Investigations at the open valley site of El Porton included the excavation of Str. J7-4, a series of low superimposed substructural platforms associated with Monument 1, a large (2.3 x 1.5 x 0.4 m) schist slab displaying the remnants of what is probably the earliest Preclassic glyphic inscription yet discovered in the Maya highlands (Fig. 11-4; see Sharer and Sedat 1973). This monument seems to reflect an early variant of the widespread and diverse Preclassic sculptural tradition of the southern



Figure 11-3. Salama Valley Monument 21 engraved with clusters of small cupules: (Panels a, b and c1–c3); several much larger cupules (Panel b); cupules connected by grooves (c4, c5); an apparent face with ear ornaments (c6); and a "dotted" cross (c7) (after Sharer and Sedat 1987:pl. 18.26).



Figure 11-4. Salama Valley Monument 1, detail showing preserved portion of the carved glyph column with (top to bottom) an animal head (?) above a small bar (a version of T772 or T644, the "seating glyph"); a horizontal bar; a possible head with a sideways U-shaped element (a version of Glyph X4a?); another horizontal bar; a large U-shaped bracket enclosing a central element (T683?); a final horizontal bar, surmounted by two dots; and a head with an inverted U-shaped eye, crest, and fanged jaw (T849/T747?) (after Sharer and Sedat 1987:pl. 18.3).

Maya area. Some individual stylistic and epigraphic elements have Middle Preclassic correlates (Olmec and possibly Monte Alban), but the glyphic text would appear to be an early Maya inscription (Justeson 1978:250).

Unfortunately, Monument 1 was originally found by looters, and the pit that was dug to expose this stone effectively destroyed much of the crucial evidence that might have more clearly demonstrated the monument's original context. The illicit excavation also reportedly discovered and dislodged several smaller carved stones (pedestal sculptures) and found an apparent cache. But the evidence gathered from the subsequent detailed excavation of Str. J7-4, revealed a sequence of constructional and ritual activity that spanned the latter half of the Preclassic era (ca. 500 B.C.–A.D. 200). These data allow a fairly confident dating of Monument 1 at ca. 400 B.C. based on its surviving architectural associations.

The available evidence indicates that the original placement of Monument 1 was axial to and in front of a low (half-meter high) adobe-plastered platform that supported a shrinelike building constructed of adobe-plastered earthen-cored walls. Directly beneath and sealed by the floor of this structure, and on the same axial line as Monument 1, a cached inverted pottery vessel containing carbon was recovered. This material (sample P-2132) provided a one-sigma calibrated radiocarbon date of 410-370 B.C. (2260±60 B.P.; Sharer and Sedat 1987). The floor is continuous over the distance of 9.4 m from the cache to the point where it abuts the rear of Monument 1, providing the most probable architectural association, although the extent of this floor to the front and sides of the monument was destroyed by the looter's pit. A plain flat stone "altar" was excavated from its setting on this floor in front of Monument 1, beyond the confines of the looter's disturbance. The base of the monument was surrounded by a foundation of stones that underlay the surviving floor to its rear, indicating that both the cache and the monument were in place before the floor was laid.

During the approximately 600 years after the placement of Monument 1, Str. J7-4 continued to be a focus of ritual activity, including placements of additional caches and plain monuments, and the original shrine was successively enlarged by four major constructional episodes (in addition to several dozen refurbishments). During the final period of activity at this locus, Monument 1 was completely buried by one of these structural expansions (Sharer and Sedat 1987). This event can be dated to ca. A.D. 15 ± 13, based on an archaeomagnetic date from a burned floor sample (Sharer and Sedat 1987).

The full description and initial interpretation of Monument 1 have already been published (Sharer and Sedat 1973). The following synposis provides a brief description of this important monument and an updated interpretation in light of available comparative evidence, based on the account presented in the final report of the Salama Valley investigations (Sharer and Sedat 1987).

Monument 1 is carved in low relief on its west face; but except for some basal elements, most of what was apparently its central scene has disappeared. The surviving basal elements are quite similar to motifs found on Preclassic monuments from the southern Maya area, including Abaj Takalik Stela 3 (Quirarte 1981:301, fig. 1e), Kaminaljuyu Stela 19 (Parsons 1981:fig. 5), and several Izapa monuments (Quirarte 1973:figs. 3 and 4). The central basal element is similar to an incised motif found on a Chicanel sherd excavated at El Mirador (Demarest and Fowler 1984:fig. 47).

Fortunately a greater portion of the single vertical glyph column is preserved along the right margin of the monument. It is bordered on the left and bottom by a raised band (the top or beginning of the inscription is destroyed). Within the border are a series of glyphic elements, carved in low relief and embellished with fine-line incising, including four apparent numerical prefixes that separate at least four main signs. A remnant of a possible fifth main sign, probably a human hand motif (based on Polaroid photo taken by the looters) that was badly damaged sometime after the original discovery, is represented by the uppermost surviving traces of carving in the glyph column. Beneath this, the reasonably complete elements begin (top to bottom) with a badly damaged horizontal bar (presumably the number 5), followed by an animal (?) head with an eye containing an incised vertical band or cross, which surmounts a small horizontal bar. The latter is similar to a glyph found on Kaminaljuyu Monument 10 (Miles 1965:fig. 13) and the Leyden Plate (Glyph T772, Thompson 1962:370). This is followed by another horizontal bar (presumably the number 5) and what may be another head with a U-shaped element turned on its side for an eye, similar to Glyph X4a (Thompson 1960:241). Beneath this is another horizontal bar (presumably the number 5), followed by a large U-shaped bracket enclosing a central element, seemingly an early version of glyph T683 (Thompson 1962:283–89), as Justeson (1978:246) has proposed. Below this is the final horizontal bar, surmounted by two "dots" that may represent the number 7, followed by the final main sign, a head with an inverted U-shaped eye, crest, and fanged jaw that has affinities to Olmec motifs (see Joralemon 1971:35–48, 67–70) and monuments at Izapa and Kaminaljuyu (see Miles 1965:fig. 2). Some of these same elements are found on later Maya glyphs (T747 and T849, Thompson 1962:329 and 394).

The possible correlations between the Monument 1 main signs and later Maya glyphs may provide clues to the subject of this text. The correlated Maya glyphs include T722 (perhaps an early version of T644, the "seating glyph"), Glyph X4a of the lunar series, T683 ("moon" or twenty), and T849, which has been seen as an early version of T747 that may substitute for Glyph D of the lunar series (Thompson 1962:394). In sum, although the text is obviously incomplete, the comparative evidence indicates that several of the main signs relate to a lunar theme. This further suggests that the inscription might have referred to a calendrical date, a moon count or some similar record, given its apparent numerical associations.

Regardless of its subject, its date at ca. 400 B.C. obviously makes the Monument 1 text significant to our understanding of the origin of Maya writing. It has been noted that its single-column format places it closer to inscriptional traditions found on monuments outside the Maya area in Oaxaca, Tres Zapotes, Cerros de las Mesas, and Tuxtla, along with Abaj Takalik in the southern Maya area, in contrast to multiple-column formats more typical of early monuments in the Maya area, as at Kaminaljuyu, El Baul, and Chalchuapa (Justeson et al. 1980:45). But the fact that the Monument 1 numericals are not associated with day signs, as is the typical pattern in the early Monte Alban inscriptions, makes possible derivation from Oaxacan origins less likely (Justeson et al. 1980:58). Rather, given the correlations with later Maya glyphs noted above, it seems more reasonable to conclude that the Monument 1 text is an ancestral form of Maya writing. Differences in format or other characteristics from those of other Preclassic Maya texts are probably due to the precocious age of Monument 1 (Justeson et al. 1980:58), since it appears to be a minimum of some two hundred years earlier than any other known inscription in the Maya area.

CONCLUSION

The presence of these early monuments in the northern Maya highlands raises some intriguing questions about the origins of Maya writing. The first and foremost issue stems from the presence of two apparently distinct inscriptional traditions—examples of what appears to be a much more widespread cupulate notational system and a single example of a glyphic system with specific correlates to later Maya glyphs—within the same small highland valley. Are these traditions related? The available dating evidence suggests the possibility that the cupulate notations, especially Monuments 13 and 14, date to ca. 500–400 B.C., whereas the glyphic inscription, Monument 1, dates to ca. 400 B.C. Such a small temporal distinction is hardly sufficient to suggest that the glyphic tradition evolved from an earlier cupulate notational system, unless the available dating evidence is disregarded. Otherwise to accommodate a thesis of developmental relationship between these two traditions one would have to postulate that the date of Monument 1's placement does not correspond to the date of the carving of its glyphic inscription (i.e., that the text was carved later, sometime during the ca. 400-year interval the stone was on display, before it was buried by construction). Although unlikely in light of all that we know about Maya monumental inscriptions, such a thesis would be somewhat embarrassingly difficult to *disprove*.

More likely, it would seem, the Salama Valley data provide evidence that there were at least two *functionally* distinct recording systems in use in the Maya highlands during the latter portion of the Preclassic. Although the available sample is too limited for firm conclusions at this point, the distribution of these texts in the Salama Valley suggests mutually exclusive patterns of usage associated with these two traditions. Monument 1 and its glyphic inscription were obviously meant for public display, situated in the midst of the dominant Preclassic organizational center for the entire region and directly associated with a series of shrines and ritual activity. Although the cupulate inscriptions derive from diverse contexts, they share noncentral valley-margin locations and a lack of associations with public architecture; none of them are known from the focus of Preclassic public architectural associations at El Portón. Rather, one is from a boulder in a side valley; the other two from small stones reused in an elite burial crypt. These distinctions may suggest individual or even idiosyncratic usage for the cupulate tradition, in contrast to public usage for the glyphic tradition.

Even if we assume that the cupulate and glyphic traditions were maintained as functionally separate systems in the Salama Valley, both may have played a role in the evolution of Maya writing, for it is under such conditions of conjunction and interaction that innovation and change are most likely to occur. As Justeson (1976:136) has stated: "One of the most important stimuli to the development of writing from previous graphic systems is in the conjoint use of two or more different graphic systems." It is significant that we have evidence of such conditions in the Salama Valley, for the valley itself is located midway between the southern highlands and Pacific coast on the one hand, and the Maya lowlands on the other. And the conjunction and interaction between these two foci of Preclassic development were crucial not only to the evolution of Maya writing but also to the emergence of Classic Maya civilization.

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12

Comparing Maya Image and Text

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Can Maya art function like text? Does Maya writing explain pictures? Recent studies of Maya iconography have been, to a large degree, based on a conviction that both queries are to be answered in the affirmative. Yet there is evidence to the contrary. What that evidence is, and how it relates to the Maya case, is the subject of this essay.

So much has been written about image and text in Mesoamerican studies, it may be useful to clarify my use of the terms at the outset. Image refers to pictures—figurative or abstract—in any medium, rendered on flat or three-dimensional surfaces. Image here is not the pictorial part of text as in pictographic, ideographic, or logographic "writing," nor does it have any place in the "evolutionary" schemes for the development of writing proposed by Diringer (1962), Gelb (1974), or Marcus (1976b). Text, on the other hand, refers to writing, which is linear in construction. It is not the glyph included in a picture. Since text here is what Bloomfield (1933) originally characterized as being recorded speech, it must have some relationship to language. Clearly, pictorial list-making—images burdened with writing, or what has been called "text-images" (Saunders 1985)—evident in several regions and periods in Mesoamerican history expands the narrow Western definitions of writing we encounter in Diringer and Gelb. My use of text, however, is purposely limited. Only Maya and possibly Zapotec scripts are considered texts in the following discussion.

Equating Maya image and text results from two factors: one is significant progress in the decipherment of the Maya script; the other, the use of Western art historical methodologies. The particular situation of "conjoined texts and images"[1] in Classic Lowland Maya art has led to the assumption that image is "readable" in the way texts are read. Even when text is not "conjoined" with or "embedded" in image, as is sometimes the Maya case, this view leads to seeing image as having the kind of arbitrary meanings associated with writing; the content of Maya art is presumed to be as self-revelatory as has been proposed for text. Thus, images are approached the same way Champollion successfully read Egyptian hieroglyphs and the way Berlin (1958), Proskouriakoff (1960), Knorosov (1982), Lounsbury (1974), and others productively decipher the Maya script. However, Thompson (1958:297) long ago pointed out that in the Dresden and Madrid codices image and text are not equivalent and that texts do not interpret the pictures. Berlo (1976:26–28) has described subtle interrelationships between image and text in the Madrid; the very success of that interplay is dependent on the unique properties of both pictures and writing. Scholars working on historical problems in Mesoamerican art outside the Maya region have questioned also the notion that sculpture, painting, and architecture can be "read" using associated writing (Boone 1980; Klein 1980; Berlo 1983). That these writing systems may be less "advanced" (to use a misleading evolutionary term) than that of the Maya (and more like picture-making than writing as we define it) can be seen as an argument for Mayanists to take particular heed of the observations made by their art historian colleagues working in better-known regions. These investigators raise problems in the use of a form of pictographic writing to explain pictures. Do not such problems exist to an even greater degree when a more linguistically based text, such as that of the Maya is used to interpret pictures?

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[1] Janet Berlo (1983:13) defines three distinct types of texts linked with Precolumbian art: (1) "discrete" texts which do not appear with the image itself but may relate to it, as in an ethnohistoric account written in European script after the image was made; (2) "conjoined texts and images" which simultaneously appear together, as on a Classic Maya stela; (3) "embedded texts" which appear as part of image configurations, as in examples of Maya art depicting "elaborate costume-encoded 'messages'."

Significant is the fact that while "keys" to Maya writing seem to be in hand, the same cannot be said for Maya images. This is not to say that meanings in these images are not encoded in a symbolic system—a sort of grammar of visual language—which could be "unlocked" once the right key or series of keys is found. But, as any locksmith or lockpick understands, we have to know what kind of lock we are dealing with before we can open it. The "locks" on Maya images are different from those on texts. Keys that work on "text locks" do not open "image locks." Methods, based on linguistic analyses, aimed at "cracking" Maya iconography may be unproductive for images. It seems unlikely that the association of Maya text with Maya image transforms image-making into a form of writing any more than it changes writing into a form of image-making.

Holding at bay for a moment the issue of texts' relative arbitrariness (to what degree meaning in writing is unaffected by context), I take the position that pictures are less arbitrary than writing and that image analysis should reflect this difference. I acknowledge, but do not entirely accept, the arguments of some deconstructionist art historians and literary critics who now question structuralist interpretations of image and text which fix meanings in forms. I have argued elsewhere (Miller 1983) that Amerindian art has a long and unique tradition of encoding complex knowledge as image which is distinct from Mesoamerican literary traditions. It is a type of communication which relies on metaphor whose meaning is as varied as are spatio-temporal factors exterior to its form. As a point of departure from the issues I raised in my 1983 paper, I am addressing here Maya images' special qualities vis-à-vis Maya inscriptions. But before attempting this, consideration of how image and text interrelate in general is in order.

IMPLICIT MODELS

When Western art is studied beyond its own history of artists and workshops influencing each other through time and space, it is often seen as an adjunct to text. This is the logical outgrowth of a tradition in the history of art which has focused on image-making of a profoundly text-oriented civilization. The relative paucity of texts, so evident in the Amerindian case, has not been of concern to historians of European art, who have been able to rely on relatively abundant texts. Within European art history, the unique nature of image rarely has been confronted because image usually has been analyzed in the context of coeval and later writings (Kubler 1962b). In the European tradition, a major focus of iconographic studies include what Panofsky (1955) called "conventional" meanings (i.e., the analysis of textual sources to explain visual forms). There is little question that this background provides useful tools for the scholar of Mesoamerican art, while, at the same time, requiring major modifications to analyze the particular situations encountered in pre-Hispanic America.[2]

During the first half of this century, art historical analytical methods used in the Old World were uncritically applied to the New.[3] In view of increasing archaeological, ethnographic, and historical understanding of the Amerindian peoples, it is now clear that these Old World methods, which are culture specific and are by no means universal, have been unproductive. Many Mesoamerican iconographers currently acknowledge that the relationship between pre-Hispanic writing and the imagery with which it is sometimes associated does not parallel that of Europe (e.g., Berlo 1983; Boone 1980; Klein 1980; Kubler 1975; Marcus 1976b; Miller 1983). Yet, a legacy of Old World methods persists in attempts to use Maya text to explain Maya image. Such attempts employ circular arguments: if pictures make visually explicit what is stated textually, then image must mirror any given textual decipherment. It seems that the increased understanding of Maya writing has fueled the tendency to rely on texts to interpret coeval image, despite current writings on the significant differences between modes of communications.[4]

In areas outside the New World, investigators interested in the cultural implications of literacy have been analyzing how writing as a cognitive system influences "traditional societies" which have recently become literate (Goody 1968, 1977; Ong 1982). Although image is not of direct concern for these scholars, their investigations are relevant here because they have forced the question of equivalences between modes of expression. For example, Goody questions the contention of Bloomfield (1933) and others that writing is merely recorded speech. Goody argues that writing involves fundamentally different mental processes from speech and can and often does actually alter its meaning. Consid-

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[2] Recently, the work of literary critics and semioticians, particularly those who address meaning in image (e.g., Nichols 1983), are forcing art historians to consider the ideological bases of visual traditions. And reactions to this approach (e.g., Sears 1988) suggest that a healthy questioning of art historical method and theory is under way by those who favor a "contextual" art history.

[3] The writings of Paul Westheim (1950) and Pál Keleman (1946) are representative of these approaches.

[4] George Kubler has been a notable exception in Americanist studies. He characterizes the uniqueness of art by stating that it cannot "record anything it is not actually programmed to register . . . [and that] still another misconception arises from assuming that images enjoy a one-to-one relation with texts and that texts can be made fully to explain objects without leaving any unintelligible residue" (Kubler 1975:766).

eration of the problematic link between oral traditions and written texts suggests that, when assessing the relationship between written and visual symbols, we would be well advised not to equate them. Spoken and written language are different mechanisms of communication which affect signification; differences in written and visual communication also influence meaning. In other words, how information is conveyed is inextricably linked to what is conveyed. This is not to assert that "the medium is the message," but it is surely a part of considering the effect of the mode of communication on what is communicated. In assessing how written words relate to pictures, we are in effect comparing two distinct communication modes.

IMAGE'S TIE TO CONTEXT

Shifts in an image's meaning as time progresses very much depend on specific situations. Continuities of meaning seem less common than changes. The major contribution of Panofsky's "disjunction" hypothesis and its application to New World iconographic systems (Kubler 1967) is less the formulation of a universally applicable process than it is an important insight into image's dependence on particular changing contexts. For example, the Maya architectural sculpture illustrated in Figure 12-1 can be identified as a "Cauac Monster"; virtually all of the similar representations studied by Taylor (1979) come from looted Late Classic tombs, and, considering the internal contexts of the pictorial evidence she presents, her identification is convincing. When it appears on an Early Classic structure at the site of Tikal, however, and in the context of relevant archaeological and historical evidence, it can signal the sun emerging from the Underworld. Since certain caves were for the Maya both entrances to and exits from the Underworld, the image may also symbolize, in part, a cavelike place rather than a specific supernatural being (Taylor 1979:83). Given any identification(s) of the image, the point is that it shifts with changing contexts, some of which are quantifiable, others of which are not.

It seem obvious, yet is sometimes overlooked, that the same thing can have different meanings in changing places as well as times. An example is the simple observation that archaeological artifacts, such as obsidian chips, acquire significance when found in specific loci. At Tikal, obsidian chips found in building fill often signaled the presence of an Early Classic tomb, but they also indicated obsidian workshops or garbage dumps. Proper identification depends on the archaeologist's facility for evaluating things in their quantifiable contexts. Extracted from their primary loci, obsidian can also be analyzed for source and time.



Figure 12-1. One of a pair of architectural sculptures on the middle tier of Tikal Str. 5D-33-2nd, flanking stairway (drawing by William R. Coe).

Lacking measurable contexts, however, obsidian chips are just obsidian chips.

The art historian confronts similar problems with those complex human-made things judged to carry denser meanings than do simple tools. Intended meanings in art not only shift with changes of time and place but they sometimes are also unclear from the very beginning, in the same locus. Examples abound in the history of art. One well-documented case involved sculpted figures on the façade of Paris's Notre Dame Cathedral. These twelfth-century didactic images of the kings of Judah were always taken by the illiterate populace as sculptures of French monarchs. So convinced were late eighteenth-century heirs of this long-standing misidentification that they symbolically mimicked revolutionary action: the sculptures were decapitated with the same enthusiasm they witnessed systematic beheadings of live monarchists during the French Revolution's "Reign of Terror." Mutilated figurative sculptures are also known from Olmec and Classic Maya sites. That these sculptures' makers and mutilators interpreted them in the same way is not axiomatic. If intended and perceived meanings can be at odds within the same cultural tradition, are they not so for those outside seeking to understand them?

Image can also derive meaning from cultural factors existing beyond the quantifiable entities of space and time. These factors are often obscure. They refer, in part, to what Panofsky (1955:30, 41) called the third level of iconological content in art: "intrinsic meaning or content"; it deals with the meaning of visual symbols and with structural values of art forms that may not be apparent to the artists involved but that, never-

theless, can make sense to the iconologist who takes into consideration the primary archaeological contexts and cultural implications of the art form concerned.[5] Amplification of Panofsky's third level of meaning is implied in the work of Roland Barthes (1957), who characterized both verbal and visual forms as metaphors that can be understood only when seen in the context of what lies at the base; this he names "a formless, unstable, nebulous condensation." For Barthes, when a sign's basic cultural context is known, then its message takes on "unity and coherence." Sperber (1975) reformulates the problem by focusing on understanding signs as cultural metaphors which explain realities of a particular time and place; for Sperber, both text and image also refer to what Barthes called the "nebulous condensation." Sperber names this formless font of meaning the vast storage, the memory of a particular civilization, its "encyclopaedic knowledge." Roy Wagner's (1986:9) rephrasing of Sperber's ideas as a kind of "federal reserve system . . . symbol [which has] the potency of money . . . " graphically clarifies what Sperber means: signs, such as image and text, draw upon a kind of cultural meaning bank, the reserves of which never remain constant.

Continuing Wagner's metaphor, access to the meaning bank of any culture is the currency of iconological discourse. Without it, understanding of image is beyond means. It is striking how knowledge of spatial, temporal, and cultural matrices render evaluations of image out of context worthless. For example, the so-called Nazca lines (linear trajectories executed on a colossal scale upon arid flatlands of Southern Peru about 100 kilometers long and several kilometers wide) have been taken as the work of extraterrestial beings who once had to land their airships, modeled on, it would seem, the likes of our Boeing 747's, with their need for extra long runways. Evidence that these enormously expensive enterprises were executed by the Nazca to fulfill compelling social needs renders such fantasy moot. Pithily characterized by Kubler (1962a:286) as "an architecture of diagram and relation, with the substance reduced to a minimum," they become meaningful when considered as astronomical sighting-lines (Kosok 1947; Kosok and Reiche 1949) or in the context of calendrical and territorial management strategies of the Nazca (Zuidema 1988). Fantasy has been focused also on central Australian landscape images. But Nancy Munn's (1973) brilliant analysis of Walbiri *guruwari* (tracks or marks in the countryside which are embodiments of ancestral powers etched in the landscape) is a fine example of how rich ethnographic data reveal the relationship between image and the traditional Walbiri concepts of cosmology and ritual behavior. In the Maya region, stuccoed, elevated causeways forming intra- and intercity communications systems called *sacbeob* in Yucatec Maya) have been compared with Old World road systems, hardly relevant for peoples without the wheel and a beast of burden. As early as 1965, Michael Coe (1965:111) suggested that these causeways had ritual function at Classic Maya sites, such as Tikal, serving to tie together royal patrilineages in the history of that site. He interpreted the causeways of the Classic Maya site of Tikal in the context of Maya spatiotemporal organizational needs as revealed in ethnographic and documentary data for the Northern Yucatan Peninsula. While these sources are not coeval with Tikal, they represent the most closely related data available.

This nebulous meaning bank that lies at the base of image is well guarded against scholarly probings. In the Classic Maya case, a major barrier blocks access to meaning: ethnographic or documentary data used to interpret image all date from later periods. But there are ways to successfully negotiate objections by other scholars against such "upstreaming" or use of data from later periods as a basis for interpretation. Certainly, the use of later sources to understand earlier images must be most carefully employed in order to distinguish significant continuities of meaning from those which have changed. Later documentary data can convey the collective mind of the Maya as revealed in their myths. Hardly the equivalence of image, such written accounts can provide access to the collective consciousness of common values from which coeval image and text both gain symbolic capital. Despite the fact that there is little Maya historical data which can serve to provide those deeper strata of meaning to which Barthes, Sperber, and Wagner refer, M. Coe is particularly astute in employing those that are extant effectively. His use of the document known as the *Popol Vuh*, or Book of Counsel of the Highland Maya Quiché, is a case in point (Coe 1973, 1978). Whether or not one is convinced by his interpretation of the Maya iconography that is his focus, the use of documentary sources to "flesh out" the skeletal armatures of meaning in the iconography he treats represents an approach which tries to reconstruct the cultural context of image. Considering the perspicacity of Coe's analysis, one can only lament the irretrievable loss of specific spatial and temporal data which may have given further support for his arguments.

While Barthes and Sperber place equal emphasis on context in understanding all signs—linguistic and

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[5] Panofsky's third level actually involves two different aspects: (1) *Weltanschauung* and (2) "essential tendencies of the human mind." The first is culture specific, more appropriate to our formulation of an approach to Maya iconography, whereas the second is reductive, being, in fact, closer to Lévi-Strauss's structuralist interest in cross-cultural studies of myth.

visual—Reiche, Zuidema, Munn, Coe, among others, focus on images in the specific settings of the culture that produced them, as reconstructed from ethnographic and historical evidence. Wagner (1986) sees the abstract sign, be it said, written, or drawn, as one of two poles from which meaning emerges. The other is what he calls the cultural meaning bank from which signs withdraw significance. I propose here that context—spatial, temporal, and cultural—is of crucial importance in interpreting image because of its particular dependence on factors outside its form to determine meaning. This is not to say that image has no meaning inherent in its form—which Kubler (1962b) called "self signals"—or that language's meaning is not dependent to some degree on context. I do suggest, nevertheless, that image tends to be more context-dependent than text and that such context is a key to interpreting its meaning. Accordingly, the polymorphic composite in Figure 12-1 takes on meaning in its relative spatiotemporal location: one of two like sculptures fronting the middle tier of an Early Classic building at Tikal with related images situated above and below (Fig. 12-2). Another context in understanding the meaning of Figure 12-1 is the royal tomb underneath the building on which the image conspicuously appears—still another, ethnohistorical analogy. The more information external to the sculpted form, the more it takes on unity and coherence as a cultural metaphor. Without such knowledge, the image is nothing more than an irreducible, concrete arrangement of matter whose surface substance remains mute.

Image tends to expand upon experience, whereas text compresses it. For example, the polymorphic facial image illustrated in Figure 12-1 exhibits natural attributes (human, serpent, fish, plant), as well as states of being (flesh of the living and skeleton of the dead); it transmutes these natural forms and conditions by melding them into a new entity. In contrast, the Maya glyph *cauac* reduces meanings clustering around a specific day name in one of the Maya calendars. The composite of natural forms shown in Figure 12-1 presents a reality bounded by the world of appearance, the surface substance of things. Even though, as a composite, its reference is not that of the natural world, it is, nevertheless, very much a new supernatural being or place which is as real as the matter out of which it is made. So close is the link between image and what it represents that it can be one and the same, as in the sculpture of the Mexica deity Huitzilopochtli encountered by Cortes and his cohorts, which was made of amaranth seed bound together with the human blood of sacrificial victims: the most nutritious food of the Mexica people and that of their gods were bound together, transforming nature into a compelling image. The visual sign of the supernatural embodied the very stuff on which men and gods depended.

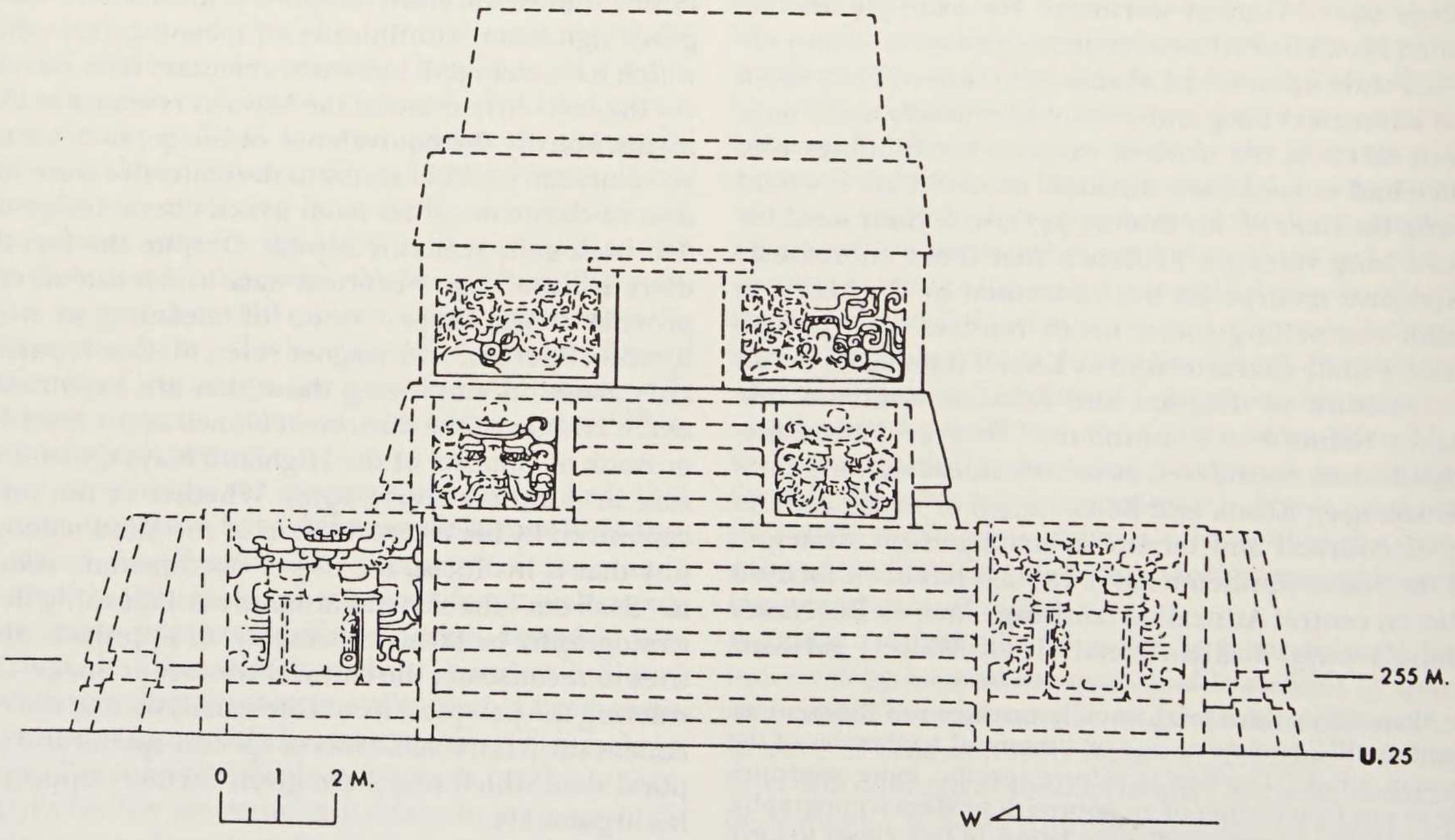

Figure 12-2. Front elevation of Tikal Str. 5D-33-2nd (drawing by William R. Coe).

TEXT'S TIMELESSNESS

The term originally coined by Saussure (1959) to understand language as a semiotical system—what he called *langue*—has two basic characteristics, the first of which (the arbitrariness of the sign) is relevant to my argument that text seems less dependent on spatial, temporal, and cultural factors than does image. Indeed, writing has been called "context-free" language (Hirsch 1977:21–23, 26) and "autonomous" discourse (Olson 1977, 1980). Ong's *Orality and Literacy: The Technologizing of the Word* (1982) treats differences in "mentality" between oral and written cultures, stressing that writing abstracts thought and is context-independent. It is writing's self-contained aspect that inspired distrust in the validity of its contents since it has the power to depart from and even distort reality. Such wariness is evident in what Plato has Socrates say in the *Phaedrus*: "Writing is inhuman, pretending to establish outside the mind what in reality can be only in the mind" (Ong 1982:79). Distrust of text can also be seen in Vergil's *Aeneid*. When Aeneas reached Cumae and entered the cave of the Sibyl, he urged her not to respond with potentially distorting words:

> "Do not write down your words on leaves, for they will fly away as playthings of the rushing winds. I beg you to speak for yourself."
>
> (Vergil. *Aeneid*, ll. 75–76, quoted in MacCormack n.d.:17)

For Aeneas, the right stuff was to be found in speech, not text.

There is little question that the view of writing as being context-independent owes much to Saussure's characterization of the sign as an absolute unit of sensual abstraction. Along with Edward Sapir, C. Hockett, and Leonard Bloomfield, Saussure equated writing and orality; its signs were characterized as having meaning fixed in its forms. In recent years, however, the linguistic sign has been viewed as having a less arbitrary nature than is evident in the Saussurien approach to language. "Reading theory" in literary criticism (e.g., Cohen 1974) disputes the fixed meanings attributed to text by arguing that significance in literature derives more from the reader than the writer. Vološinov (1986:86) sees meaning residing in the synapse between generator and recipient of the message, arguing that "word is a two-sided act, . . . the product of the reciprocal relationship between speaker and listener, addresser and addressee." Another poststructuralist view places emphasis on use or "practice" (how words are used in actual social situations), rather than categorical structure, in determining meaning of discourse genres (Hanks 1987).

The thrust of Goody's work (1977, 1968) has been to explore the implications of literacy among peoples who have recently become literate. His thesis that literacy changes the way people think is being contested by investigators concerned with how literacy affects social systems. For example, Bledsoe and Robey (1986: 207) demonstrate that among the Mende of Sierra Leone, writing responds to changing needs, allowing "people to choose among perceived facts." They further show that, in some cases, there can be a similarity between literacy and orality, both having the potential to change meaning by responding to a complex dialectic between sayer and listener, writer and reader. Bledsoe and Robey also bring to literacy studies a challenge to Goody's argument for "restricted literacy." To them, both orality and literacy can be restrictive, secret, and manipulative. For the Mende, they see text as an addendum to speech: "Writing does not replace the oral idiom but comprises one component of the total pool of potential knowledge that the Mende strive to attain and manipulate in competition with others" (Bledsoe and Robey 1986:222). It seems that, in the Mende case, the written word had a very different effect from what Max Weber (1977:66–69) described for it in his model of bureaucratic organization: the introduction of literacy did little to reveal the structure of power, but rather obfuscated and even falsified its intents.

Writing may, in some cases, facilitate communication, particularly over long distances, due to its context-independent quality, as Goody argues, and it also objectifies operations such as counting, separating the act of counting or naming by numbers from what is counted. In contrast, image is inextricably linked to what is counted and cannot be reduced to a single abstract system; its meaning depends directly on references to the entity depicted. But writing can be shown in some cases also to be as dependent on context as is speech and image. Too often, the distinctions between the communication modes seem to depend on presupposed conclusions regarding meaning. Nevertheless, writing does have a kind of undeniable finality and closure that orality lacks. Henige's (1980:255) discussion of oral Ganda and Nyoro kinglists, for example, illustrates orality's flexible nature when compared to written kinglists: the "oral mode . . . allows for inconvenient parts of the past to be forgotten" because of the "exigencies of the continuing present." Evidence for the fixity of script in contrast to orally based memory is even found in Bledsoe's and Robey's (1986:207) paper, which otherwise draws parallels between the two modes: in an example of writing used to control succession among the Mende, they state that "A chief's brother . . . commonly keeps a written record of the movement and conduct of each of the chief's wives. Since the brother and his descendants are potential rivals to the chief's descendants, his primary concern

is not to assist his memory even if the information is accurate; it is to create a resource that he might use in the future to dispute or confirm the paternity of his brother's wife's offspring."

The example of emblem glyphs, originally deciphered as designators of place in the Maya lowlands (Berlin 1958), is a case illustrating how Maya writing can in one sense derive meaning from context and in another sense function in a context-independent manner. The structure of emblem glyphs, interpreted as naming specific locations such as the Classic Lowland Maya sites of Tikal, Palenque, or Copan, includes an element called the "Ben-Ich (Ahpo)" superfix. Because this superfix is also used as a title for "lord" or "ruler" (Lounsbury 1973:141), the link of place and ruler is obvious. Rulers can, of course, change places (as some apparently did) to form marriage alliances between sites such as Tikal and Naranjo (Marcus 1976a:58–61). Maya cities are obviously and impressively incapable of such movement. Thus, the emblem glyph is read and functions in a dual manner, indicating immovable cities as well as the peripatetic lords who rule them.

Perhaps the most compelling argument for a text's lack of dependence on context is its inherent characteristic to be unaffected by attempts to alter its meaning. In Ong's (1982:79) words, "There is no way directly to refute a text. After absolutely total and devastating refutation, it says exactly the same thing as before." Writing can so distort reality that it can render dead what is patently alive. Thus, the Vietnam veteran who saw his name engraved in black stone of the Washington Vietnam monument was, to readers who did not know him, as dead as his mutilated comrades mouldering in their graves.

Whether the sign, be it said, written, or drawn, is more or less context-dependent will doubtless continue to be a subject for debate. At issue is the duality of all communication systems, what Arnheim (1954) called for the visual arts the interrelationship of concept and percept. Less controversial is that text's uniqueness vis-à-vis image lies in the way it is put together. This special quality of text is covered in Saussure's second observation of the linguistic sign's basic characteristics: the linear nature of the signifier. In contrast, the image is not linear, having virtually infinite possibilities of composition and perception. Building upon the work of his predecessor Saussure, Barthes (1957) distinguishes text and image by stating that both spoken and written language are "linear," whereas visual signs are "multi-dimensional." It is these formal differences that are crucial in formulating appropriate kinds of image analysis.

MULTIVARIATE FORMS

It seem fairly obvious that pictures are made differently from texts. Less clear is that the way things are made influence the way things are understood. Texts are linear constructs following a prescribed order from left to right, right to left, top to bottom, or bottom to top. Because this is the way texts are put together, it is the way they have to be read. The text's structure, therefore, is a key to its decipherment. But this is not to say its meaning is solely conveyed by its form.

A series of images can be arrayed in a narrative frieze arranged in sequential order, but individual works of art are neither put together in a linear order nor are they "read" linearly to be understood. A painter or sculptor can compose a work in a variety of ways. And a painted or sculpted image does not impose the same kind of rigid ordering to be understood as does a painted or carved text. One can look at the center of a sculpture or painting before the top or the top before the center, the bottom before or after the side. One can "take in" the whole scene at once because the totality of the image also communicates meaning. Assuming that the Maya did not speed read, a written page or text panel on a Classic Maya stela, in contrast, is meaningless seen as a whole. It must be read in the same order it was constructed in order to understand its meaning (i.e., linearly). Some poetry can be seen to be somewhat nonlinear in construction, but I submit that such works are, in fact, words made to look somewhat like pictures. Image has many possibilities of construction and perception, whereas text has a single mode of formation and reading. It is its varied possibilities of construction and perception that enable a picture to present meanings which are similarly complex.

Whereas the linear order of texts describes both how writing is put together and read, the term nonlinear for image's structure and perception is less useful. Nonlinear describes what image is not, rather than what it is. Barthe's term "multi-dimensional" is one solution, although it is contaminated by specific meanings for "dimension" in art historical discourse. I propose a word to describe image's varied, observable aspects: *multivariate*. In the following discussion, it is a term referring to the simultaneous top-to-bottom, side-to-side organization of a picture's surface, including front-to-back three-dimensional organization of architecture and sculpture. The word invokes the complex qualities of pictorial forms which can include various states of being. In Figure 12-1 the combinations of anthropomorph, serpent, fish, and plant invoke meanings which are not only conflicting but are also presented as an

irreducible reality that calls upon several taxa in the natural world, transforming them into a visual sign for a supernatural being or place by combining them in an unnatural manner.

CAUAC MONSTER VS SUN GOD?

The meaning of the complex sculpture shown in Figure 12-1 can serve as an example of the use of multivariate forms to convey complex meanings characteristic of Maya art. The quadripartite composite of anthropomorphic, serpentine, piscine, and vegetable characteristics can be seen as typical of a class of pictorial composition employed by the Maya to convey conflicting meanings associated with their supernatural beings or places. Its significance involves layered meanings that are inherently fluid. Such forms cannot be understood outside of their spatial and temporal situation because they mean different things in different contexts. Figure 12-1 appears on the middle tier of a funerary temple at Tikal, known as Structure 5D-33-2nd.

Built in the middle of the fifth century A.D., Structure 5D-33-2nd's (Fig.12-2) striking design and architectural embellishment persisted largely unchanged until the end of the seventh century, when it was partially dismantled to be covered by a thirty-meter-high construction. Plainly visible from the open plaza fronting the North Acropolis for over two centuries, Structure 5D-33-2nd represents the most ornate Early Classic Tikal funerary architecture and sculpture. Awkwardly proportioned, the terraces of its pyramidal base jut out far to the sides of the slightly off-center stairs. Adorning the front faces of the lowermost broad terraces are two-meter-high vertical rectangles enclosing stucco polymorphic reliefs that flank the lower part of the stairs. The temple's second tier is also embellished by vertical rectangles enclosing stucco relief facial images (the focus of this iconographic exercise, illustrated in Fig. 12-1), proportionately smaller than those below. Covering the entire exterior of the temple's vertical walls, and flanking the doorway, are two horizontal rectangles bearing stucco relief sculptures. Fragmented bits of stucco were found in the debris of the sloping roof and roof comb, intentionally dismantled by the Maya to fill the temple's two rooms as a means of providing a solid base for the construction of 33-2nd's successor, 33-1st. Enough sculptural detail survives from 33-2nd's outer surfaces to enable a partial reconstruction of the building's south elevation (Fig. 12-2) and to interpret its splendid iconography.

The specific meanings of this building and its architectural sculpture came to light after years of research based on the University of Pennsylvania's Tikal Project fieldwork data. Interpretations of these images, based on the archaeological contexts of its building and relevant historical sources, have appeared in detail elsewhere (Miller 1986). The pertinent documentary source is a sixteenth-century recorded oral narrative (known as the *Popol Vuh*), perhaps originally formed from the reading of a lost glyphic text. As a rich record of Maya beliefs, it has been interpreted by Michael Coe as providing the mythic context for Maya funerary pottery (see my reference to Coe's analysis above). The *Popol Vuh* recounts an ancient Maya belief that select mortals became rulers by dint of their defeat of the gods living beneath the surface of the earth. The story specifically names two brothers known as the Hero Twins who succeed in tricking these deities and pass through the Underworld realm, where all other mortals inevitably end their existence. The myth can be interpreted as a Maya metaphor for rule, an explanation of why and how certain individuals became rulers, characterizing them as cyclically passing through the Underworld to emerge from caves to be reborn, as the next generation of a ruling family. In the *Popol Vuh*, the Hero Twins, probably representative of rulers in general, emerge from the Underworld caves as the sun and the moon or Venus. It seems likely that the sun and Venus became metaphorical symbols for rule itself, symbols which appear to have been invoked in the imagery of royal funerary contexts at Tikal and elsewhere in the Maya lowlands.[6]

Structure 5D-33-2nd visually proclaims royal descent, based on the model of the solar calendar. From bottom to top the iconographic program is as follows: stuccoed sculpture paired on either side of Structure 5D-33-2nd's pyramid stairs depicts skeletal frontal facial images (Fig. 12-3). Huge outcurving fish barbels (associated with the watery Maya Underworld) frame an open rectangular mouth, inside of which is a seated figure shown in profile facing the back of a small crouching figure on a pedestal support. The position of Figure 12-3 at the base of the funerary pyramid supports the interpretation of the image as a representation of the sun still in the Underworld. The paired images of the next level represents the same deity, in a different guise. Here the deity is shown literally in a position emerging from the Underworld, analogous to the position of

[6]Freidel and Schele (n.d.) have proposed also that the *Popol Vuh* provides a source for interpreting architectural sculpture. Linking concepts of Maya rulership to the myth of the Hero Twins and their cyclical manifestations as the sun and Venus as Morning Star, they interpret images fronting buildings at the Preclassic period Maya sites of Cerros and Kohunlich.

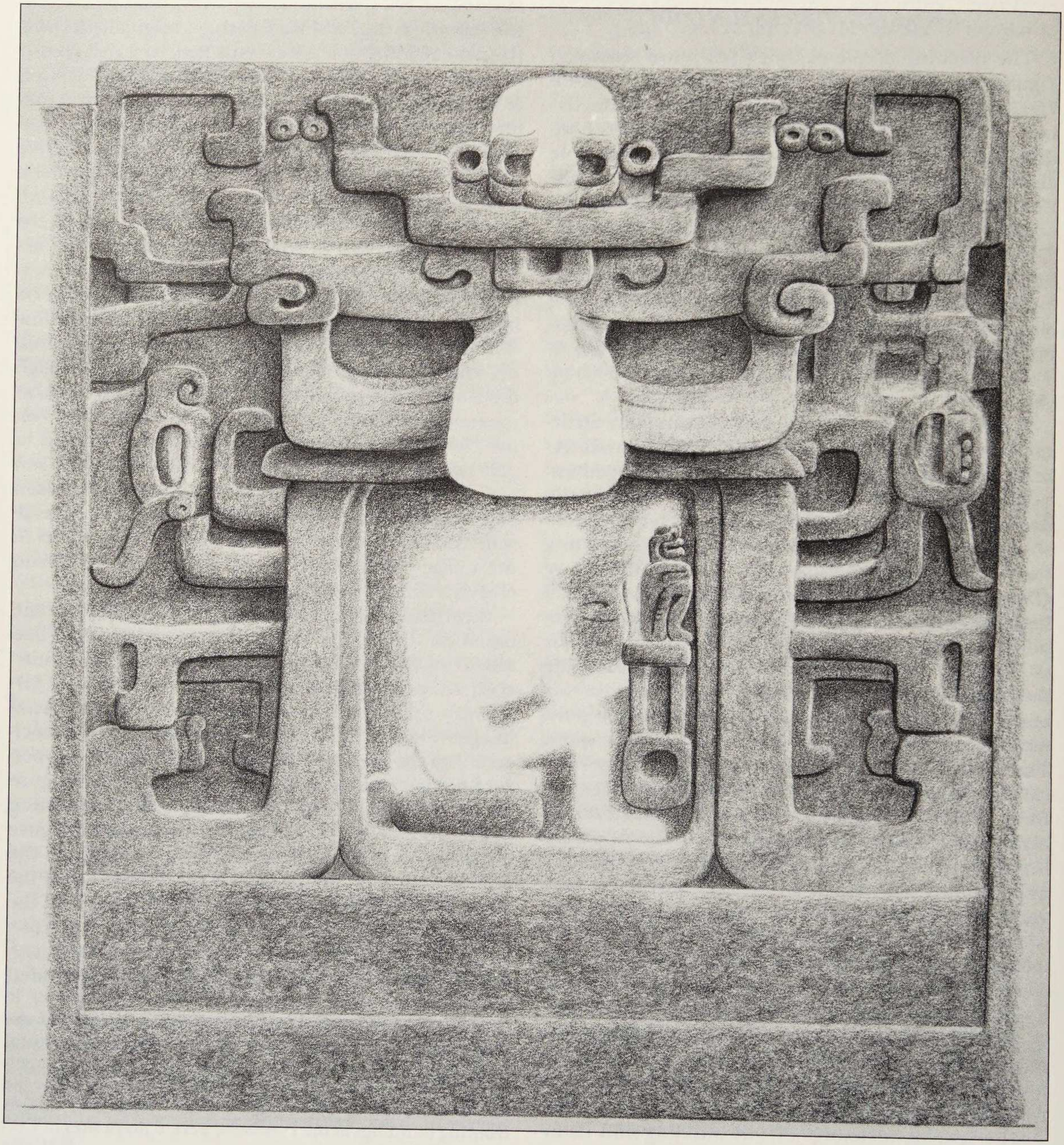

Figure 12-3. One of a pair of architectural sculptures on the lowermost tier of Tikal Str. 5D-33-2nd, flanking stairway (drawing by William R. Coe).



Figure 12-4. One of a pair of architectural sculptures on the exterior walls of the temple atop Tikal Str. 5D-33-2nd, flanking doorway (drawing by William R. Coe).

the sun at sunrise: fish barbels emerge from the sides of the partially fleshed upper mouth; serpents of the earth's surface snake out of the creature's maw, poking through earflares; and eyes are covered with water-lily leaves from the watery surface of the Maya Underworld (Fig. 12-1). Completing the rising-sun theme, a pair of horizontal rectangular panels flank the entrance to the temple interior (Fig. 12-4). In each of these images a crouching reptilian creature with jaguar snout is framed above by leafy scrolls, possibly stylizations of plantlike forms associated with the watery Underworld of Maya cosmology. The reference of earplugs (human costume), feline snout, round bird eyes, and saurian limbs suggests that this image is an Early Classic Maya manifestation of Venus as Morning Star, an image which evolves into a modified form at the site of Chichen Itza in Northern Yucatan.

It appears that the sculptural program of Structure 5D-33-2nd includes themes of the cyclical rising of the sun from the sacred Underworld caves, preceded by Venus as Morning Star. This may have served as a fifth-century Tikal Maya metaphor for the rebirth of Maya rulers: like the sun and Venus which rise together in the east during the first 5 days of the 584-day cycle of Venus,[7] legitimate rulers emerge from the place of the ancestral gods. At Tikal the replication of sacred Underworld caves were ruler's tomb chambers, carved out of the bedrock beneath the North Acropolis platform.

Composites like the one illustrated in Figure 12-1, when produced during the Late Classic Period, have been identified as Cauac Monsters (Taylor 1979)—that is, associated with the Underworld. Their identity has been presumed to be the same, even in the unique Early Classic contexts described here. Leaving aside the question of whether or not the interpretation of "Cauac Monster" is correct, to assume that the image has a unvarying meaning wherever and whenever it occurs is to overlook the nature of Maya iconography. Given the powerful effect changing time and place exerts on meaning, when seeking to identify an image in Maya art, before the question of "what" is posed, "where" and "when" must first be known. That the sculpture shown in Figure 12-1 is placed above a skeletal facial rendering and below a Venus representation positions it in astronomical and calendrical terms of solar cycles and their metaphorical use by the Early Classic Period Maya. In these contexts and in the sources mentioned

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[7] The synodical revolution of Venus is 584 days, consisting of four unequal segments of 263, 90, 250, and 8 days in duration. For our purposes, it is significant that the Venus tables in the Dresden Codex (46–50) clearly indicate Maya awareness that, after 250 days as the Evening Star in the western sky at sunset, Venus is lost to view for a total of 8 days: 4 days as it passes through inferior conjunction and 4 more days before it can be distinguished as the Morning Star in the eastern sky at dawn (i.e., its first helical rising, preceding the sun and beginning its 236-day period as the Morning Star). See Thompson (1971:221–29); 1972:62–71) for a discussion of Maya knowledge of the synodical revolution of Venus.

above, Figure 12-1 illustrates an image of the sun, emerging from the Underworld caves, wearing accouterments associated with the supernatural creature or place, referred to previously as the "Cauac Monster." The specific meaning, as metaphor for rule, comes from an understanding of the complex archaeological matrices of this architectural sculpture as well as relevant historical evidence. In other contexts, the same image could well have a different meaning. The point is less that my identification is a correct one than that it depends on contexts, the proper interpretation of which should always be open to question. The image illustrated in Figure 12-1 is an example of a multivariate form with its reference to several taxa in the natural world, recombined in a manner invoking fluid meanings which are determined by factors outside of its form. In this case, it is the position on the pyramid and consideration of what is shown above and below which provides the context carrying metaphorical meanings.

CONCLUSION

The questions posed at the beginning of this essay (Can Maya art function like text? Does Maya writing explain pictures?) cannot be answered categorically. That is precisely my point. Complex aspects of Maya culture find visual and linguistic expression in these different communication modes; their contents may overlap, but one is neither more nor less effective as a message bearer than the other and there is no requirement for one to explain the other. They are each admirably suited to the task of conveying different kinds of messages, responding to distinctive Maya needs. To summarize, there are three points to my argument: (1) although the context-dependent aspects of Maya image and Maya text differ more by degree than by opposition, these differences affect their respective contents; (2) image's multivariate forms expressing complex and sometimes conflicting meanings stand in contrast to writing's linear organization, conveying arbitrary messages prescribed by its form; (3) Maya iconography studies should acknowledge these differences.

The case of the iconographic identification, discussed above, serves to demonstrate that meaning in Maya art cannot be determined from consideration of the image itself, out of its archaeological contexts. To try to interpret Figure 12-1 without this information would be to assume that its multivariate forms do not connote meanings that vary in time and space. Maya writing, on the other hand, is not so context-dependent, since it can be read wherever it appears, even in the transcribed print of a published text, due to its prescribed, linear form connoting arbitrary meanings. Since each mode of communication is predisposed to convey contrasting types of messages, it follows that their analysis should be designed to reflect their differing qualities.

Conflicting values such as sky and earth could be combined and expressed in a sculpted pictorial composite including anthropomorphic, serpent, bird, and plant attributes. The image communication mode was perfectly suited to convey qualities of Maya supernaturals. In the context of the temple on which the Figure 12-1 image was placed and the extant documentary record, we see that a sculpture representing the sun is in the transitional position of emergence from a cave-like darkness at sunrise, an Early Classic Period pictorial metaphor for origins of supernatural powers associated with Tikal rulers.

When text and image appear together, as is often the case in Maya sculpture and painting, a special situation occurs that has produced a dynamic tension extraordinary in the history of Mesoamerican art. As the Classic Period matured, an increasing tendency to include text with image ("conjoined texts and images and embedded texts") can be seen as an attempt to influence traditional meanings by linear writing. At Tikal, texts in association with Classic Maya iconography are bids to influence dynastic rule, to specifically designate ruling families so that they can continue to carry the power of supernatural beings, traditionally modeled on the solar cycle: linear trajectories of dynasties were imposed upon the fluid patterns of supernatural beings. The implications of such attempts to influence traditional rule by displacing cyclically modeled patterns with lineal forms have been described for Tikal (Miller 1986). Suffice it to mention here that since the Maya tradition of image-making is older than that of writing, the superimposition of text on image—the association of textual passages with pictures—reveals a Maya tendency to try to specify fluid entities, to name heirs to supernatural powers, traditionally expressed by multivariate images. It can be seen as a successful Late Classic Maya attempt to usurp traditional Preclassic and Early Classic power by changing the cosmological rationales for the succession of rule. I have argued elsewhere that this formal tension between linear texts and multivariate images is expressive of the political tensions in Late Classic Maya society between conservative and revolutionary factions that eventually led to the collapse of that system (Miller 1986).

However one may interpret the interaction of Maya image-making and texts, even the existence of that dynamic is totally missed if one ignores the fact that image-making and writing evolve out of separate and sometimes parallel traditions, each of which has its own history which changes at different rates. Certainly one cannot apply methods of analysis designed to read lin-

ear texts to the problem of understanding multivariate images. Unlike meanings in texts, the signification of iconography does not lie in a specific identification such as "Cauac Monster" or, for that matter, the sun god. In one spatiotemporal context the meaning may be "Cauac Monster"; in another, the sun god emerging from the Underworld; in still another, a sacred place or even combination of place and state of being. Linear texts, however, can specify linear events such as a dynastic sequence. The first presents fluid qualities of Maya deities which shift identities according to time and place. The latter represents specific events and personalities in a temporal sequence; its specificity is purposeful and, as in most societies, was devised to justify dynastic rule in a culture that traditionally looked to signs from their gods to decide the course of human action.

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13

Narrative in Classic Maya Art

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The narrative content of Maya art is not only a source of historical data but also is a conceptual window through which we can glimpse the belief systems of these Precolumbian people. To communicate these ideas, the Classic Maya developed a pictorial narrative system and also created the only true writing system in Mesoamerica (see Gelb 1952:13). In most cases, both image and text were employed simultaneously, although the ways in which they interact vary from object to object. With the ongoing decipherment of Maya hieroglyphic writing and iconography, we are in a position to reexamine Maya art in terms of its narrative structure.

For present purposes, I define narrative in its general sense as the accounting or recital of facts, and am not restricting the term to the more specific definition of narrative as the recounting of a *series* of events in sequence. The more general definition allows us to identify different categories of narrative in Maya art, including simple narrative, the monoscenic method, and simultaneous narrative (after Weitzmann 1970).[1] A discussion of these narrative categories in Maya art will be followed by an analysis of the interaction of text and image, examining the complexities within the visual narrative system.[2]

Simple narrative is defined as the recounting of related events in a sequence wherein the actions are organized as a progression through time that mirrors the original sequence. Although rarely found in the surviving examples of Maya art, the murals from Structure 1 at Bonampak exemplify simple narrative. Murals in the three rooms pictorially detail the sequence of events of the heir designation ritual for the successor to the Bonampak throne (Miller 1986). These events include the presentation of the young heir to the assembled nobles (Room 1), a subsequent military raid with the taking of prisoners for ritual torture and sacrifice (Room 2), and the culminating public ceremony on the front of the pyramid and personal bloodletting by members of the Bonampak royalty (Room 3).[3]

Most of the pictorial space within these three rooms is filled with the pictorial images. Hieroglyphic texts are found in the narrow horizontal registers that divide the pictorial space, and short (usually vertical) texts occasionally are found next to individuals depicted in the scenes. These texts record the historical dates and astronomical data and briefly describe the actions depicted by the images; the short vertical texts name the individual participants.

Considered as a whole, the three rooms of Structure 1 exemplify simple narrative—that is, they recount an event in sequential imagery. The pictorial images carry most of the descriptive communicative load, although hieroglyphic inscriptions supplementally describe the events and name the actors. These texts are linked to the imagery, and recall Janet Berlo's category of "conjoined text" (Berlo 1983:8), wherein the text and image amplify each other.

A second type of narrative described by Weitzmann (1970) is the monoscenic method, wherein one scene from the total event is portrayed and stands for the whole. Many of the Maya stone stelae display this kind of narrative. For example, Naranjo Stela 13 (Fig. 13-1) depicts a ruler dressed in royal regalia presumably as he appeared in public at the culmination of the rituals commemorated by this monument. He wears the Jester God in his headdress, an Ahau head and pendant celt

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[1] Although Weitzmann's work discusses specifically the literary content of images, his categories are applicable to this discussion of the pictorial narrative categories in Maya art.

[2] I will restrict the discussion in this paper to individual art objects and not broach the complicated subject of the narrative structural interactions of monument groups such as the Str. 23 lintels at Yaxchilan.

[3] The Bonampak murals exemplify simple narrative when one considers each room in comparison with the others. An analysis of each room's mural in and of itself, however, reveals that the artists employed other narrative strategies within each composition.

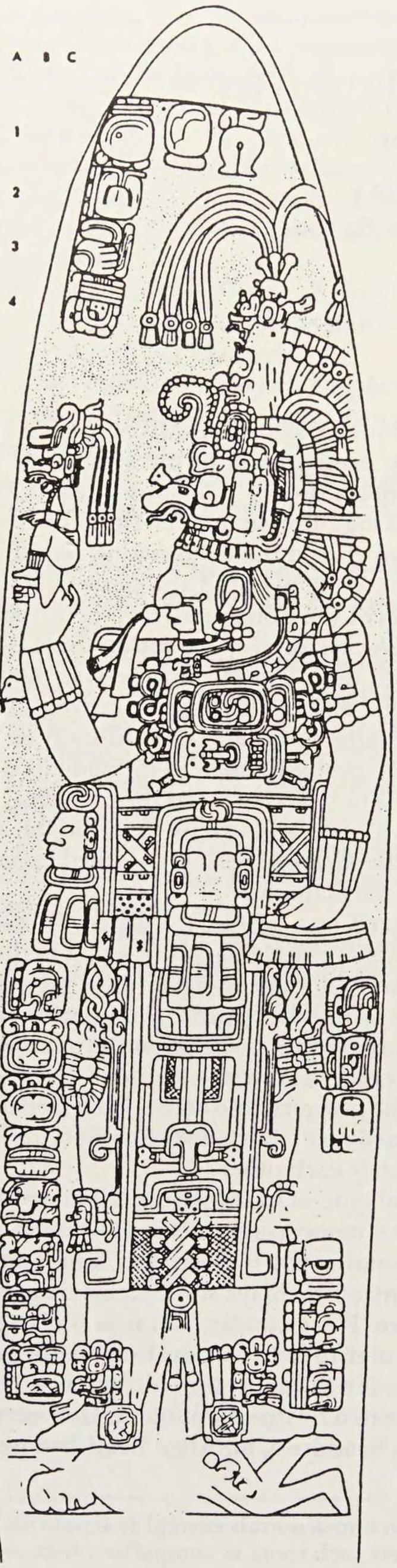


Figure 13-1. Naranjo Stela 13 (after Graham and von Euw 1975).

belt assemblage, a God C-Sun God loincloth, and an elaborate pectoral. He holds aloft the God K scepter, and his left hand grasps a small round shield. The ruler stands above a sacrificial victim whose torture and sacrifice most likely took place at the culmination of the ritual event (Schele and Miller 1986:210).

Yet the St. 13 images and glyphic text make reference to other portions of the ritual, including an earlier military raid during which the sacrificial victim was captured and the auto-sacrifice on the part of the ruler that presumably took place as part of the final events. His military role is indicated by the small round shield in his left hand and by the large skull pectoral on his chest (Dillon and Christensen 1985). Blood sacrifice on the part of the ruler is indicated by his display of the God K scepter and by the two intertwined strips of cloth hanging from his belt that end in the three-knot assemblage indicative of personal blood sacrifice (Stuart 1984; Schele and Miller 1986:176).

The combination of individual iconographic references found on this monument suggests to the viewer that it commemorates a tun-ending ritual (see Stone n.d.), an interpretation that is confirmed by the glyphic text. The monument's date is the lahuntun ending on 12 Ahau 8 Pax 9.17.10.0.0, and the main verb (at A3) is the common tun-ending compound. Blood sacrifice is indicated in the text by the kin-akbal glyphs at A7-A8 (Stuart 1984:13).

Therefore, the Stela 13 pictorial imagery makes reference to the constituent parts of the event commemorated by the monument, even though the artist depicts the ruler at the culmination of the events. The military raid and capture is not visually represented. Also absent is a depiction of the personal bloodletting by the ruler. For the formal portrait of St. 13, then, the artist chose the monoscenic method to record this multifaceted ritual event, focusing on the culminating public appearance by the ruler and making only iconographic and glyphic references to the constituent parts.

Weitzmann describes a third kind of narrative as the simultaneous method. Here, several component actions are rendered together in a single scene. This type of narrative structure is rarely found on Maya public monuments such as stelae and building facades, but it is a method employed by the painters of the Late Classic pictorial pottery. For example, a polychrome vessel (Fig. 13-2; after Clarkson 1978) depicts an Underworld scene that includes four human and three supernatural actors. Although these figures appear together in an unbounded scene, each exists and acts independently of the others with no implied interaction.

These seven figures represent seven Underworld vignettes that comprise a larger narrative that is probably linked to the epic tale recounted in the *Popol Vuh* (see Tedlock 1985). For example, the human decapita-



Figure 13-2. Rollout drawing of a Late Classic polychrome vessel (after Clarkson 1978).

tion by the prominent Underworld skeletal deity recalls the decapitation of Hun Hunahpu by the Underworld lords One Death and Seven Death. The human seated within a body of water surrounded by fish may make reference to the trick sacrifice of the Hero Twins, Hun Ahpu and Xbalanque, whose pulverized bones were thrown into the Underworld river after which they reappeared as fish men. In short, the narrative structure of this vase and of many of the Late Classic painted pottery vessels exemplifies Weitzmann's simultaneous narrative wherein selected components of a longer narrative are presented concurrently.[4]

The hieroglyphic texts painted on this vessel include the Primary Standard Sequence (Coe 1973) encircling the top of the vase, which, as David Stuart (n.d.) has recently demonstrated, names the painter or the owner of the vessel and also may describe its function. Short vertical texts are placed among the individual figures and, like the short vertical texts found on carved monuments and the Bonampak murals, name the depicted actors. As seen in the Bonampak murals, these short texts exemplify Berlo's (1983:8) category of conjoined text.

[4]Flora Clancy (personal communication, 1987) has pointed out that a circular field such as the surface of a cylindrical vessel may not be a good example for this discussion. She notes that the circular shape naturally frames sections of the continuous image and that it is only in modern "rollout" representations such as that seen in Figure 13-2 that we perceive the simultaneous narrative of the vase's composition. Clancy's point is well taken, although I contend that the Maya artist conceived and executed the composition as a simultaneous coincident expression to be perceived in a like manner.

THE INTERACTION OF IMAGE AND TEXT

The three types of narrative discussed above outline the rich inventory of narrative strategies available to the Classic Maya artist. In these examples I have only superficially described the interaction between the images and the texts, noting how the texts supplement the pictorial images. Yet the interaction of text and image in Maya art is not this simple. The addition of a writing system allowed the artists to be more creative within the established narrative structures, and several messages could be conveyed simultaneously with different emphases. Thus, information could be presented in a multifaceted, sometimes subtle, and highly sophisticated manner that changed the nature of the pictorial narrative structure.

The existence of hieroglyphic texts and pictorial images as viable communicative modes provided Maya artists with two systems that could be manipulated simultaneously to carry similar or congruent information. In fact, on many public monuments the pictorial images communicate the kinds of information we usually associate with written texts. Janet Berlo discusses this "embedded text" characteristic of Precolumbian art, noting that in many Precolumbian cultures

> art intersects with writing and linguistic information to such an extent that a knowledge of the associated written, oral, or linguistic traditions provides insight into the art on a richer level. (Berlo 1983:11)

Berlo goes on to point out that for the Yucatec Maya, their language makes no distinction between writing and drawing; the same word (*tz'ib*) suffices for both. Thus, in the Maya mind text and image fall within the same conceptual category, suggesting that both have the potential to function equally as systems of communication.

This paper concludes with a discussion of the parallel yet interconnected nature of text and image on public Maya monuments. A slight cultural digression, however, is required to fully appreciate the sophisticated interaction between text and image in Classic Maya art.

A seminal article by Irene Winter (1986) analyzes the narrative style of the Stele of the Vultures (Fig. 13-3), a carved stone monument from the ancient Near Eastern city-state of Lagash. The stela is two-sided, and like many of the Classic Maya stone stelae, utilizes both text and image on each of the carved faces of the monument. Winter notes that, although the texts and images on the Lagash stela complement each other, they are strictly independent. The pictorial imagery found on both sides is directed toward the nonliterate sector of the local population, whose pictorial message is related to the hierarchy and power of the state. The texts, which are carved on top of the pictorial images, present the state's legal case concerning land boundaries. They are meant for a literate audience, and communicate to nonlocal peoples the Lagash state's territorial claims. Therefore, the text and image operate individually and carry dissimilar messages in a narrative strategy that Winter calls "autonomous narrative" (Winter 1986:23). This type of narrative is characterized by the logic of organization and emphasis of the pictorial images being independent of the text.

The narrative structure of Classic Maya monuments, however, differs from the autonomous narrative identified by Winter in ancient Near Eastern public art. Although autonomous narrative may have existed as an initial creative operative, more often Maya texts and images function within a parallel and integrated narrative structure. Tikal St. 31 illustrates this characteristic of public Maya art. It is my contention that although the St. 31 (and most Maya stelae) images and texts are physically separate from one another within the monument's picture plane, unlike the Lagash Stele of the Vultures, Maya images and texts communicate similar information in a parallel and integrated manner. That is, one narrative form reiterates and reinforces the other in a kind of strategy I call "interactive narrative."[5]

Stela 31 (Fig. 13-4) is an Early Classic monument (9.0.10.0.0, or A.D. 446) whose four sides are carved with pictorial and hieroglyphic imagery. Pictorial representations are found on the front and sides of the monument. The front is dedicated to a full-figure portrait of the Tikal ruler "Stormy Sky" (Coggins 1975:185). Although the bottommost section of the stela has been lost due to ancient breakage, the extant image indicates that the figure's legs continued below the break with no space available for a hieroglyphic text. Each of the two sides of the monument presents a full-figure profile portrait of Stormy Sky's father "Curl Snout" (Coggins 1975:186). This kind of monumental pictorial composition with a central front figure flanked by lateral figures is called a "wrap-around" stela (Clancy 1980:54) because the composition wraps around the monument. As such, St. 31 represents the Early Classic version of the standard Late Classic royal accession monuments where the ruler is flanked by his deceased parents (e.g., the Palace Tablet from Palenque [Schele 1978]).

Hieroglyphic texts on St. 31 are found on the monument's sides and rear. The side texts are relatively short (sixteen glyphs on one side, twelve on the other) and are isolated in an unbounded area above the image of the father, Curl Snout. The rear of the monument is dedicated to an extensive hieroglyphic text whose more than 200 glyphs represent the longest-known inscription from Tikal. Although the bottommost portion of the text is lost, the majority is well preserved, allowing us to decipher the primary messages and to reconstruct the syntax or glyphic narrative structure of the inscription.

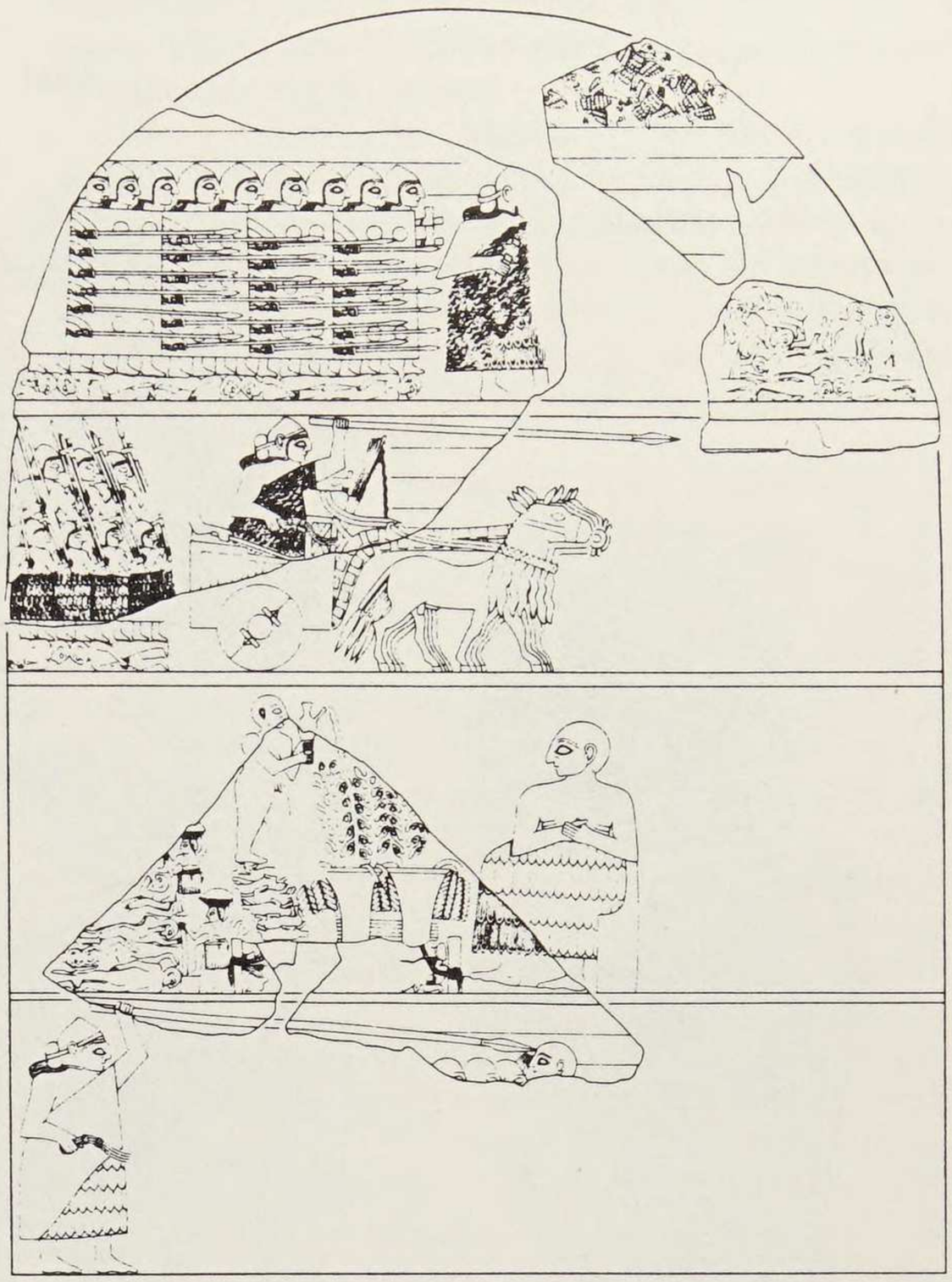
Stela 31 was erected in celebration of the first katun anniversary of Stormy Sky's accession (anniversary accession phrase at G8-H8). This glyphic passage is preceded by what may be the accession clause itself (at ?E5-F6; the first part of the clause is lost due to the break in the stela) and by the period-ending rituals performed by Curl Snout, the previous ruler (at F15-E20). Curl Snout's legitimate position within the Tikal dynasty is implied by his katun-ending rituals recorded in the rear text (at E16-E20). His legitimacy is also stated in the short texts above his portraits on the sides of the stela. Here Curl Snout's ancestry is noted at K4-L4 and M3-P3, and his name phrase ends with the Tikal emblem glyph (at I4 and P3). Stormy Sky's parentage statement ends the opening clause of the rear text (at B21-?B25) naming both his father Curl Snout (at A23) and his mother (at A24). Stormy Sky's descent from Curl Snout is also stated pictorially. The stela's wrap-around composition discussed above implies that the central figure (Stormy Sky) is the current ruler, and the flanking figure is that of his father (Curl Snout) who was the previous ruler.

Parentage and legitimate descent are reiterated on the front of the monument by a third portrait of Curl Snout that embellishes the uppermost portion of the stela. Floating above Stormy Sky, a bustlike depiction of Curl Snout looks down upon the scene. He is clearly identified as Curl Snout because his hieroglyphic name comprises his headdress (Coggins 1975:186). Similar

[5] For an alternative view of the narrative strategy of St. 31, see Clancy (1983). Clancy has written extensively on narrative in Maya art, and the reader is directed to her articles of 1985 and 1986 for additional viewpoints.



obverse

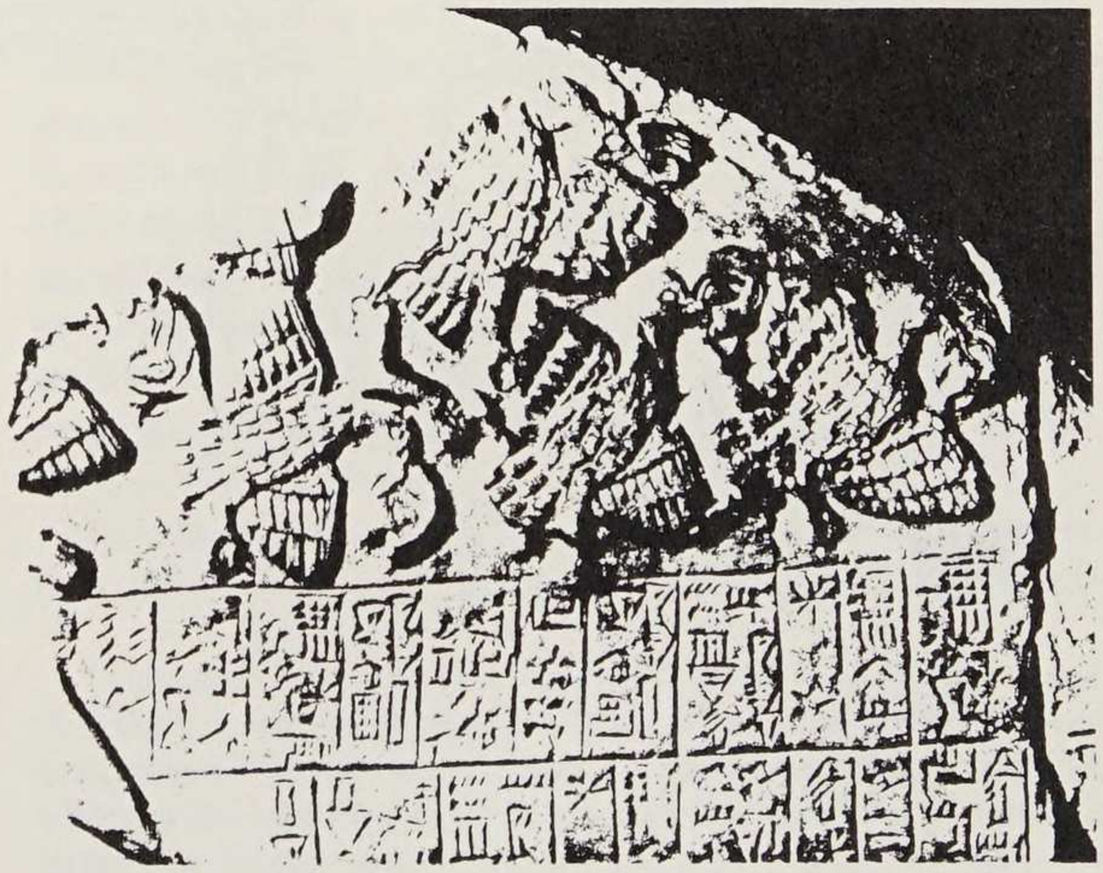


reverse

Figure 13-3. Lagash Stele of the Vultures (after Winter 1986).

floating figures found on other Maya monuments represent supernaturals, in many cases God K, who is particularly important to rulership, royal blood, and lineage (e.g., Tikal St. 4; Schele and Miller 1986:49). In the case of St. 31, then, Curl Snout takes the place of God K, and his floating presence at the top of the stela bestows both dynastic legitimacy and divine sanction upon the rulership of Stormy Sky.

One-half of the rear text on St. 31 records a katun history (twenty-year periods) for Early Classic Tikal. However, the text is not a simple sequential listing of katuns. Rather, they are recorded within a structure of rulership—that is, the katun-endings are recorded for each of the Early Classic rulers' reigns. For example, the clauses at C9-C14 and D14-C24 record Great Jaguar Paw's ending of the fourteenth and seventeenth katuns, 8.14.0.0.0 and 8.17.0.0.0, respectively. Although it is certain he ended the intervening ones as well, these two katun-endings were chosen because they embrace the years of his reign. Therefore, the St. 31 text focuses upon the individual rulers and not upon the katun se-



detail of hieroglyphic inscription

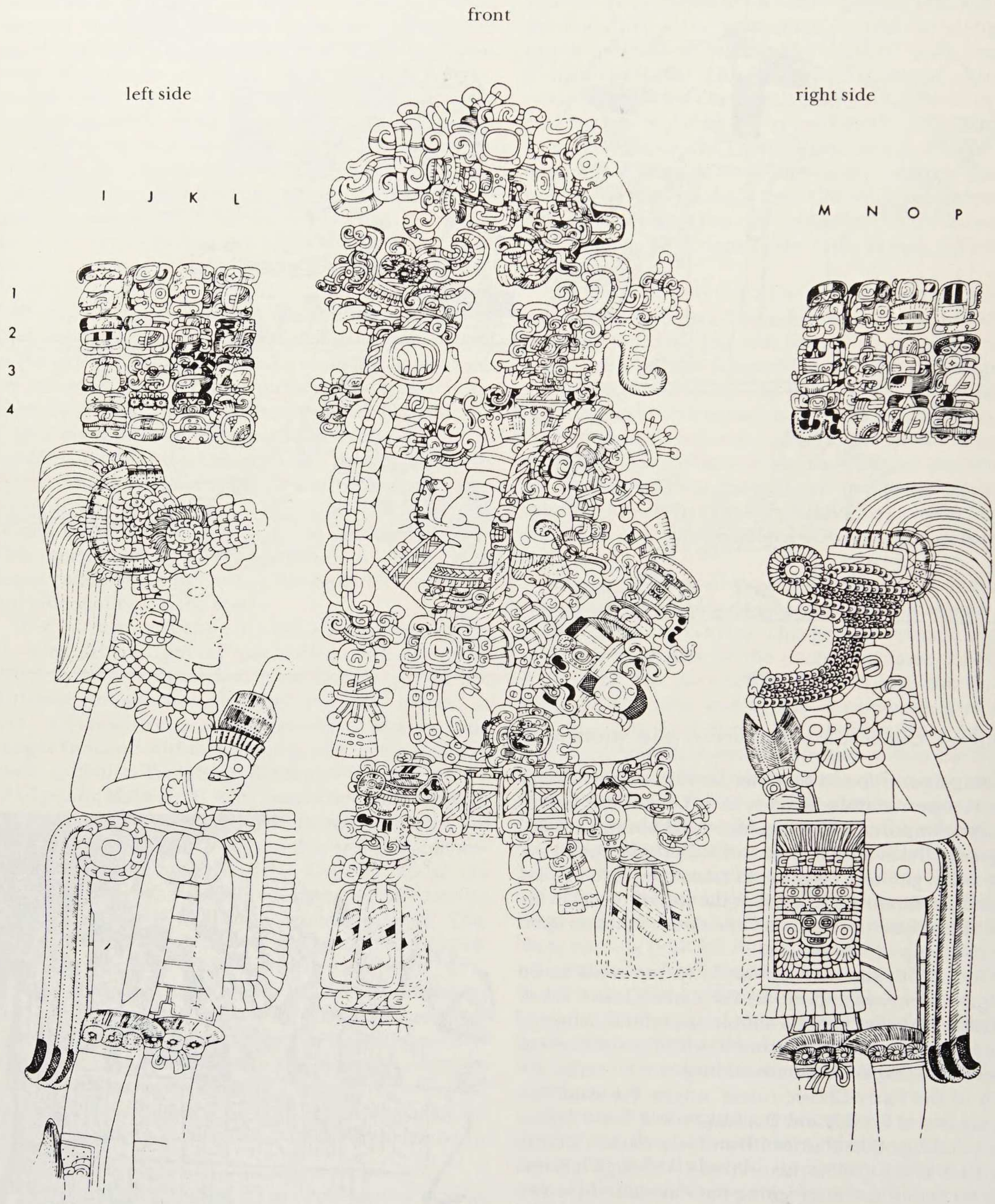
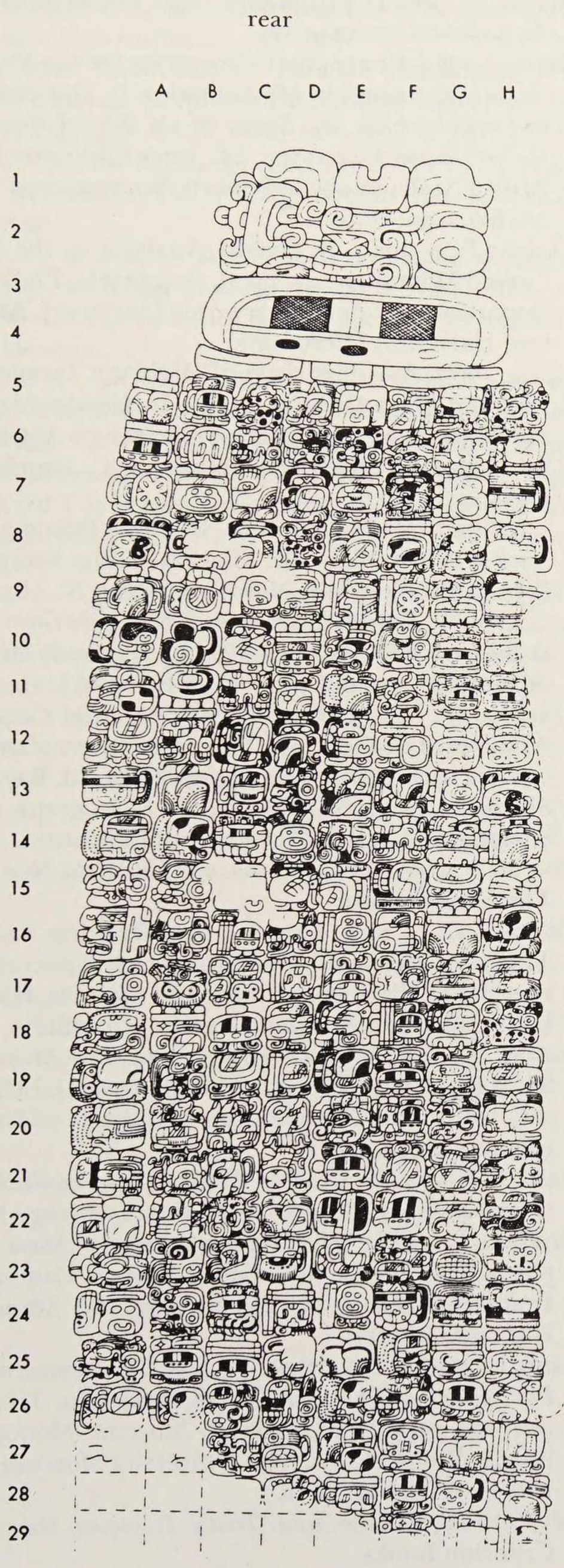


Figure 13-4. Tikal Stela 31 (after Jones and Satterthwaite 1982).



quence itself. In essence, then, this long inscription constitutes a dynastic history for Tikal rather than a katun history and functions as a written public record of legitimate royal descent.

Stela 31 employs the standard T569 Tikal emblem glyph in both the hieroglyphic inscription and the pictorial images. If the main purpose of the texts and images is to establish the legitimate Tikal dynasty rather than the social history of the site, the stela's accession and rulership content may strengthen the argument that emblem glyphs refer to dynasties rather than to geographic locations.

The final complete clause on the back of St. 31 records Stormy Sky's period-ending ritual on 9.0.0.0.0 (H9-G24). The second half of this clause includes the name of the deity GIII (at H18 [Berlin 1963]). Although it is uncertain whether GIII supernaturally takes part in the event or whether his name simply appears as part of the name phrase of Stormy Sky, the glyphic implication is that GIII gives supernatural sanction to the event and, by implication, to Stormy Sky himself.

On the front of St. 31, Stormy Sky is depicted wearing as part of his costume and holding in his arms various objects of power that restate both his and the Tikal dynasty's divine legitimate descent. Stormy Sky holds in the crook of his left arm an iconic scepter composed of the head of GIII surmounted by the main sign of the Tikal emblem glyph (T569) that includes the *ahaw* (T168) superfix. Thus, Stormy Sky is depicted at his accession anniversary displaying an icon that implies GIII's divine sanction of his accession and of the Tikal dynasty as a whole. If this weren't enough to establish Stormy Sky's rightful position at the site, he wears as part of his headdress a twisted rope that Schele has suggested signifies the Tikal emblem glyph (Schele 1985:62).

Therefore, the pictorial imagery on the front of St. 31 conveys the same messages that are communicated glyphically in the rear text. These include the formal statement of the Tikal dynasty, Stormy Sky's position therein, and the divine sanction by GIII. The pictorial imagery, then, exemplifies Berlo's (1983:11) embedded text category wherein the pictorial imagery conveys textual information, and these two kinds of imagery operate interactively to communicate similar information (interactive narrative).[6]

In conclusion, the Classic Maya pictorial representational system embraces different types of narrative,

[6] Carolyn Tate (personal communication, 1988) has noted that the pictorial iconographic imagery on St. 31 was selected to communicate simultaneously the data recorded in the text, whereas the text breaks down the information into a sequence based on linear time. Tate insightfully concludes that the text communicates historicity while the image is intended to be timeless.

including simple, monoscenic, and simultaneous narrative. The addition of a hieroglyphic text to a stela or other work of art augments the narrative and provides a tandem informational system as exemplified by Tikal St. 31. Here the pictorial and hieroglyphic imagery is characterized by a narrative strategy in which text and image function together to communicate overlapping messages. I categorize this system as interactive narrative, wherein the formal composition and iconography of the pictorial imagery reiterate and reinforce those messages communicated by the hieroglyphic inscription. The interactive narrative strategy that characterizes many Classic Maya public monuments contrasts with the autonomous narrative of the Lagash Stele of the Vultures wherein the figural representation has its own emphasis independent of the text (Winter 1986:27). With Classic Maya public art, the logic of organization and emphasis of both the inscription and image is interdependent.

A brief discussion is in order of the possible social imperative behind the development of interactive narrative. On St. 31, the long hieroglyphic text is found on the rear of the monument. I presume that the back of the stela faced away from public space and away from the majority of viewers. It is not implausible that hieroglyphic literacy was enjoyed by only a select few within the elite ranks of Maya society, and it follows that the St. 31 text was meant primarily for the few Tikal literati.[7] Like the ancient Near Eastern stela, then, the pictorial imagery was intended for a nonliterate audience. Therefore, in order for the monument to serve its intended function as a public document of legitimate descent and divine sanction thereof, the Maya determined that the pictorial imagery and the hieroglyphic inscription should convey the same information. This may have been the sociocultural determinant behind the development of interactive narrative, a narrative strategy that allowed the stela to fulfill its function as a legitimate public document for all members of the Tikal polity.

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[7] The concept of writing as a tool of the powerful few in a society has been discussed at length by Claude Lévi-Strauss (1961). He notes that writing is a source of prestige, and it gives preferential access to the sacred for those who wield its power. His points seem to hold true for the Classic Maya as well.

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14

Transformations: Relationships between Image and Text in the Ceramic Paintings of the Metropolitan Master

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THE ANALYSIS OF MAYA FUNERARY CERAMICS

Maya painted funerary ceramics proffer a wealth of information germane to social and dynastic as well as artistic history. Unfortunately, illicit excavation destroys a large percentage of the original information, since looters conceal the name and location of the site and the stratigraphic context in which the ceramics were found. This lack of archaeological context has forced most scholars to concentrate on classifying the supernatural images and interpreting the content of inscribed hieroglyphic texts on such vessels.

Michael Coe (1973), in the first significant study of Maya funerary art, set forth groundbreaking theories on both the symbolism and the inscribed texts. Through iconographic analysis, Coe not only identified several of the deity images but he also demonstrated that even scenes of court life carried unavoidable supernatural connotations by virtue of the tomb context in which they were placed. Through epigraphic study, Coe disproved the opinion that ceramic texts were without meaning. He identified the Primary Standard Sequence, a text usually painted near the rim, as part of a longer passage used consistently throughout the Maya area. Coe (1973:18–22) further showed that since Calendar Round dates often precede the Primary Standard Sequence, with names and titles of historical individuals following it, this passage must function as an extended verbal clause.

Coe attempted to interpret the text of the Primary Standard Sequence on the basis of deity heads which feature prominently among its hieroglyphs. He suggested that this passage, in the form of a funerary litany, traces the progress of the *Popol Vuh*'s mythological Hero Twins through their Underworld journey of death, transformation, and rebirth—a form of sympathetic magic designed to aid the soul of the deceased in completing the same process. More recently, Stuart (see Houston and Taube 1987:40), Grube (in press), MacLeod (1988), and others have proposed an alternate reading based on phonetic principles. According to their interpretation, the first clause of the Primary Standard Sequence text identifies the medium—whether carved or painted—and the second clause identifies the shape and the contents appropriate to it. On the basis of Stuart's analysis, cylinder vases, which constitute a large proportion of both painted and carved ceramics manufactured in the Late Classic period, were designed to hold a ritual cacao drink, perhaps with maize added (MacLeod 1988). These developed from Early Classic cylinder tripod vessels, on which the second clause of the Sequence first appears. Such cylinder tripods represent adaptations of Teotihuacan ceramics, the means by which the cacao-drinking ritual was likely introduced.

Acceptance of Stuart's hypothesis has generally resulted in a rejection of Coe's earlier interpretation. However, iconographic and epigraphic interpretations need not be mutually exclusive. That Maya artists intended the Sequence to be read on both literary and symbolic levels is clear from the high proportion of deity heads which are used to elaborate the simple text. For example, these deity heads appear to have been selected according to the same dualistic structure of destruction and re-creation which charts the progress of the Hero Twins through their Underworld transformation. Those in the first clause are generally monstrous deities or predatory animals (shark, vulture, eagle, bat, jaguar), suggesting destruction, whereas those in the second clause tend to be more passive and have more positive associations (fish, rabbit, spider monkey). Similarly, although the male portrait in the first clause represents the aged solar deity known as God N, that in the second is a form of the youthful, reborn Maize God (God E).

The literary content of the Primary Standard Sequence illuminated by Stuart and others may be interpreted according to the same structural opposition of destruction and creation. In Maya art, the techniques of carving and painting are symbolically associated with

death, through the act of penetration with a sharp implement, analogous to bloodletting. These allusions to death in the first clause are opposed by the references in the second clause to vessels and liquid contents, both associated with fertility and renewal. The same process of transformation from death to rebirth, the basis of most funerary iconography, may be read in the Sequence on several levels.[1] Coe is not completely wrong, nor is Stuart completely right. Mayanist scholars are not unlike the blind men examining an elephant—each clarifying the part they can feel, but none, individually, conceiving of the entire animal.

Recently, scholars have also begun to clarify the historical content of Maya funerary ceramics. Neutron activation analysis of past composition, combined with traditional analyses of paste, temper, slip, shape, and decoration, have allowed the distinction of several regional styles (Bishop et al. 1985). Epigraphic analysis of historical texts, inscribed on a few ceramics, may sometimes specify provenience, as with the "Fleur-de-lis" vase from Naranjo or the group of ceramics with the Ik emblem glyph, probably from San Jose de Motul (Schele and Miller 1986:227). Among the large number of "Codex Style Site A" ceramics, some illustrate the emblem glyph with a snake head as the main sign (Fig. 14-1) that is also found on looted sculptures comprising the "Site Q" group, now generally believed to have originated at the site of El Peru (Peter Mathews, personal communication, 1987). However, the lack of correspondence of ruler names and dates carved on the stone sculptures with those painted on the ceramics has impeded formulation of historical context for these wares.[2]

In the absence of relevant epigraphic information, stylistic analysis may help recover some of the context lost through looting. Reents's study of the Naranjo-Holmul ceramics uses stylistic analysis to hypothesize a general social context on the basis of quality as well as content. According to Reents (1985:160–62), the cruder ceramics, which are frequently incorrect in both symbolism and text, might have been used by members of the lower classes to furnish their graves; the large body of ceramics which are correct and detailed in approach would have been affordable to the middle classes. The very small number of innovative pieces with elaborate iconography and lengthy historical texts would then have been limited to tombs of the elite.

In their studies of Maya ceramics, several authors have noted the possibility of identifying the hand of individual artists. Some of these painters have been discussed in recent literature, named either through the best known of their works, such as the "Fenton Painter" (Schele and Miller 1986:153) and the "Painter of the Altar de Sacrificios Vase" (Robicsek and Hales 1981:121), or according to an element of their style, such as the "Master(s) of the Pink Glyphs" (Schele and Miller 1986:153, 227).[3]

Stuart (1987:4–7) has recently suggested that Maya painters inscribed their own names in the ceramic texts, identified by the naming compound that follows the introductory phrase *u-tzib*, or 'his writing'. However, in the examples which Stuart cites, the person named in this context appears to be the owner rather than the painter of the vessel. For example, Stuart notes the caption or naming text which appears behind a toad-impersonator on a vase from the "*Ik* site" (Stuart 1987:fig. 7), but does not mention the second *u-tzib* phrase on the same vase, which is followed by a female name, and is appropriately adjacent to one of the female dancers. It would seem more likely that this man and woman commissioned the vase together than that they painted it together. One might speculate that the couple intended to commemorate an important audience with the ruler, who perhaps conferred upon them some special status or title. Similarly, in the "Fleur-de-lis" vase (Stuart 1987:fig. 6), the person whose name is introduced by the *u-tzib* compound is shown to be of royal blood, son of the Naranjo ruler and his consort. This extended naming phrase of sixteen glyphs is again more likely to refer to the elite owner of the vessel than to the artist. If so, then the phrase *u-tzib* constitutes another example of name-tagging, equivalent to the phrase *u-lak* ('his plate') which appears, for example, on four plates identifying their owner as the son of Tikal's twenty-second ruler (Houston and Taube 1987:fig. 4).[4] In view of the lack of evidence for signed Maya ceramic paintings, stylistic analysis still proves the most useful tool in distinguishing individual artists.

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[1] The funerary opposition of destruction and creation may be read within the literary content of the Primary Standard Sequence on another level. Carving and painting, mentioned in the first clause, are frequently applied to the raw clay, before fire has transformed it into a vessel capable of holding liquids, as specified in the second clause.

[2] Hales (Robicsek and Hales 1981:157) identifies an historical name on the Codex Style Site A vessel numbered 129 as the famous "Jaguar Paw" who was defeated by Ruler A of Tikal in the late seventh century. However, the condition of this glyph is such that its original form is not evident. Hales also notes that the adjoining date has no known relationship to the carved stone texts associated with this ruler (Robicsek and Hales 1981:157–58).

[3] Barbara and Justin Kerr (n.d.b) have correctly demonstrated that the "pink glyph" works to which Schele and Miller refer were painted by a group of artists rather than a single hand.

[4] Houston and Taube (1987:fig. 4) list three of these plates. The fourth is unpublished, but available in the archive of Maya pottery slides compiled by Nicholas Hellmuth.

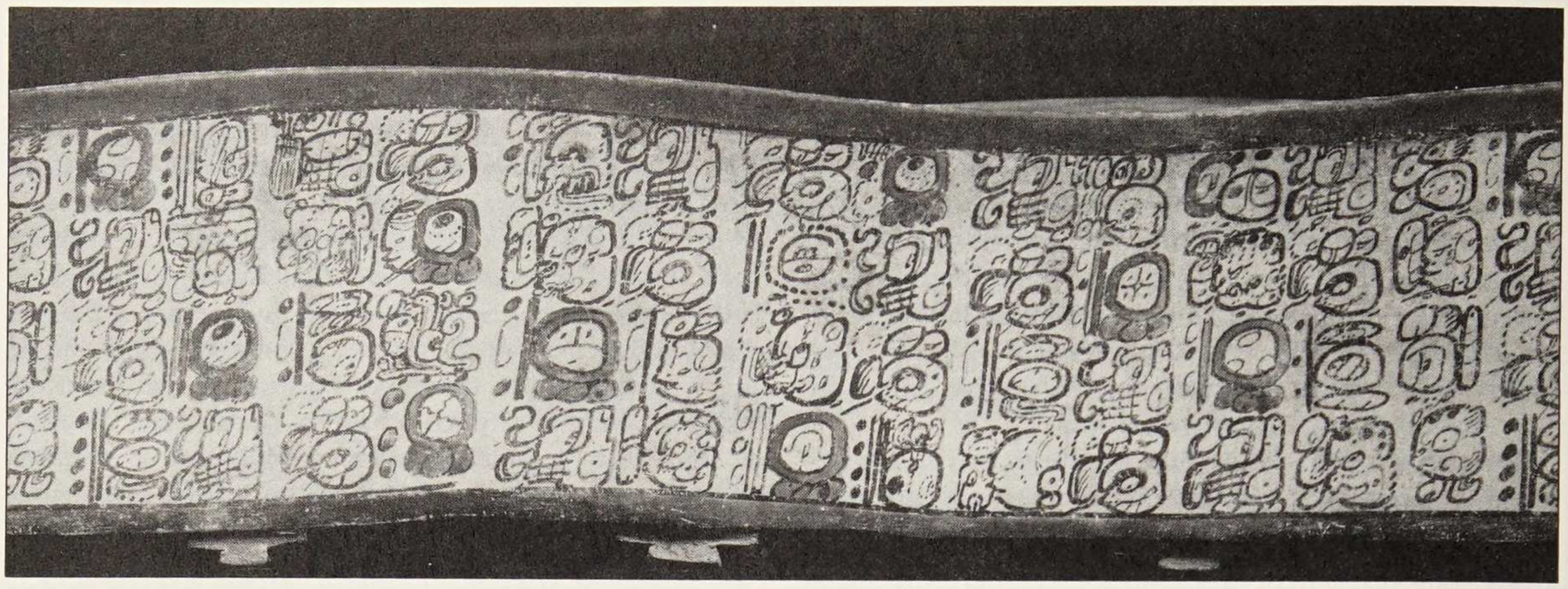

Figure 14-1. All-glyphic vase; collection unspecified. Catalogue number 128 in Robicsek and Hales 1981. (Photo: copyright 1982 Justin Kerr; photographic rollout #1371)

Chronological context has proven more difficult to reconstruct. Dynastic texts with Calendar Round dates are rare on ceramics. Instead, most inscribed dates occur with mythological scenes, and some of these may have astronomical rather than historic associations (Coe 1973:93; Schele and Miller 1986:312), so they cannot be used to date the manufacture of the ceramic. Again, stylistic analysis proves more valuable in determining chronological relationships and developments. The largest number of painted vases are of the Tepeu II type, spanning a century of development which encompasses the same stylistic transformation from ornate to dynamic modes of composition that Proskouriakoff (1950:181) identified in relief sculpture. Excavations of elite tombs at Tikal, particularly tombs 116 and 196, demonstrate that artists in both media participated in this aesthetic revolution simultaneously.[5] By analyzing decontextualized Tepeu II ceramics according to this sequence, we can learn a great deal about the development of Maya ceramic art and aristocratic society. For example, it is possible not only to compare the approaches used in representation of dynastic history at the "*Ik* site" by the Painter of the Altar de Sacrificios Vase and the Master(s) of the Pink Glyphs but also to determine that the former artist preceded and exerted a profound influence on the latter group.

[5]Tomb 116, generally dated around 9.15.2.0.0 (Coggins 1975:456), contains ceramics painted only in the ornate mode. Tomb 196, whose final inscribed date at 9.16.4.9.8 to 9.16.7.9.8 (Coggins 1975:567) is closer to Proskouriakoff's date of 9.16.0.0.0 for the division between ornate and dynamic modes, contains two figurative cylinder vases painted in the ornate mode (Coggins 1975:figs. 140, 142) and one in the dynamic mode (Coggins 1975:fig. 141).

THE RELATION OF STYLE TO ICONOGRAPHIC ANALYSIS

Although we tend to separate stylistic and iconographic or epigraphic analyses as responding to two different sorts of problems, in reality the two methodologies are interdependent. Iconography is never static. The use of signs and symbols evolves through time and diversifies further through areal specialization. To fully understand the meaning which an artist intended in delineating a particular motif, we need to establish the place of origin, process of evolution, and path of diffusion of that motif as well as the contexts in which it occurs. Such historical reconstructions depend entirely on knowledge of provenience and date, precisely the two forms of information which, if lost through illegal excavation, may be discerned only through stylistic analysis.

Maya ceramic painting in particular challenges iconographic analysis. Ceramic artists were not as conservative in their approach as stone carvers, who were often restricted to standardized dynastic representations whose persistence over several centuries at each site demonstrated the permanence of its ruling authority. Instead, funerary artists seem permitted if not prompted to innovate, in order to enhance the value of objects which in some cases seem destined to be viewed only briefly before the interment. Many painters responded to this need for innovation with original combinations and irreverent exaggerations of motifs: their deftness must have elicited gasps of appreciation from *cognoscenti*. The most creative and admired artists would be least bound by symbolic canons, so that interpreting their work requires taking

into account the nature and evolution of their distinctive approach.

The importance of placing a work within its stylistic context in order to decipher its symbolism may be demonstrated briefly in terms of current analysis of the Metropolitan Vase (Fig. 14-2). The composition on this ceramic involves a pair of dancing deities, identified as the Death God (God A) and the Barbel God (God B), also known as GI of the Palenque triad. They flank a Cauac Monster altar, atop which reclines the anthropomorphic Jaguar God. Looking on from the viewer's right are a doglike animal and an insect holding a smoking cigar. Recent publications are consistent in following Lounsbury's (1985:53–56) interpretation of this scene as an event from the *Popol Vuh*.

Lounsbury discusses the Metropolitan Vase as evidence for identifying the Barbel God (God B) as Hunahpu, one of the second generation of Hero Twins in the ballgame myth of the *Popol Vuh*. Part of the basis for Lounsbury's interpretation is his identification of the reclining jaguar deity as Hunahpu's twin, Xbalanque or Jaguar-deer. Drawing on this analogy, he attempts to find an event in the *Popol Vuh* in which one twin attacks the other, as the Barbel God appears to do to the Jaguar God on the Metropolitan Vase. The only appropriate episode in this myth occurs just before the twins' final victory over the lords of death. They perform tricks for the court, sacrificing and reviving a series of subjects as they dance. Following a hierarchical sequence which echoes modern medical testing, they first try out the procedure on a dog, and then on a lowly sacrificial victim. Next, at the request of the lords of death, Xbalanque sacrifices and revives Hunahpu. Finally, the lords demand to undergo the same sacrifice, and thus lose their power to the twins. To support his identification of the Metropolitan Vase as an illustration of one twin sacrificing and reviving the other before the lords of death, Lounsbury identifies the animal behind the death god as the dog who first underwent the process of sacrifice and revival.

Despite such parallels between the myth of the Hero Twins in the *Popol Vuh* and the Metropolitan Vase, there are several differences which require consideration. For example, whereas the Metropolitan Vase shows the Jaguar God as a victim, the *Popol Vuh* specifies that Xbalanque (Jaguar-deer) sacrifices and revives Hunahpu. Lounsbury suggests that the reverse trick would also have been performed, even though it is not mentioned. However, Xbalanque elsewhere acts again as a shamanistic healer and restorer for Hunahpu—when Hunahpu loses his head to the Death Bat—a role consistent with the feline connotations of his name. This suggests that the roles of the Hero Twins were more standardized and that the sacrifice of Xbalanque by Hunahpu would have been out of place in the *Popol Vuh*.

The manner of including a death god in the scene on the Metropolitan Vase also makes its interpretation as an event from the *Popol Vuh* suspect. The *Popol Vuh* text always refers to a pair of death gods, who act as adversaries to the Hero Twins and who do not themselves dance. By contrast, the painter of the Metropolitan Vase has paired the Barbel (God B) and Death (God A) gods as dancing adversaries to the reclining Jaguar God victim. Focusing instead on the Barbel and Jaguar gods as the important deity pair, as Lounsbury does, contradicts the arrangement not only on this vase and on others painted by the same master but also on other examples of such "symmetrical sacrifice" scenes produced by ceramic workshops at other sites (Robicsek and Hales 1981:figs. 17A, 20A–B).

Other images shown on the Metropolitan Vase also lack clear association with this episode from the *Popol Vuh*. First, the animal positioned behind the Death God (God A) cannot be identified clearly as a dog, since it lacks the standard dog ear and has many feline attributes. On another version of this scene painted by the same artist (Robicsek and Hales 1981:no. 19), a jaguar appears in its place. Second, although the insect may represent the fireflies who aid the Hero Twins, they occur in a much earlier episode of the *Popol Vuh*. Third, there is no description of an altar in the *Popol Vuh* like the great Cauac Monster altar that becomes the focal point of the ceramic painting. Lounsbury's identification of the Barbel (God B) and Death (God A) gods on the Metropolitan Vase as the youthful heroes of the *Popol Vuh* is based on abstracting these images from their context, and thus seems less likely when the whole composition is considered and different versions of the same scene are compared.

Lounsbury's analysis underlines a basic problem in the interpretation of funerary ceramics as representations of myth. Such interpretations not only require distortions of either the text or the image to make them fit but they also demote artistic activity to the level of illustration. A comparison of the Metropolitan Vase with the *Popol Vuh* demonstrates that ceramic artists were no mere illustrators. The painter of the Metropolitan Vase may have been depicting a form of sacrifice with import analogous to that of the transformational tricks performed by the Hero Twins in the *Popol Vuh*, but he was not illustrating any known Maya myth. On the one hand, he included elements which contradict the myth; and on the other hand, elements he included that most parallel the myth, such as the dancing Barbel (God B) and Death (God A) gods, do not occur in known versions of the scene produced at other sites. If Maya ceramic artists were expected to illustrate such a myth, the images would not only relate more closely to the text but they also would be more uniform and standardized among the many workshops and



Figure 14-2. The Metropolitan Vase; Metropolitan Museum of Art. Catalogue number 21 in Robicsek and Hales 1981. (Photo: copyright 1975 Justin Kerr; photographic rollout #521)

sites. We might also expect greater uniformity among the works of a single artist. The Metropolitan Vase differs from the other versions of the scene by its painter and the associates of his workshops as well as the approach taken at other sites, demonstrating this artist's freedom and independence in manipulating visual imagery. Although participants in the same religious system as narrators of myth, ceramic artists exhibited a self-sufficiency, developing a repertoire of forms and motifs appropriate to the advantages and limitations of their own medium.

But what of the hieroglyphic inscription on the Metropolitan Vase? In removing the images of the Barbel and Jaguar gods from their pictorial context, Lounsbury also ignores the text. In the only recent discussion of this inscription, Schele (Schele and Miller 1986:287) rightly notes that the verbal clause does not explain the events or name the personages depicted, but she incorrectly assumes that the same text may appear with a variety of scenes. Schele (Schele and Miller 1986:49) also uses hieroglyphic interpretation to name the Barbel God on the Metropolitan Vase. Following David Stuart's identification of a naming text for this god on a single ceramic plate (Schele and Miller 1986:60, n55), Schele calls him Chac Xib Chac. Stuart's evidence is the glyphic compound preceding the usual God B portrait glyph, composed of the *chac* sign ('red' or 'great') and a human face, which he translates as *xib* ('youth'). The artist who painted this plate [6] may have intended the naming text to be read *Chac Xib Chac*, but it differs significantly from the name which the Metropolitan Master consistently (Robicsek and Hales 1981:nos. 20, 23, 27) gave to his Barbel God (God B) image, in which the compound preceding the portrait head is composed of the signs for *yax* ('green' or 'new') and *imix*.[7] The publications of Lounsbury and Schele are but two examples of the myopia involved in interpreting the imagery or text on a funerary ceramic without adequate consideration of its context.

STYLISTIC ANALYSIS OF CODEX STYLE SITE A CERAMIC PAINTING

The foregoing discussion demonstrates that iconographic and epigraphic analyses are most accurate and complete when the stylistic context of the work is best understood. Ideally, we would wish to study a large corpus of ceramics produced in a single locality within a fairly short span of time, so that different artists could be distinguished and their influence upon each other determined. Ironically, the deplorable looting of one site, called Codex Style Site A by Robicsek (Robicsek and Hales 1981), has provided us with such a corpus. Through the exhaustive catalogue of codex style ceramics produced by Robicsek and Hales, we are even able to compare different versions of the same scene painted by different artists and by the same artist at different times.

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[6] Robicsek (Robicsek and Hales 1981:249) first noted that this plate was by the Painter of the Altar de Sacrificios Vase.

[7] The *imix* glyph has several phonetic readings, including 'ma', 'ba', and 'mul'. In Landa's *Relación* (Tozzer 1941:191), *ba* is given as the term for stingray. Tozzer (1941:190, n. 1001) also notes in his commentary that *yax bay* is a term for the dogfish shark. Both of these animals are closely connected with the Barbel God (God B).

Three discussions have been published which distinguish the styles of individual Site A painters. Coe (1973:94; 1978:22, 28) speculated on the relationship of five Site A vessels, which he attributed to three artists without explaining his criteria. Barbara and Justin Kerr (1980) approached the problem more academically, selecting a sample for analysis and applying Morellian methodology familiar from studies of European painting, involving the comparison of details such as faces and hands. Although the Kerrs developed useful definitions of three artists—whom they called the Princeton, Metropolitan, and Fantastic painters—they did not extend this analysis to other vases or other artists. Robicsek (Robicsek and Hales 1981:245–49) attempted a more comprehensive sorting of Codex Style ceramics from various sites, which he assigned to sixteen artists. Although he incorporated the results of the Kerrs' analysis (changing the name of the Fantastic Painter to the Painter of the Prancing Deer), he did not adopt their methodology and instead frequently grouped vessels by scene rather than style. His most useful contribution in this section is the identification of his "Painter 1, or the Calligraphic Painter."

My study here of the relationship between text and image in the art of the Metropolitan Master is based on a stylistic analysis which attempts to combine the comprehensive approach of Robicsek with the Kerrs' use of sound methodology. The sample included all available ceramics associated with Codex Style Site A, including those in the Robicsek and Hales catalogue, as well as unpublished examples, illustrations of which were generously made available by Barbara and Justin Kerr. The results of this analysis, presented in an earlier paper (Cohodas 1985), is summarized here along with a further explanation of the methodology.

This stylistic analysis began with a study of nine all-glyphic vessels published by Robicsek and Hales (1981:nos. 121–29). The fact that all nine vessels record the same text facilitated comparison of handwriting styles. These were defined in terms of the characteristic glyph form, the brushstrokes which form the cartouche, the method of relating main signs to affixes, the delineation of internal detail, and the addition of external embellishment.

Within this sample, three individual hands were recognized. One vase (Fig. 14-1) is clearly by the painter of the Metropolitan Vase (Fig. 14-2). Both works share the small, compact, slanting glyphs with a cartouche painted in a few strokes, with an angular turn at eight o'clock and a thinning at five o'clock. The Metropolitan Master also contrasts simple and clear interior details with decorative exterior embellishments, including dashes and wire lines. Five vases (Robicsek and Hales 1981:nos. 121, 123, 124, 125, 129) were painted by a second hand whose more rigid approach is based on straight lines and on horizontal and vertical emphases, with little tonal variation. This painter often simplified the outer form of glyphs while increasing the interior detail. On the basis of his method of delineating thumbs, Robicsek (Robicsek and Hales 1981:249) ascribed three of these five vessels to his "Painter 11, or Dynasty Vase Painter A." Another vase (Robicsek and Hales 1981:no. 127) was painted by a third artist, whom Robicsek called "Painter 12, or Dynasty Vase Painter B." His expressive style involves large glyphs outlined with multiple strokes, bulging outward and meeting at sharp angles. In his line, more emphasis is placed on variations in tone than in width, and he indulges in extreme elaboration of internal detail with fine parallel lines. Analysis of these writing styles also highlighted the portions of the second painter's texts that had been repainted in modern styles, and revealed that two of the dynasty vase series published by Robicsek and Hales (1981:nos. 122, 126) are completely modern paintings.[8]

The next step was to analyze writing styles on other Codex Style Site A vessels, allowing the attribution of further pieces to the same three artists. In so doing, it was discovered that the Princeton (Fig. 14-3) and Metropolitan (Fig. 14-2) vases were actually painted by the same hand, not by two different artists as the Kerrs (1980, 1981) had suggested. Indeed, Robicsek had attributed this painter's dynastic vase (Fig. 14-1) to "the Painter of the Princeton Vase" (Robicsek and Hales 1981:247). Three additional writing styles were also distinguished within this sample. Two of these artists generally painted glyphs backwards. One, here called the Backwards Glyph Painter (see Robicsek and Hales 1981:no. 49), used thick lines with little variation in width or tone, joining them at sharp angles which often flattened the glyphic cartouche into a parallelogram. The other artist, called the Fantastic Painter by the Kerrs (1980, 1981; see Robicsek and Hales 1981:no. 43), preferred a thin wire line, often doubled to suggest depth, and created rounded glyphs with little internal detail. The last artist included in this study is Robicsek's "Painter 1, or the Calligraphic Painter." His delicate and ornate glyphs (see Robicsek and Hales 1981:no. 72) show little distortion or slant. Thick lines describe the form, and thinner lines create standard internal details, carefully followed by a tawny or pinkish wash to suggest volume and mass. Unlike the other five artists, the Calligraphic Painter limited his inscriptions to a continuous band beneath the rim, painted with the help of guidelines above and below. Of those ceramics from Site A that were not painted by these six artists, most

[8] Robicsek and Hales no. 126 is a modern painting in the style of the second artist, whereas no. 122 is in the style of the third artist, as is an additional unpublished vase (Kerr photographic rollout #2094).

were minor or inferior imitations of their work, which did not add significantly to this iconographic and textual study.

Once these six handwriting styles were understood, the investigation was expanded to include all forms of painted imagery on the Codex Style Site A ceramics. Characteristic methods of delineating faces, hands, postures, textiles, or jewelry proved helpful in attributing works without sufficient text. As the stylistic analysis progressed, attention shifted to more general features, such as the use of line—with its variations in width and tone—or the overall density of dark to light on the painted surface. As a result of these stylistic analyses, it was possible to attribute nearly two hundred vessels to these six Site A artists (see Tables 14-1, 14-3). For convenience, Robicsek's two "dynasty painters" were renamed. His "Dynasty Vase Painter A" is here called the Frontal Rabbit Painter after the image on number 87 in the Robicsek and Hales catalogue, whereas his "Dynasty Vase Painter B" is here called the Ringed Eye Painter after a detail on their vase number 18.

In addition to the series of vases with the same dynastic text, several additional themes were discerned which had been interpreted by several artists, comparisons between which helped to further clarify their distinctive approaches. For example, Robicsek and Hales (1981) published five artists' versions of an iconic composition with two supernatural scribes. The Metropolitan Master's version (Robicsek and Hales 1981:no. 64) is characteristically of highest quality, with crisp delineation, organically unified and rounded forms, strong composition, expressive line, delicate and intricate detail, suggestion of depth through variations in tone, and elaboration of the background space with open forms and rounded fillers. As with other themes, the Frontal Rabbit Painter produced the closest imitations, simplified in detail and flattened through lessening of the tonal variation (Robicsek and Hales 1981:no. 63). The Ringed Eye Painter (Robicsek and Hales 1981:no. 62) characteristically produced an innovative, unified, and exuberant version with virtual elimination of negative space by overlapping of figures and multiplication of detail with fine parallel lines, as in the headdress feathers. The Fantastic Painter's version (Robicsek and Hales 1981:no. 61) displays his wiry line and extreme range of distortion, as in the leaflike elements protruding from beneath the scribes' arms. Finally, in the Calligraphic Painter's version (Robicsek and Hales 1981:no. 71), the deflated figures are defined with a heavy, inexpressive outline and a tawny wash. The usual rim band of detailed, delicate hieroglyphs is typically placed between light guidelines.

These comparisons revealed that the works of the Metropolitan Master were on the whole more competent and innovative than those of other artists, perhaps setting the models which his associates then imitated. Since his works also account for nearly half of the attributed ceramics, including all of the major formats and with longer and more consistently organized texts, they were selected for more intensive analysis. The next step was to suggest a chronological seriation of his works in order to trace the evolution of his approach and the derivation of more idiosyncratic images and themes.

The framework of this seriation was provided by the contrast between the style of the Princeton Vase (Fig. 14-3) and that of the Metropolitan Vase (Fig. 14-2). For example, in the Princeton Vase, a fine and extremely long wire line defines forms in silhouette, and a wash adds depth and is often puddled (Kerr and Kerr 1980, 1981) for dramatic effect. Figures are monumental and refined, with elegant detail of costume and physical features. Despite the brutality of the narrative, the composition is quiet, with static figures elegantly posed in a broad space that avoids overlapping and allows room for lengthy texts in discrete blocks and bands. By contrast, the artist's approach in the Metropolitan Vase is more personal and dynamic. Line is heavier but modulated in width, with gaps at the junctures, suggesting a fleshy, three-dimensional form. Depth is also suggested by secondary lines of lighter tone, by figures positioned in three-quarter view, by foreshortening—especially of feet but also of legs—and by a stress on overlapping. As the figures expand and interlock, the negative space is divided into small pockets. Glyphs show greater elaboration in external embellishment, and they appear in much shorter texts, dispersed into the pockets of space and often overlapped by the figures. Although none of the Metropolitan Master's works may be securely dated by inscription, the direction of this progression is evident: the Princeton Vase is painted in the static, ornate mode of Early Tepeu II, whereas the Metropolitan Vase is painted in the subsequent dynamic mode of Late Tepeu II.[9]

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[9] Dating the Metropolitan Master's works to the end of the ornate phase and beginning of the dynamic would put the early portion of his career in katun 15. If Codex Style Site A is indeed El Peru, then this period of the formation of its ceramic workshop coincides with a political and artistic resurgence, following perhaps two katuns of domination by Tikal. Such a resurgence may account for the erection of a long series of carved stone panels featuring ballplayer images and a lengthy dynastic text (Cohodas, in press). Judging by the most prominent dates recorded in the Chenes region, the fashion for capstones painted in the same monochrome style is also contemporaneous. In fact, the hand of the Metropolitan Master may possibly be discerned in some of these capstones, particularly that from Xnucbec (Robicsek 1978:195) and the fine line portions of the Santa Rosa Xtampak capstones (Pollock 1970:56) as well as possibly the University Museum Capstone (Jones 1975). Similar work may underlie the



Figure 14-3. The Princeton Vase; Princeton Museum of Art. Catalogue number 1 in Robicsek and Hales 1981. (Photo: copyright 1975 Justin Kerr; photographic rollout #511)



Figure 14-4. Young Dancing Lord; collection unspecified. Catalogue number 82 in Robicsek and Hales 1981. (Photo: copyright 1980 Justin Kerr; photographic rollout #1202)

Arranging other works by the Metropolitan Master along this progression from ornate to dynamic allowed further refinement of the chronological seriation. A transitional style was defined, when the fine line was first replaced by the more expressive and varied line, but before the negative space was lost to expanding forms and elaborate detail. In this middle period, the Metropolitan Master adopted the new dynamic mode with enthusiasm, producing compositions based on strong diagonals with near-perpendicular intersections, exaggerating the size of hands and both the size and the diagonal slant of glyphs (Fig. 14-4; see also Robicsek and Hales 1981:no. 139). This seriation also revealed that although the Metropolitan Vase may be among the latest known works of this painter, the Princeton Vase is certainly not the earliest, since at least three published works (Robicsek and Hales 1981:nos. 70, 138, 141) represent preceding developments. Whereas for certain discussions this three-part sequence of early (Princeton Vase), middle (transition), and late (Metropolitan Vase) styles has proven sufficient, in other contexts it has been necessary to subdivide the early and late styles. This subdivision results in an expanded five-phase sequence referred to by Roman numerals I through V (Table 14-2).

The work of other artists followed similar lines of evolution, allowing relationships among these painters to be defined more precisely. Most striking is the evidence that although the Calligraphic Painter was accorded higher prestige at the beginning of this sequence, the Site A workshop soon fell under domination by the Metropolitan Master. For example, although the Metropolitan Master was already elaborating narrative compositions in a fully monochrome Codex Style in Phase I, both he (see Robicsek and Hales 1981:table 23 A,D,F) and the Ringed Eye Painter (see Robicsek and Hales 1981:table 2C,F) were simultaneously imitating the Calligraphic Painter's more polychrome iconic compositions and Primary Standard Sequences texts (see Robicsek and Hales 1981:table 24A and 26B). This

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coarse repaintings of the Dzibilnocac capstones (Pollock 1970:31; Gallenkamp and Johnson 1985:44).

Table 14-1. Comparison of Motifs by Painter

Composition	Calligraphic	Metropolitan	Ringed Eye	Frontal Rabbit	Fantastic	Backwards Glyph
Iconic:						
Animals	174[a]	176; T12I				
Snake Deity	T16D, E, F[b] T14aA, C T15A, B, C; *3229*[c]	T11C, D T21A				
Kan Monster	T24A, C; T26B	T23A, D, E, F; T17D				
Jester God	T17H	115; T17C, F, G, I; T18B		T18A		
Flare God	133, 134	132, 136	137			
Skull & Lily	*2723*	75; 113; *2226*	112		167	
Young God	107, 165; T25B	74, 77	79	73		
Scribe & Monkey Gods	71, 72	60, 64, 69	62, 159	59, 63, 160; *2294*; 157, 161	61	158?
Men & Bundles		85, 86, 90		89; *2095*, *2285*		
Ahau Glyph	T27E	T8A, B, E; T19	T4B; T8A			
Medallion	T5B, D, F T7A, B, D *3230*, *3336*	T4C, E T13B, E		T4A?		
Primary Standard only		T1G; T10A, C, D; T22A; T27D	T2C, E, F T10F			
Other	107; T9C	T9B		80		
Throne Room		70	18, 88	87, 145; *2603*		
Death Series		30, 31, 32, 33, 39, 40, 46 47, 48, 48b, 50, 52, 53, 138; *1991*, *2010*, *2041*, *2067*, *2284*, *2286*	34, 38, 45, 51, 29		43	49
Dynastic		128	127	121, 123, 124, 125, 129, 130		
Narrative:						
Woman & Deer		14, 15, 16, 140; *2794*				
Mating & Effigies		10, 11, 12, 12a, 12b, 13, 9; 17	2772	8		
Young Dancing Lord		82, 94, 95, 96, 97, 99, 101, 104, 106; *2011*, *2282*	92, 103?	83, 93, 98, 105; *2096*	84	81, 102
War, Sacrifice, & Hunting		1, 2, 56, 108, 109, 111, 139, 143; *1900*	18, 110			
Cauac Altar Sacrifice		19, 20, 21, 23, 27; *2207*[d]		22, 26	24	
Cauac Sacrifice Related		37a, 141; *2068*, *2213*, *2572*, *2715*	3	37, 142	*2595*	

[a]Simple numerals (e.g., 141) are catalogue numbers in Robicsek and Hales (1981).
[b]Numerals prefixed by the letter T (e.g., T15A) are table numbers in Robicsek and Hales (1981).
[c]Italicized numerals (e.g., *2202*) are numbers for Kerr photographic rollouts not published in Robicsek and Hales.
[d]Note that the bottom half of Kerr photographic rollout *2207* has been recently restored in the style of the Fantastic Painter, although the original is by the Metropolitan Painter.

Table 14-2. Tentative Chronological Seriation of Selected Works by the Metropolitan Master

	I	II	III	IV	V
Iconic:					
Animals		176[a]; T12I[b]			
Kan Monster	T23A, D, F		T17D		
Jester God		115; T11C, D	T17C; T18B	T17F, G, I	
Flare God			136	132	
Young God, Skull, & Lily	*2226*[c]	74, 75, 113	77		
Scribe & Monkey Gods			60, 69	64	
Men & Bundles, Perforators	85	90	86		
Ahau Glyph	T19			T8A	T8B, E
Medallion			T4C, E		
Primary Standard	T22A; T27D	T1G; T10A, C, D	T10E		
Other			T9B; T21A		
Throne Room	70		68		
Death Series	138	50	52, 162; *2067* *2284*, *2286*	30, 31, 39, 40, 41, 44, 48b; *2010*, *2041*	32, 33, 47, 48
Narrative:					
Woman & Deer		140; *2794*	16	14	15
Mating & Effigies	17	12	12a	11, 12b	10
Young Dancing Lord	117	*2282*	82, 96, 97, 104, 106	94, 99; *2011*	95
War, Hunting, Sacrifice	109, 143	111	110, 139; *1900*		
Other Old God	1, 2	56	108		
Cauac Altar Sacrifice			20	19	21, 23, 27; *2207*
Cauac Sacrifice Related	141, *2068?*		*2213*, *2715*	28, 37a; *2572*	

[a]Simple numerals (e.g., 141) are catalogue numbers in Robicsek and Hales (1981).
[b]Numerals prefixed by the letter T (e.g., T15A) are table numbers in Robicsek and Hales (1981).
[c]Italicized numerals (e.g., *2202*) are numbers for Kerr photographic rollouts not published in Robicsek and Hales.

situation was reversed in Phase II when the Metropolitan Master became the most widely imitated artist; as a consequence, the monochrome style began to dominate the Site A workshop. At this time, the Ringed Eye Painter turned entirely to elaborations of the Metropolitan Master's approach (compare Robicsek and Hales 1981:nos. 50, 51) and the Frontal Rabbit Painter began his pedestrian imitations (compare Robicsek and Hales 1981:nos. 73, 74). In phases IV–V, the works of two more innovative artists appeared simultaneously, both characterized by extreme distortion of images and backwards presentation of glyphs—traits that would be inappropriate in any phase but the high dynamic of Late Tepeu II. During this sequence, the Calligraphic Painter continued elaborating his distinctive approach, attracting only mediocre followers. I had earlier concluded that the Metropolitan Master must have set up a rival workshop by his Phase II (Cohodas 1985). However, the Calligraphic Painter must have retained close contact with the Metropolitan Master, since he adapted some of the latter artist's ideas from his Phases III–V.

Reents (1985:169–70) summarizes evidence for identifying the ceramic workshop archaeologically as a residential compound and suggests (159–60) that the paint-

Table 14-3. Corpus of Codex Style Site A Ceramics Employed in This Study

Number	Format	Theme	Texts	Artist	Comment
1[a]	Narrative	Mating & Sacrifice	Primary Standard, historical, verbal clause, naming	Metropolitan	The Princeton Vase
2	Narrative	Old God Sacrifice	Primary Standard, historical, verbal clause, naming	Metropolitan	
3	Narrative	Cauac Altar Related	Primary Standard, naming	Ringed Eye	
7	Narrative	Old God Sacrifice	Abbreviated clause	Frontal Rabbit	
8	Narrative	Mating	Abbreviated verbal clause	Frontal Rabbit	
9	Narrative	Mating	Verbal clause	Ringed Eye	
10	Narrative	Mating		Metropolitan	
11	Narrative	Mating & Effigies	Verbal clause	Metropolitan	Heavily restored
12	Narrative	Mating & Effigies	Abbreviated clause, dependent clause	Metropolitan	
12a	Narrative	Mating & Effigies	Verbal clause, naming, & eroded text	Metropolitan	
12b	Narrative	Mating & Effigies	Verbal clause	Metropolitan	
13	Narrative	Mating & Effigies	Eroded	Metropolitan	
14	Narrative	Woman & Deer	Eroded	Metropolitan	Heavily restored
15	Narrative	Woman & Deer	Verbal clause, Primary Standard	Metropolitan	
16	Narrative	Woman & Deer	Verbal clause, naming	Metropolitan	Heavily restored
17	Narrative	Effigies	Verbal clause, naming	Metropolitan	Revised by artist?
18	Throne Room		Primary Standard	Ringed Eye	
19	Narrative	Cauac Altar	Verbal clause	Metropolitan	
20	Narrative	Cauac Altar	Verbal clause, naming	Metropolitan	
21	Narrative	Cauac Altar	Verbal clause	Metropolitan	
22	Narrative	Cauac Altar	Verbal clause	Frontal Rabbit	
23	Narrative	Cauac Altar	Verbal clause, naming, Ahau medallion on base	Metropolitan	
24	Narrative	Cauac Altar	Calendar round	Fantastic	
26	Narrative	Cauac Altar		Frontal Rabbit	
27	Narrative	Cauac Altar	Verbal clause, naming text	Metropolitan	
28	Narrative	Cauac Altar	Verbal clause	Metropolitan	
29	Death Series		Naming	Ringed Eye?	Heavily restored
30	Death Series		Primary Standard, *balam ahau*	Metropolitan	Heavily restored
31	Death Series		Primary Standard, *balam ahau*	Metropolitan	
32	Death Series		Primary Standard, *balam ahau*	Metropolitan	
33	Death Series		Primary Standard, *balam ahau*	Metropolitan	
34	Death Series		Naming	Ringed Eye	
37	Narrative	Cauac Altar	Verbal clause	Frontal Rabbit	
37a	Narrative	Cauac Altar	Verbal clause	Metropolitan	
38	Death Series		Primary Standard, naming	Ringed Eye	
39	Death Series		Primary Standard, *balam ahau*	Metropolitan	
40	Death Series		Primary Standard, *balam ahau*	Metropolitan	
41	Death Series		Primary Standard, *balam ahau*	Metropolitan	
42	Death Series		*Balam ahau*	Ringed Eye?	
43	Death Series		Primary Standard	Fantastic	
44	Death Series		*Balam ahau*	Metropolitan	Heavily restored
45	Death Series		*Balam ahau*	Ringed Eye	Heavily restored
46	Death Series		*Balam ahau*	Metropolitan??	Heavily restored

Number	Format	Theme	Texts	Artist	Comment
47	Death Series		Primary Standard, *balam ahau*	Metropolitan	
48	Death Series		Primary Standard, *balam ahau*	Metropolitan	
48a	Death Series		*Balam ahau*	Ringed Eye?	Heavily restored
48b	Death Series		*Balam ahau*	Metropolitan	
49	Death Series		*Balam ahau*	Backwards Glyph	
50	Death Series		*Balam ahau*	Metropolitan	
51	Death Series		*Balam ahau*	Ringed Eye	
52	Death Series		Primary Standard	Metropolitan	Heavily restored
53	Death Series		Primary Standard	Metropolitan	Heavily restored
56	Narrative	Old God	Pseudoclause, naming	Metropolitan	
57	Iconic	Scribes		Frontal Rabbit	
58	Iconic	Scribes		Frontal Rabbit	
59	Iconic	Scribes		Frontal Rabbit	
60	Iconic	Scribes		Metropolitan	
61	Iconic	Scribes		Fantastic	
62	Iconic	Scribes		Ringed Eye	
63	Iconic	Scribes		Frontal Rabbit	
64	Iconic	Scribes		Metropolitan	
68	Throne Room		Verbal Clause	Metropolitan	
69	Iconic/Death Series	Scribes	Naming	Metropolitan	Heavily restored
70	Throne Room		Naming	Metropolitan	
71	Iconic	Scribes	Primary Standard	Calligraphic	
72	Iconic	Scribe		Calligraphic	
73	Iconic	Young God		Frontal Rabbit	
74	Iconic	Young God		Metropolitan	
75	Iconic	Skull & Lily		Metropolitan	
76	Iconic	Young God		Frontal Rabbit	
77	Iconic	Young God	Tzolkin	Metropolitan	
78	Iconic	Young God		Frontal Rabbit	
79	Iconic	Young Goddess	Naming	Ringed Eye	
80	Iconic	Women, Perforators		Frontal Rabbit	
81	Narrative	Young Dancing Lord		Backwards Glyph	
82	Narrative	Young Dancing Lord	Verbal clause, naming	Metropolitan	
83	Narrative	Young Dancing Lord	Naming	Frontal Rabbit	Heavily restored
84	Narrative	Young Dancing Lord		Fantastic	
85	Iconic	Men & Bundles	Pseudonaming	Metropolitan	
86	Iconic	Men & Perforators		Metropolitan	Heavily restored
87	Throne Room		Naming	Frontal Rabbit	
88	Throne Room		Naming	Ringed Eye	Heavily restored
89	Iconic	Men & Bundles	Naming	Frontal Rabbit	
90	Iconic	Men & Bundles	Tzolkin	Metropolitan	
91	Narrative?	Young Dancing Lord?	Tzolkin	Ringed Eye?	
92	Narrative	Young Dancing Lord	Tzolkin, naming?	Ringed Eye	

Number	Format	Theme	Texts	Artist	Comment
93	Narrative	Young Dancing Lord	Verbal clause	Frontal Rabbit	Complete repainting
94	Narrative	Young Dancing Lord	Verbal clause	Metropolitan	
95	Narrative	Young Dancing Lord	Verbal clause	Metropolitan	
96	Narrative	Young Dancing Lord		Metropolitan	
97	Narrative	Young Dancing Lord		Metropolitan	Heavily restored
98	Narrative	Young Dancing Lord	Verbal clause, naming	Frontal Rabbit	
99	Narrative	Young Dancing Lord	Verbal clause	Metropolitan	
100	Narrative	Young Dancing Lord	Clause?	Metropolitan?	Eroded
101	Narrative	Young Dancing Lord	Calendar round, Primary Standard	Metropolitan?	Heavily restored
102	Narrative	Young Dancing Lord	Verbal clause	Backwards Glyph	
103	Narrative	Young Dancing Lord	Tzolkin	Ringed Eye?	
104	Narrative	Young Dancing Lord	Tzolkin	Metropolitan	Heavily restored
105	Narrative	Young Dancing Lord	Tzolkin	Frontal Rabbit	
106	Narrative	Young Dancing Lord		Metropolitan	Fragment
107	Iconic	God & Snake		Calligraphic	
108	Narrative	Old God	Pseudonaming?	Metropolitan	
109	Narrative	Hunt	Verbal clause, dependent clause	Metropolitan	
110	Narrative	Hunt	Naming	Ringed Eye	
111	Narrative	Hunt	Clauses, naming	Metropolitan	"The Barbarians"
111a	Iconic	Skull & Lily		Ringed Eye	
112	Iconic	Skull & Lily		Metropolitan	
113	Iconic	Skull & Lily		Metropolitan	
115	Iconic	Jester God		Metropolitan	
117	Narrative	Young Dancing Lord	Primary Standard, historical, naming	Metropolitan	
118	Narrative	Young Dancing Lord		Frontal Rabbit?	
121	Dynastic		Verbal clauses	Frontal Rabbit	
123	Dynastic		Verbal clauses	Frontal Rabbit	
124	Dynastic		Verbal clauses	Frontal Rabbit	
125	Dynastic		Verbal clauses	Frontal Rabbit	Heavily restored
127	Dynastic		Verbal clauses	Ringed Eye	
128	Dynastic		Verbal clauses, Primary Standard	Metropolitan	
129	Dynastic		Verbal clauses	Frontal Rabbit	
130	Dynastic		Verbal clauses	Frontal Rabbit	
132	Iconic	Flare God		Metropolitan	
133	Iconic	Flare God		Calligraphic Follower	
134	Iconic	Flare God		Calligraphic Follower	
136	Iconic	Flare God		Metropolitan	
137	Iconic	Flare God		Ringed Eye	
138	Death Series		Primary Standard, historical, *balam ahau*	Metropolitan	
139	Narrative	Jaguar God Sacrifice	Calendar round, naming	Metropolitan	
140	Narrative	Woman & Deer	Naming	Metropolitan	Heavily restored
141	Narrative	Jaguar Predator	Verbal clause, dependent clause	Metropolitan	Fragment
142	Narrative	Cauac Related		Frontal Rabbit	

Number	Format	Theme	Texts	Artist	Comment
143	Narrative	Ballgame	Verbal clause, naming	Metropolitan	Heavily restored
145	Throne Room		Naming	Frontal Rabbit	
148	Narrative	Cauac Related?		Frontal Rabbit?	
152	Throne Room		Naming	Frontal Rabbit?	
157	Iconic	Scribe?		Frontal Rabbit	
158	Iconic	Scribe		Backwards Glyph?	
159	Iconic	Scribe		Ringed Eye	
160	Iconic	Men & Bundle		Frontal Rabbit	
161	Iconic	Scribe?		Frontal Rabbit?	
162	Iconic/Death Series		Naming	Metropolitan	
164	Iconic	Young God & Deer		Frontal Rabbit	
165	Iconic	Young God	Primary Standard	Calligraphic	
166	Iconic	Supernatural		Calligraphic??	
167	Iconic	Skull		Fantastic	
174	Iconic	Animal		Calligraphic?	
176	Iconic	Animals		Metropolitan?	
T1G[b]	Iconic	Glyphs	Primary Standard	Metropolitan	
T2C	Iconic	Glyphs	Primary Standard	Ringed Eye	
T2E	Iconic	Glyphs	Primary Standard	Ringed Eye	
T2F	Iconic	Glyphs	Primary Standard	Ringed Eye	
T4A	Iconic	Medallion		Frontal Rabbit?	
T4B	Iconic	Ahau		Ringed Eye?	
T4C	Iconic	Medallion		Metropolitan	
T4D	Iconic	Medallion		Frontal Rabbit??	
T4E	Iconic	Medallion		Metropolitan?	Heavily restored
T5A	Iconic	Medallion		Calligraphic Follower	
T5B	Iconic	Medallion		Calligraphic Follower	
T5D, F	Iconic	Medallion		Calligraphic	
T5E	Iconic	Medallion			
T6A	Iconic	Medallion			
T6B	Iconic	Medallion			
T6C	Iconic	Medallion		Calligraphic Follower	
T6D	Iconic	Medallion			
T6E	Iconic	Medallion		Calligraphic Follower	
T7A	Iconic	Medallion		Calligraphic	
T7B	Iconic	Medallion		Calligraphic	
T7C	Iconic	Medallion			
T7D	Iconic	Medallion		Calligraphic	
T7E	Iconic	Medallion			
T8A	Iconic	Ahau		Metropolitan	
T8B	Iconic	Ahau		Metropolitan	
T8C	Iconic	Medallion		Ringed Eye?	
T8D	Iconic	Ahau		Frontal Rabbit?	

Number	Format	Theme	Texts	Artist	Comment
T8E	Iconic	Ahau		Metropolitan	
T8F	Iconic	Imix		Frontal Rabbit?	
T8G	Iconic	Ahau			
T9A	Iconic	Medallion			
T9B	Iconic	Sky Band		Metropolitan	
T9C	Iconic	Sky Band		Ringed Eye?	
T10A	Iconic	Kan		Metropolitan	
T10B	Iconic	Ahau			
T10C	Iconic	Kan		Metropolitan	
T10D	Iconic	Ahau	Primary Standard	Metropolitan	
T10E	Iconic	Sky Band		Metropolitan	
T10F	Iconic	Glyphs	Primary Standard	Ringed Eye	
T11A	Iconic	Lily			
T11B	Iconic	Lily			
T11C	Iconic	Jester	Incomplete	Metropolitan	
T11D	Iconic	Jester		Metropolitan	
T11E	Iconic	Lily			
T12A	Iconic	Kan Monster		Ringed Eye??	
T12B	Iconic	Reptilian	Primary Standard	Calligraphic Follower	
T12C	Iconic	Kan Monster			
T12D	Iconic	Kan Monster			
T12E	Iconic	Kan Monster			
T12F	Iconic	Kan Monster			
T12G	Iconic	Kan Monster		Metropolitan Follower	
T12H	Iconic	Insect?		Metropolitan??	
T12I	Iconic	Eagle		Metropolitan	
T12J	Iconic	Kan Monster			
T13A	Iconic	Snake	Primary Standard	Calligraphic Follower	
T13B	Iconic	Snake		Frontal Rabbit?	
T13C	Iconic	Snake		Ringed Eye?	
T13D	Iconic	Snake	Primary Standard	Calligraphic Follower	
T13E	Iconic	Snake		Metropolitan?	
T13F	Iconic	Snake			
T13G	Iconic	Snake	Primary Standard	Calligraphic Follower	
T14aA	Iconic	Snake	Primary Standard	Calligraphic	
T14aB	Iconic	Snake			
T14aC	Iconic	Snake	Primary Standard	Calligraphic	
T15A	Iconic	Snake	Primary Standard	Calligraphic	
T15B	Iconic	Snake	Primary Standard	Calligraphic	
T15C	Iconic	Snake	Primary Standard	Calligraphic	
T16A	Iconic	Snake	Primary Standard	Calligraphic?	
T16B	Iconic	Snake		Metropolitan Follower	
T16C	Iconic	Snake	Primary Standard		

Number	Format	Theme	Texts	Artist	Comment
T16D	Iconic	Snake	Primary Standard	Calligraphic	
T16E	Iconic	Snake	Primary Standard	Calligraphic	
T16E	Iconic	Snake	Primary Standard	Calligraphic	
T16F	Iconic	Snake	Primary Standard	Calligraphic	
T16G	Iconic	Snake			
T16H	Iconic	Snake			
T16I	Iconic	Snake	Primary Standard	Calligraphic??	
T16J	Iconic	Snake	Primary Standard		
T17A	Iconic	Jester			
T17B	Iconic	Snake			
T17C	Iconic	Jester		Metropolitan	
T17D	Iconic	Reptilian		Metropolitan	
T17E	Iconic	Snake			
T17F	Iconic	Jester		Metropolitan	
T17G	Iconic	Jester		Metropolitan	
T17H	Iconic	Jester	Primary Standard	Calligraphic	
T17I	Iconic	Jester		Metropolitan	
T18A	Iconic	Jester		Frontal Rabbit	
T18B	Iconic	Jester		Metropolitan	
T19	Iconic	Ahau		Metropolitan	
T21A	Iconic	Snake		Ringed Eye??	
T21B	Iconic	Snake		Metropolitan Follower	
T22A	Iconic	Glyphs	Primary Standard, historical	Metropolitan	
T23A	Iconic	Kan Monster		Metropolitan	
T23B	Iconic	Supernatural	Primary Standard		
T23C	Iconic	Kan Monster		Ringhed Eye??	
T23D	Iconic	Kan Monster		Metropolitan	
T23E	Iconic	Kan Monster		Metropolitan?	
T23F	Iconic	Kan Monster	Primary Standard, historical	Metropolitan	
T24A	Iconic	Kan Monster	Primary Standard	Calligraphic	
T24C	Iconic	Kan Monster		Calligraphic?	
T24D	Iconic	Kan Monster		Ringed Eye??	
T24F	Iconic	Kan Monster		Frontal Rabbit??	
T25B	Iconic	Maize God		Calligraphic	
T25C	Iconic	Maize God		Calligraphic	
T26B	Iconic	Kan Monster	Primary Standard	Calligraphic	
T26C	Iconic	Kan Monster			
T27A	Iconic	Medallion			
T27B	Iconic	Medallion			
T27C	Iconic	Snake		Calligraphic	
T27D	Iconic	Glyphs	Primary Standard	Metropolitan	
T27E	Iconic	Ahau	Primary Standard	Calligraphic	
T27F	Iconic	Medallion			

Number	Format	Theme	Texts	Artist	Comment
1900[c]	Narrative	Sacrifice	Naming	Metropolitan	Heavily restored
2010	Death Series		*Balam ahau*	Metropolitan	Heavily restored
2011	Narrative	Young Dancing Lord	Calendar round	Metropolitan	
2041	Death Series		*Balam ahau*	Metropolitan	Heavily restored
1991	Death Series		Naming	Metropolitan	
2067	Narrative/Death Series	Mating	Naming	Metropolitan	Heavily restored
2068	Narrative	Cauac Related	Primary Standard	Metropolitan?	Heavily restored
2095	Iconic	Scribe		Frontal Rabbit	
2096	Narrative	Young Dancing Lord	Verbal clause	Frontal Rabbit	
2152	Iconic	Medallion	Primary Standard	Calligraphic	Heavily restored
2207	Narrative	Cauac Altar	Verbal clause	Metropolitan[d]	Heavily restored
2213	Narrative	Cauac Related	Verbal clause, naming	Metropolitan	
2226	Iconic	Insect	Primary Standard, historical	Metropolitan	
2282	Narrative	Young Dancing Lord	Verbal clause	Metropolitan	
2284	Death Series		*Balam ahau*	Metropolitan	
2285	Iconic	Men & Bundles	Primary Standard, naming?	Frontal Rabbit	
2286	Death Series		*Balam ahau*	Metropolitan	
2294	Iconic	Scribe?		Frontal Rabbit	
2572	Narrative/Death Series	Cauac Related	Verbal clause, *balam ahau*	Metropolitan	
2595	Narrative	Cauac Related	Naming	Fantastic	
2603	Throne Room		Naming	Frontal Rabbit	
2715	Narrative	Cauac Related	Verbal clause	Metropolitan	
2716	Death Series		Primary Standard, *balam ahau*	Metropolitan?	Heavily restored
2723	Iconic		Primary Standard	Calligraphic	
2772	Narrative	Mating	Verbal clause, naming	Ringed Eye	
2794	Narrative	Woman & Deer	Verbal clause, naming	Metropolitan	
3229	Iconic	Snake	Primary Standard	Calligraphic	
3230	Iconic	Medallion	Primary Standard	Calligraphic	
3366	Iconic	Medallion	Primary Standard	Calligraphic	Heavily restored

[a]Simple numerals (e.g., 141) are catalogue numbers in Robicsek and Hales (1981).

[b]Numerals prefixed by the letter T (e.g., T15A) are table numbers in Robicsek and Hales (1981).

[c]Italicized numerals (e.g., *2202*) are numbers for Kerr photographic rollouts not published in Robicsek and Hales.

[d]Note that the bottom half of Kerr photographic rollout *2207* has been recently restored in the style of the Fantastic Painter, although the original is by the Metropolitan Painter.

ers associated with it, who produced works in the same style but differing in quality, were members of the same extended family.[10] At Codex Style Site A, the Calligraphic Painter, who achieved the earliest dominance, may have been the founding patriarch[11] who trained his younger associates: the Metropolitan and Ringed Eye painters. These artists in turn trained a younger group, including the Frontal Rabbit, Fantastic, and Backwards Glyph painters. Together, these six artists may then represent two to three generations within the same family.

With this summary of the methodology and results of stylistic analysis for the Codex Style Site A ceramics that form the basis for iconographic and epigraphic study, it is possible to begin analyzing the relationships between image and text which characterize the art of the Metropolitan Master.

STANDARD CONFIGURATIONS OF TEXT AND IMAGE IN THE ART OF THE METROPOLITAN MASTER

This section will present general definitions of the three typical formats which dominate the art of the Metropolitan Master. The conventional arrangement, types of images, and appropriate texts will each be briefly described. The Primary Standard Sequence, which may appear alone or in combination with any of these consistent configurations, will be discussed separately. In order to highlight some of the changes and directions of approach throughout this artist's career, these scenes will also be briefly considered in terms of the five-phase chronological sequence.

[10] Another characteristic of the Maya workshop organization is that these related painters would share the products of the same potters. For example, up to eleven of the cylindrical vases buried in Tomb 116 at Tikal were similar enough in size, shape, and paste as to possibly be the products of the same potter, yet each was painted by a different hand (Coggins 1975:545–46). At Naranjo, a vase of dancers (Coe 1978:94–99) painted by the artist responsible for the Vase of the Seven Gods (Coe 1973:106–9) and a dynastic vase with *fleur-de-lis* motifs (Coe 1973:102–3) were apparently made by the same potter from the same lump of clay (Reents 1985:164). On this basis Reents (1985:164) assumed that the same artist also painted the two vessels. However, despite the obvious family resemblance between them, these two vases were painted by different hands.

[11] The Calligraphic Painter's style shares some important similarities with the Naranjo workshop products (Reents 1985), including black background iconic scenes, use of tawny or pinkish wash, and highly detailed hieroglyphs painted with a wide outline. Perhaps he was trained in the outstanding Naranjo school and brought to Site A (El Peru?) to found a ceramic workshop. Some of the Metropolitan Master's early works show clear affinities with the Naranjo (Fig. 14-5) and general Peten (Fig. 14-6) workshops. He would also have received his training before the workshop was settled at Site A.

Primary Standard Sequence

In addition to demonstrating that ceramic painters throughout the extent of Classic Maya culture drew on the same text for this ritual sequence, Coe (1978:94–96) recognized that individual artists tended to repeat a particular selection as part of their style. At Codex Style Site A, the Calligraphic Painter codified a seven-glyph sequence of the Primary Standard ritual text, followed by from one to three glyphs which appear to be generalized titles rather than specific historical names. The most common of these is a compound combining the signs for *chuen*, *eb*, and *uinic*, interpreted as an expression for "great man" or *batz uinic* (Carlson 1988), but which often follows the compound of a God C head and "water group" prefix in the manner of an emblem glyph.

The Metropolitan Master's earliest works directly imitate the Calligraphic Painter's Primary Standard Sequence, sometimes (Fig. 14-6) even duplicating the style in which it was painted. However, the Metropolitan Master often substituted a monkey head for the fish glyph (Robicsek and Hales 1981:table 22A; Kerr photographic rollout #2226), and in one case used both (Fig. 14-6). The Metropolitan Master also added longer and more specific historical references. The names and titles of at least three individuals dominate his early pieces, and two of these are shown by a parentage statement to be father and son (Kerr photographic rollout #2226). A third individual, who predominates on what may be the very earliest pieces (Fig. 14-6) is shown once with the familiar Site Q (El Peru?) emblem glyph (Robicsek and Hales 1981:table 22A)[12] rather than the *batz uinic* title which they all shared.

The Metropolitan Master developed a distinct approach to the verbal portion of the Primary Standard Sequence. He emphasized the division of the sequence into two clauses (i.e., the "writing" versus the shape and contents, in Stuart's interpretation). He delineated glyphs from both clauses only on vessels from his first phase (Figs. 14-5, -6; Robicsek and Hales 1981:table 22A; Kerr photographic rollout #2226). By the end of his first phase, the Metropolitan Master consistently chose only one of the two clauses for any vase. The first clause, which he used rarely and only through his Phase III, may be represented by three or four glyphs (Robicsek and Hales 1981:no. 117; table 23F). The second clause instead increased in prominence, and always appeared in a codified four-glyph sequence (Fig. 14-1, -3).

[12] The name of this ruler and the Site Q emblem glyph are not visible in the view of this ceramic published by Robicsek and Hales (1981:table 22A), but are available in the archive of Classic Maya ceramic slides compiled by Nicholas Hellmuth.

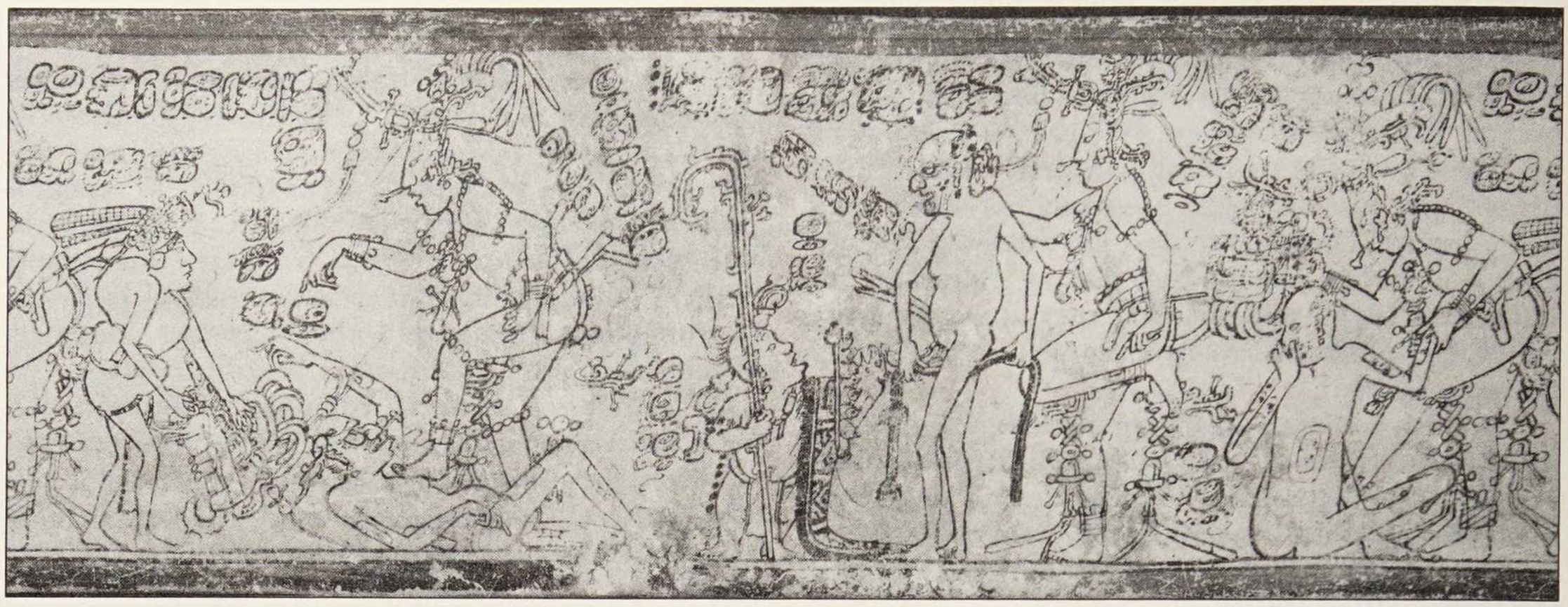

Figure 14-5. Vase with three narrative groups; collection not specified. Catalogue number 2 in Robicsek and Hales 1981. (Photo: copyright 1981 Justin Kerr; photographic rollout #1560)



Figure 14-6. Death Series; November collection. Catalogue number 138 in Robicsek and Hales 1981. (Photo: copyright 1979 Justin Kerr; photographic rollout #771)

By incorporating the Primary Standard Sequence within the painted scene, the Metropolitan Master departed from Maya norms. In the more traditional compositions of his first phase, the Primary Standard Sequence text still occurs in a band beneath the rim, but this band is not demarcated from the scene (Fig. 14-3). In fact, since it does not circle the vessel, portions of the figural design intrude into the same level. Another first phase vessel (Fig. 14-5) has the final Primary Standard glyph dropped below the rim band to further integrate it with the image, and the historical reference appears in a separate band. In the Master's late period, the visual distinction between the Primary Standard Sequence and the figural scene is completely dissolved. The text may still appear in a horizontal or vertical band (Robicsek and Hales 1981:no. 33), but crowded or overlapped by the images. The figures and their naming texts appear to have been painted first, with the Primary Standard Sequence adjusted to fit the available space. The four glyphs may then be dispersed into several background areas (Robicsek and Hales 1981:no. 41). The Sequence is often curtailed, with



Figure 14-7. Death Series; November collection. Catalogue number 47 in Robicsek and Hales 1981. (Photo: copyright 1980 Justin Kerr; photographic rollout #1181)

examples of three (Robicsek and Hales 1981:no. 40), two (Fig. 14-7), or one (Robicsek and Hales 1981:no. 39) glyph only. Since this Sequence always begins with the "wing quincunx" and never skips any of the four glyphs, it would appear that the Master simply stopped when he ran out of suitable space. Perhaps the educated audience would be reminded of the entire text by the quotation of even a single glyph, like the first line of a well-known song.

The Metropolitan Master also departed from norms of Classic Maya vase painting by rejecting the concept that the Primary Standard Sequence was appropriate to any type of scene. Although his earliest examples imitate those of the Calligraphic Painter and other Maya artists in placing the text in a rim band above an iconic or death series image, the Metropolitan Master soon began to limit and regularize the context in which he quoted this passage. Toward the end of his first phase, as he developed the concept of the incomplete rim band and the one-clause, four-glyph sequence, he also began to limit the Primary Standard Sequence to narrative scenes only (Fig. 14-3). He delineated the Sequence very little during the transitional Phase III, and then revived it in his late period (Phases IV–V) for exclusive use with the death series format.[13] Furthermore, he eliminated all references to historical individuals during his Phase II.

In summary, the Metropolitan Master developed an individual approach to the pan-Maya Primary Standard Sequence through a series of creative alterations, substitutions, and eliminations. Whereas his earliest examples follow normal usage in citing both clauses, adjoining historical names and titles, isolating the text in a rim band and juxtaposing it with any type of scene, his later and more idiosyncratic approach instead involves a single clause in a codified four-glyph Sequence, lacking historical references, integrated with the painted scene, and restricted to a specific format. All of these changes reveal a single overriding intent to integrate the text and image, primarily by treating the text *as* image.

Iconic

The simplest approach to the organization of imagery on a ceramic involves a large centralized image—such as the medallions, day signs, or deity heads which commonly decorate plates and vases (Robicsek and Hales 1981:table 19)—or the serial repetition of a supernatural image, as occurs around the sides of vases. To enhance the repetitive symmetry on vases, anthropomorphic figures are generally shown only from the waist up (Robicsek and Hales 1981:no. 136) or seated (Robicsek and Hales 1981:nos. 60, 64). Although similar figures appear with naming texts in other formats, hieroglyphs are notably absent from the iconic format. In fact, the Metropolitan Master inscribed hieroglyphs with iconic scenes only during his transitional Phase III (Robicsek and Hales 1981:nos. 69, 162), when he was generally experimenting with the combination of more than one format in a single composition. As mentioned above, although the Metropolitan Master's earliest iconic scenes imitate those of the Calligraphic Painter, and thus include a rim band with a Primary Standard Sequence text (Robicsek and Hales 1981:table 22A, 23F; Kerr photographic rollout #2226), this inscription is

[13] One exception to this rule is a late style narrative (Robicsek and Hales 1981:no. 15) with the Primary Standard Sequence.

quickly eliminated from the Metropolitan Master's iconic format.

Death Series

This group of sacrificial animals and anthropomorphic deities has the character of a procession, since whether they walk, stand, sit, or dance, the figures always face in the same direction: toward the viewer's left. Unlike the supernatural images in the iconic format, these are always differentiated both in form and by the hieroglyphic texts which name them. These texts, or captions, consist of from one to three naming glyphs, followed by the general *u-balam-ahau* title (Schele 1985), and occasionally an emblem glyph.

As with the Primary Standard Sequence the death series format changes in the hands of the Metropolitan Master from an imitation of conventional models to a more individualized approach. The death series by this artist (Fig. 14-6), which is stylistically his earliest known example, combines the standard Peten juxtaposition of skeletal and feline deities with the configuration of rim text favored by the Calligraphic Painter. By his Phase II, the Metropolitan Master had extended his repertoire of images to include birds, bats, and still unidentified quadrupeds (Robicsek and Hales 1981:no. 50). Anthropomorphic figures become common in the death series of his transitional Phase III (Kerr photographic rollout #2286), when a combination of formats leads to a closer relationship with narrative scenes (Kerr photographic rollout #2715). The frequency of death series images increases dramatically in the Metropolitan Master's late style (Phases IV–V) as the repertoire of images and naming texts also becomes more constant, repeated in slightly different combinations or permutations from vase to vase (compare Robicsek and Hales 1981:nos. 33, 39, 40, 41, 47, 48). Frequent images still include anthropomorphic deities from the narrative scenes, such as the Barbel God (God B), Death God (God A), and Old God (God N) in the jaws of "Deer-snake." However, the most common images in the Metropolitan Master's later period death series are land animals, including deer, jaguar, monkey, dog, peccary, and toad. Naming texts for the later death series also revive (from Phase I) the use of emblem glyphs, such as the snake-head emblem associated with Site Q (El Peru?) or emblemlike titles such as the *muluc-ahau* title (Robicsek and Hales 1981:no. 33—Deer-snake and Toad, respectively). As noted above, the second clause of the Primary Standard Sequence also becomes an integral part of the late style death series. The regularity of this juxtaposition allows us to recognize the so-called dynastic vase (Fig. 14-1) as a modified death series, substituting a string of verbal clauses for the processional figures and completing these with the Primary Standard Sequence.

Narrative

Scenes representing the confrontation or interaction of anthropomorphic deities represent the most complex and distinctive product of the Metropolitan Master and his imitators. As with the death series, he began by closely imitating established formats, then adapted them in a unique manner, and finally standardized his own adaptations through frequent repetition. An early vase painting by the Metropolitan Master (Robicsek and Hales 1981:no. 70) imitates the traditional throne room scene, complete with the canopy above the enthroned ruler, his L-shaped naming text, a row of seated attendants facing the throne, and the female attendant behind. The Master's more individual approach to the throne room composition appears on the Princeton Vase (Fig. 14-3), where the static confrontation of the conventional throne room scene is given narrative drama. Instead of simply gazing at his attendants, the aged, enthroned deity participates in a special, metaphorically sexual relationship with one of the five women, and simultaneously acts as spectator to the scene of ritual decapitation taking place outside the throne room. In another example of creative adaptation, the Naranjo-Holmul format, involving young lords dancing with dwarfs and hunchbacks as attendants, is changed by the Metropolitan Master to a scene of lordly executioners with dwarfish attendants who attack three versions of the Old God (as Gods D, L, and N) (Fig. 14-5). The repetition and standardization of these narrative themes in the Metropolitan Master's later Phases IV–V are examined in the next section, following a description of the hieroglyphic texts which generally appear in the narrative format.

Two types of hieroglyphic text are characteristic of the Metropolitan Master's narrative scenes. First, naming texts often identify major participants. Such captions are similar in content and configuration to those in the death series format, but lack its distinctive *u-balam-ahau* titles and emblem glyphs. The naming texts in the narrative format also vary greatly in length and complexity. Both extremes appear on the Princeton Vase (Fig. 14-3), where three of the women are each identified by the same, single glyph, whereas God L's naming text involves ten glyphs in two columns. In general, naming texts are emphasized more in the early phases, when several may appear on the same vase, and long curving lines often connect them to the mouth of the associated figure (Figs. 14-3, -5). In later phases, these texts are shorter, more standardized, and less

frequent, and the connecting lines are eliminated (Figs. 14-2, -4).

The second type of text associated with these narrative scenes is a verbal clause, beginning with a Calendar Round date, then specifying the event with a verbal compound and naming one or more of the subjects with possible added titles. The Metropolitan Master progressively standardized four distinct narrative themes (discussed separately below), each associated with a specific subject and verb in this clause. Calendar Round dates which are both random and workable in the Maya system are common only in the narratives of his Phase I. In Phases II–III, over half of the Calendar Round dates feature unworkable combinations of day name and month coefficient, and in the late Phases IV–V, 80 percent are unworkable. Since in the Maya system only five positions are possible, and one of these must work, the 20 percent of workable dates in the late phases are the result of accident rather than intent. The Metropolitan Master was thus selecting neither for nor against workability; he was simply not concerned with the problem.

How then did this painter compose his Calendar Round dates? As noted above, he progressively altered the relationship of text to image by treating the text as image. His approach to the inscription of Calendar Round dates in the verbal clauses of his late style narratives illustrates this point more forcefully. Each of the four components was selected according to different, nontemporal criteria. The day sign was chosen according to the narrative theme, probably for symbolic connotations appropriate to the intent of the scene and/or clause. For example, scenes of women and deer, with the Old God (God N) dying, always cite the day Eb in the calendar round (Fig. 14-8).

The other three components of the Calendar Round date are independent of the adjoining scene, but vary instead with the phase, and are selected from progressively narrower ranges. In vessels from Phases III–IV, (Fig. 14-4), the day coefficient is always 7 or 13;[14] the month coefficient is from a narrow range of related dates, primarily 8, 13, 15, 18;[15] and the month is almost always Ch'en.[16] In the final group, painted in phases IV–V, the day coefficient is limited to 7; the month coefficient includes five numbers in the lower range from 2 to 10 (2, 3, 4, 7, 10), a complete departure from options of the previous phase; and the month is now almost exclusively Kayab.[17] Each late style Calendar Round is a random permutation based on these narrow ranges of selection, lacking in temporal function.

The loss of temporal value for these Calendar Round dates corresponds in both time (phase) and character to the elimination of historical names from the Primary Standard Sequence texts. Individual creativity on the part of the Metropolitan Master does not by itself explain these eliminations. Instead, his rejection of historical references may suggest changes in the function of the funerary ceramic and its inscribed texts.

In summary, all three formats reveal the process by which the Metropolitan Master matured from imitation of conventional models to a more idiosyncratic approach. Only his earliest works share the configuration which completely dominates the *oeuvre* of the Calligraphic Painter: iconic scenes with rim bands containing the Primary Standard Sequence. The Metropolitan Master moved progressively further away from these and other Peten area models, in part by breaking rules that for centuries had guided Maya artists in the inscription of hieroglyphic texts. With the proliferation of vessels produced in the late phases and their more repetitive and standardized approach, the three configurations of image and text also reach their greatest distinctiveness. Thus, the late iconic images are arranged in serial repetition and lack texts; late death series involve a procession of different deities and animals with *u-balam-ahau* texts plus the second clause of the Primary Standard Sequence; and late narrative scenes display confrontational arrangements of anthropomorphic figures with simpler naming texts plus verbal clauses.

RELATIONSHIPS OF TEXT AND IMAGE IN THE FOUR TYPES OF NARRATIVE SCENE

Of the three conventional formats, the narrative scenes with their verbal clauses provide the most information for more intensive analysis of the relationship between image and text in the art of the Metropolitan Master. On the basis of repeated combinations of verb and subject in the adjoining clause, it is possible to identify four specific narrative themes which evolved over several phases in the Metropolitan Master's

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[14] The numbers 7 and 13 both carry important symbolic connotations in Maya art and writing. For example, in cosmography, 7 is the number of the earth's surface and 13 is the number of the Upperworld.

[15] The day sign Ahau, the most important of the twenty for both symbolic and temporal reasons, may occur only with the month coefficients 3, 8, 13, and 18, a possible explanation for the relationship between the coefficients selected by the Metropolitan Master.

[16] Ch'en is one of the four Cauac months. The Metropolitan Master sometimes substituted another Cauac month, Zac, by changing the prefix from "black" to "white."

[17] The Metropolitan Master's narrative scene numbered 17 in the Robicsek and Hales (1981) catalogue was painted in his Phase I. However, certain alterations appear, including changes to the curtains and the addition of a late style narrative clause with a standard late Calendar Round: 7 Cib 8 Kayab.



Figure 14-8. Woman and deer with Old God dying; collection not specified. (Photo: copyright 1984 Justin Kerr; photographic rollout #2794)

career. Each of these four themes will be described according to the personages depicted, their arrangement, and the associated verbal clause. In some cases the evolution of the scene type will also be traced.

Woman and Deer with Old God (God N) Dying

The most consistent of these four scenes involves a young female goddess embracing a deer in the open space before a canopied throne room (Fig. 14-8). In this scene, the throne room has been transformed into a deathbed, a fringed cloth hangs at the upper corner, and a bird is shown beneath the throne. The Old God (God N), now stripped, reclines on the bed, attended by a youthful male who wears a deer ear, antlers, and the deer's conch-shell chest pendant. This youth functions as a turning figure to unite the exterior and interior portions of the scene, as did the female attendant on the Princeton Vase (Fig. 14-3).

Since the woman-and-deer theme is standardized by the end of the Metropolitan Master's early period (Phases I–II), it evolves primarily through elaboration. Later versions (Robicsek and Hales 1981:nos. 14, 15, 16) show up to four birds beneath the throne and up to four attendants to the Old God (God N). Three of these are youthful deer-men; the fourth is a female attendant. Another couple also appears in the open space in the latest version (Robicsek and Hales 1981:no. 15), with this second woman actually riding her deer companion. In all three of the known later versions, the Old God (God N) shares the deer ear with his youthful attendants.

The verbal clause associated with this scene is usually placed toward the center, around the woman-deer pair and the turning figure. The day sign Eb is consistently associated with the scene throughout its history. The verb, still untranslated, appears to be read phonetically, with a *chuen* main sign, *eb* superfix, and the usual (T181) verbal ending. Following the verb are the glyphs of the woman and the deer. The first glyph has been translated (Robicsek and Hales 1981:39) as *atan*, a word for 'wife', and must refer to the woman and her matrimonial relationship, as it does in several scenes of intercourse in the Dresden Codex. The second glyph compound is 7 Ahau, a calendric name associated with the descending sun in the form of a deer in both Aztec and Maya mythology.[18] The same calendric name is used for one of the elder twin brothers in the *Popol Vuh*, where he is called, in Quiché, Vucub Hunahpu. The naming glyphs for the woman and the deer thus act as object and subject in the verbal clause.

The earliest known example of this narrative theme (Fig. 14-8) also includes naming glyphs for the two personages in the interior portion of the scene. The second of these glyphs appears frequently in the art of the Metropolitan Master in association with one of a pair of youthful gods (Fig. 14-10), as discussed below. The preceding glyph 1 Ahau must then refer to the Old God (God N). In fact, the twin brother of Vucub Hunahpu in the *Popol Vuh* is Hun Hunahpu, the Quiché equivalent of 1 Ahau. This glyphic text demonstrates that the Metropolitan Master was depicting the elder

[18]The equivalent Aztec date is Chicomeochitl, also the name for Pilzintecuhtli as the lover of the young goddess Xochiquetzal. Chicomeochitl is also specifically identified as a deer. (For further discussion of the symbolism of the date and name 7 Ahau, see Cohodas 1976:158–60).

twin brothers who die in the Underworld, but without recourse to the imagery of the ballgame, death lords, or houses of trials by which they meet their fate in the *Popol Vuh*.

Mating and Effigies

The association between mating and death forms a second standard narrative theme. In its developed stage (Fig. 14-9), the Old God (God N) rests in the jaws of a snake with deer ear and antlers as he seduces the young goddess. In this example, the Old God's (God N's) naming text appears also to be read 1 Ahau. In this version of the scene (one of the most complex versions), the Flare God (God K) appears, with the deer-snake read as his serpent foot in a visual pun.

The amorous couple which ends as the focus of the developed scene does not begin as its most important feature. Earlier versions of this theme emphasize bundled effigies of the Barbel God (God B) and Pax God,[19] patrons of bloodletting and sacrifice commonly paired on Early Classic cache vessels. In the earliest known example (Robicsek and Hales 1981:no. 17), a pair of sacrificial victims appears in the open space before the throne which supports these god effigies. Between these two pairs, and focusing the symmetrical composition, is a human sacrificial offering burning in a tripod-supported pan over a deity-faced brazier. The amorous couple first replaces one of the victims (Robicsek and Hales 1981:no. 12), and then both (Robicsek and Hales 1981:no. 12b). Simultaneously, the brazier is changed to the familiar chimney-type Maya incense burner with the "Quadripartite Badge God" face and is placed atop the throne platform in front of the two god effigies (Fig. 14-9; Robicsek and Hales 1981:no. 12b). Next, the throne and brazier are eliminated, and the mating couple is placed atop a bed of sacrificial leaves,[20] as the Flare God (God K) becomes the central image (Robicsek and Hales 1981:no. 11). Ultimately, the effigy gods themselves are eliminated, and the composition becomes a triadic arrangement of Old God (God N), young goddess, and Flare God (God K) (Robicsek and Hales 1981:no. 10).

The verbal clause which accompanies this mating scene may not have been codified until Phase III. In contrast to a Phase II example, in which the Calendar Round date and verb associated with the scene are separated from a subsidiary, possibly historical text (Robicsek and Hales 1981:no. 12), the later versions display the complete clause in a columnar text placed behind the twin effigy gods (Fig. 14-9). The surviving texts of this consistent type are all either very eroded or heavily repainted, but may be validated by comparison with the Ringed Eye Painter's version of the same scene (Robicsek and Hales 1981:no. 9). The associated day sign for this type is Muluc, and the verb is the well-known "up-ended frog" expression for birth. The subject's name, which may follow several intervening glyphs of undetermined meaning, may be paraphrased as "7 Upturned-vessel, Green Fish," hereafter occasionally referred to as 7UGF.

Young Dancing Lord

The god 1 Ahau dominates a third common narrative format, in which he is shown as a young lord, flanked by attendants of sacrificial character. The lord always faces to his right, holding his arms in a gesture associated with dance in Maya art. Characteristic of this theme is the depiction of all personages only from the waist up. Unlike the two themes described previously, the young dancing lord theme progresses from complex to simple format, suffering radical changes wrought both by alterations and substitutions.

The early form of this young dancing lord scene appears on a plate instead of a vase (Fig. 14-10). The lord appears above a composite zoomorph composed of an insect god head with water lilies, superimposed on a turtle carapace, from which emerge a toad head and an anthropomorphic blade-tongued deity with a water lily bound in his headdress. The glyphs in front of the young lord's face identify him as the god 1 Ahau and the composite zoomorph as a supernatural toad. Flanking the lord are the paired youthful deities, called the Headband Gods by Coe (1973:13–14) and Headband Twins by Schele and Miller (1986:51). The twin on the viewers' left is characterized by snake spots and identified by a youthful head glyph with snake markings and the prefix numeral 1, perhaps read Hun Chicchan-Ahau. The opposed twin is identified by the patch of jaguar skin over his mouth, as well as on his body, and by a youthful head glyph with the same jaguar patch and the prefix *yax*, perhaps read as Yax Balam-Ahau.[21]

While this earliest young dancing lord plate lacks a verbal clause, that information is provided on an unpublished plate from Phase II (Kerr photographic roll-

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[19] The Pax God is a blade-tongued sacrificial deity identified by the jaguar paw behind his ear, and may thus be a variant form of the Jaguar God.

[20] The same bed of leaves appears under the image of Bird Jaguar performing bloodletting from his penis on Yaxchilan Lintel 17 (Schele and Miller 1986:189).

[21] Schele and Miller (1986:51) incorrectly associate only the jaguar-spotted twin with the god of the number 9. The deity head used to represent the number 9 actually has the traits of both twins, with the jaguar-spotted mouth patch and snake markings at the temple. By contrast, the glyph of the day Chicchan has only the snake markings. In codical form, God H appears to subsume both twins, although he is usually shown only as the snake-spotted god.

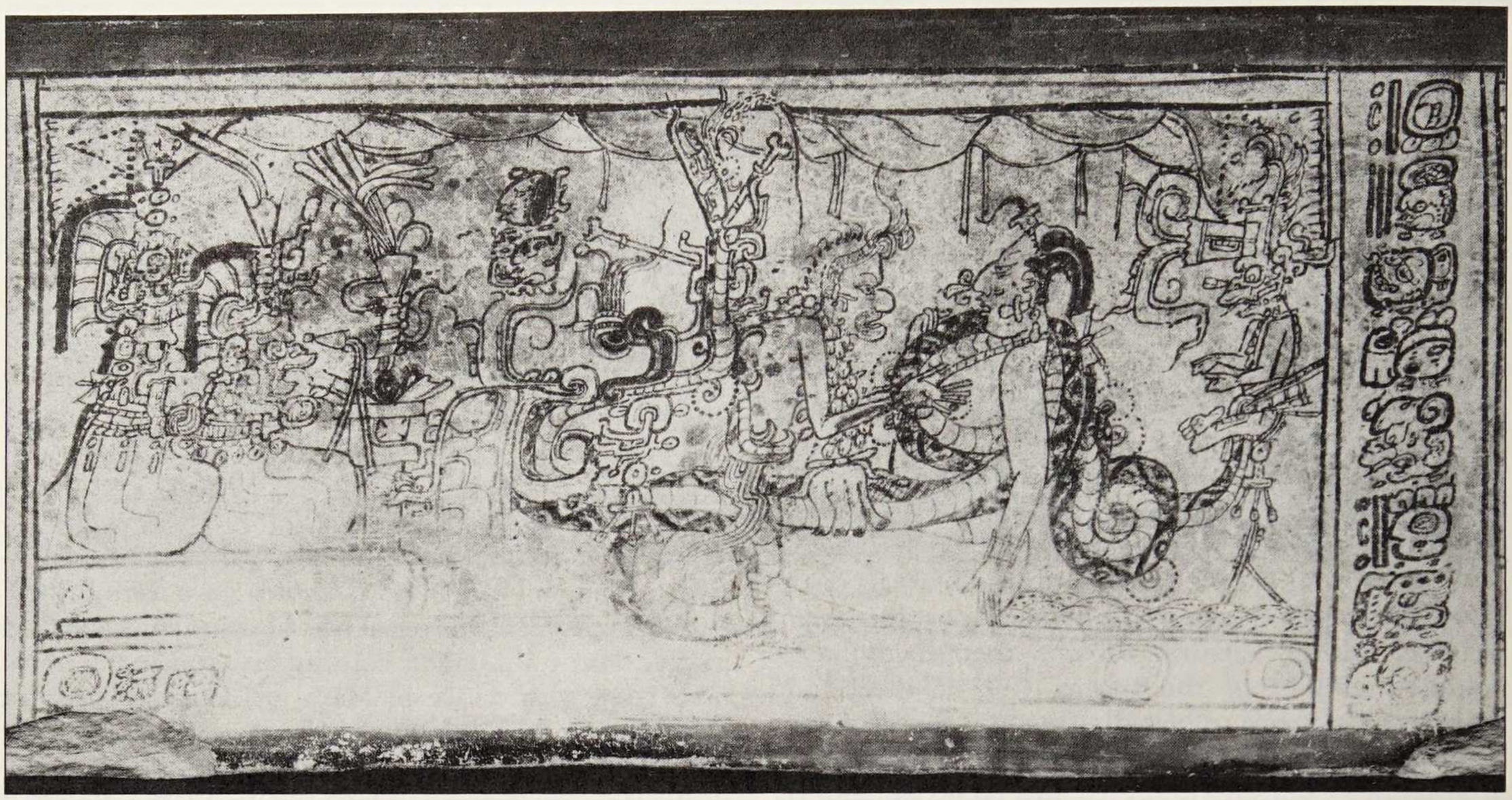

Figure 14-9. Old God mating with God-effigies and Flare God (God K); collection not specified. Catalogue number 12a in Robicsek and Hales 1981. (Photo: copyright 1982 Justin Kerr; photographic rollout #1813)

out #2282). The day sign appears as Akbal here, as in transition period versions of the theme. The verbal compound is read phonetically, with a verbal prefix, a main sign that occurs in various substitutions (*imix*, quincunx, 'snake head'), and a phonetic complement (*na*, suggesting that the main sign is read *chan*). On this plate, the glyphs following the verb are the same naming glyphs of the young lord 1 Ahau and the composite toad monster, specifying the object and subject of the clause. What the toad monster does to the young lord is further specified by the depiction of the toad-head glyph swallowing the *kin* sign for the sun. Apparently the Maya shared with the Aztec the concept of a monster toad who devoured the descending sun.[22]

By Phase III, as the young dancing lord theme was adapted to the sides of a shallow vessel, the *dramatis personae* were impressively altered. With the young lord (Fig. 14-4) appears only one of the Headband Twins, the snake-spotted Hun Chicchan-Ahau, carrying a bundle. Accompanying these two males are six women, three of whom hold bloodletting perforators. That these women also function as sacrificers is evident from the layout of the verbal clause, where only the date and verb appear at the center of the composition and the glyphs for the object and subject are juxtaposed to the associated figures to act simultaneously as naming glyphs. Here, the young lord is again named 1 Ahau, whereas the glyph of the toad head swallowing the sun is used to name one of the women. Again, Aztec belief is recalled, since the toad monster Tlaltecuhtli, who swallowed the sun every evening, was also called "Our Mother." Other naming glyphs appear in this scene. The toad woman has a second naming glyph, as does the snake-spotted Hun Chicchan-Ahau, and two of the other women with perforators are identified as sacrificial goddesses by the face glyphs marked with the "percentage" sign for death.[23]

In the Metropolitan Master's Phase IV, the young dancing lord theme reaches its greatest simplicity and standardization (Fig. 14-11), and in this form is widely imitated by other artists of his workshop. Flanking the young lord on his right are now one or two warriors who carry shields and spears and who appear either in the costume of the Barbel God (God B) or wearing head-

[22] The concept of the descending sun swallowed by a toad-earth monster and the descending sun mating with the earth are interconnected in Mesoamerica as elsewhere in the world where the theme of *vagina dentata* combines mating with devouring. In Yucatec Maya, the word *much* means both 'toad' and 'the female's external genitals' (Barrera Vásquez et al. 1980:532), another example of this equivalence.

[23] One of these women also has as a naming glyph the expression *na ho chan*, common in bloodletting expressions and at times associated with the so-called Paddler Gods, aged sacrificial twins (Cohodas, in press).



Figure 14-10. Young Dancing Lord; collection unspecified. Catalogue number 117 in Robicsek and Hales 1981. (Photo: copyright 1984 Justin Kerr; photographic rollout #1892)

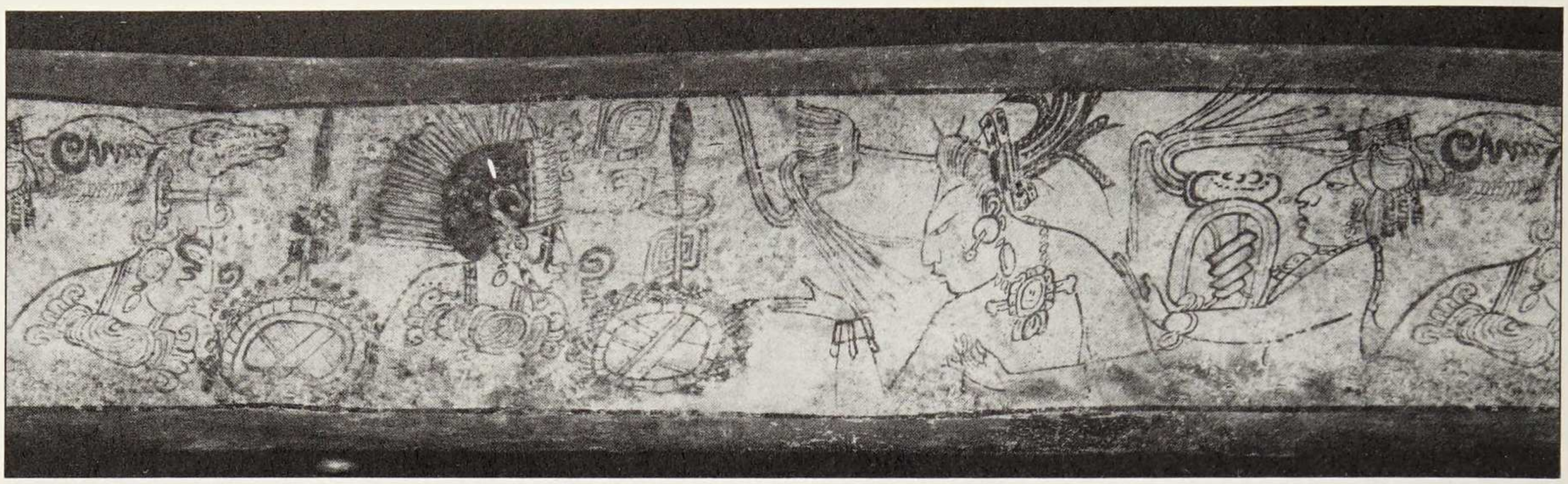

Figure 14-11. Young Dancing Lord; collection unspecified. (Photo: copyright 1984 Justin Kerr; photographic rollout #2011)

dresses of animals such as deer, eagle, vulture, or jaguar. Flanking the lord on his left are one or two additional attendants who carry sacrificial offerings, including a bundle, perforator, and stacked or folded cloths. The Calendar Round date is still placed at the center of the composition, but the verb and subject of the clause are usually eliminated (Fig. 14-11; Robicsek and Hale 1981:no. 99). The associated day sign for the young dancing lord theme is now Ik rather than Akbal. On some vases (Robicsek and Hales 1981:no. 103), only the Ik sign and its coefficient appear, and on others the clause is eliminated entirely (Robicsek and Hales 1981:nos. 94, 96). By contrast, the single Phase V version (Robicsek and Hales 1981:no. 95), displays the standard figural imagery but introduces a complete clause with the day sign Ahau and a verbal compound associated with war and prisoner sacrifice. Here, the subject is named Pauahtun instead of 1 Ahau and he is given a Muluc-Ahau title.

The Metropolitan Master painted several narrative scenes that are related to the theme of the young lord dancing by a similar verbal clause, but which show all personages in full-figure, represent the victim in a greater variety of guises, and often show more violent activities. For example, the exterior scene of the Princeton Vase (Fig. 14-3) is the decapitation of a coarse-featured victim named Pauahtun. The same name is used for three different versions of the Old God, as Gods D, L, and N, despoiled by young lords on another early vase (Fig. 14-5). The glyph of God D instead appears in the clause accompanying a scene in which the Hun Chicchan-Ahau sacrificer shoots at the Principal Bird Deity in a tree (Robicsek and Hales 1981:no. 109), whereas the deity 1 Ahau is named as the victim in the vase of the ballplayers (Robicsek and Hales 1981:no. 143).[24] The hunting theme is further developed in Phase II on the vessel which the Kerrs nicknamed "the barbarians" (Robicsek and Hales 1981:no. 111). Here, the two avian victims perched on a paddlelike object are identified by glyphs of bird heads prefixed by the number 1, and God N, shown despoiled of his turtle carapace, is named Pauahtun. The same trends continue in Phase III, as when two macaw-headed victims appear with the Hun Chicchan-Ahau or snake-spotted sacrificer (Kerr photographic rollout #1900) or when the same sacrificer confronts the bound Jaguar God (Robicsek and Hales 1981:no. 139). The most unusual use of the same verbal clause appears on a Phase II throne room scene in which the ruler and his attendants are each shown with the head of the howler monkey (Robicsek and Hales 1981:no. 68).

Along with these related sacrificial narratives, the theme of the young lord dancing bears the closest similarities to Maya ceramic painting at other sites. Robicsek and Hales (1981:fig. 58) illustrate several Tepeu I examples of the youthful lord in the cleft of the turtle carapace, which must have influenced the Metropolitan Master's early plate (Fig. 14-10). On this same plate, the young lord is dressed in a costume clearly derived from the Naranjo-Holmul dancer vases, as seen particularly in the *Xoc*-fish belt. The same dancer vases were also adapted by the Metropolitan Master to create the narrative of the despoiling of three old gods (Fig. 14-5). Furthermore, all of the important elements of his young lord theme, including the sacrificial woman, headband twins, and verbal clause describing the sacrifice of the god 1 Ahau, appear on a vase in the codex style (Robicsek and Hales 1981:no. 186), probably from Naranjo or Motul de San Jose.

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[24] The organization of several Maya ballgame scenes, with the ball as victim between the paired players as its sacrificers, parallels the layout of the Metropolitan Master's theme of the young dancing lord. Both participate in a broader category of symmetrical sacrifice scenes with the victim flanked by paired sacrificers (Cohodas, in press). Also note that much of the text on the Metropolitan Master's ballgame scene is too heavily repainted to discuss.

Sacrifice on the Cauac Altar

The fourth narrative theme shares with that of the young dancing lord a simple confrontational format in which the victim is symmetrically flanked by his paired assailants. Here, the victim is an anthropomorphic jaguar, most commonly shown child-size with idealized human features and a jaguar tail (Robicsek and Hales 1981:nos. 19, 20, 23), but occasionally shown as the Jaguar God (Fig. 14-2) or a naturalistic jaguar (Robicsek and Hales 1981:no. 27). The victim reclines atop an altar in the form of a Cauac Monster decorated with the head of the Sun God on its snout. Flanking the altar and victim are the Barbel God (God B), holding his ax and a shell blade with a deity head inscribed on it, and the Death God (God A). The postures of these sacrificers vary; they appear half-figure or squatting as well as in the dancing posture characteristic of the Barbel God (God B) in other contexts. However, in the Metropolitan Vase (Fig. 14-2), the artist takes the dancing posture to a unique extreme. As noted, the Barbel God (God B) is often named with a portrait glyph preceded by the *yax-imix* compound, whereas the other figures are rarely named. Frequently appearing with this group is also a flying insect with a cigar, possibly another *nahual* of God L. A quadruped also appears on two late examples, in one case shown clearly as a jaguar (Robicsek and Hales 1981:no. 19) and in the other (Fig. 14-2) shown with both feline and canine characteristics.

In the later, standardized scenes of the Cauac altar sacrifice, the verbal clause is written horizontally, above the center of the confrontation and near the rim. The day signs Muluc and Cib both appear with this scene. The verb is consistently of the handholding type, although the hand may hold a spiral (Robicsek and Hales 1981:no. 27; Kerr photographic rollout #2207), the Flare God (God K) head or glyph (Kerr photographic rollout #2213, #2572, #2715), or an inverted *ahau*. In some examples (Robicsek and Hales 1981:nos. 20, 21, 23), the hand is eliminated, and the inverted *ahau* appears with verbal affixes and the Flare God (God K) glyph. According to Schele and Miller (1986:287), this verbal expression refers to the display of the manikin scepter form of the Flare God (God K). The subject of this clause on Cauac altar sacrifice is the same "7 Upturned-vessel, Green Fish," whose "birth" is related in the clause adjoining the scenes of mating and effigies. This name may be followed by additional titles (Fig. 14-2), including the *batz uinic* title.

As with the other themes, the identification of the standard verbal clause allows the concept to be traced back to the precedent in the Metropolitan Master's Phase I. The same clause (lacking a date), involving the holding of the Flare God (God K) emblem by 7UGF, appears on the fragment of an early vase (Robicsek and Hales 1981:no. 141) on which an enthroned and a standing figure flank the violent scene of a feline attacking another animal.

Comparison of verbal clauses also allows identification of more experimental scenes related to the core group of Cauac altar sacrifice, painted in the Master's Phases III–IV. Each of these examples differs primarily by the use of one or two substitutions, such as showing the Old God (God N) in the deer-snake in place of the feline victim (Kerr photographic rollout #2213); showing a youthful sacrificer with a ceremonial bar in place of the Barbel (God B) and Death (God A) gods (Kerr photographic rollout #2572, #2715); or an altar formed of abstract *cauac* signs rather than the monster head (Robicsek and Hales 1981:no. 37a). The verbal clauses show similar substitutions, as of the days Chicchan or Kan (written as the *kan* cross), instead of Muluc or Cib, the birth verb instead of the holding hand, or a subject named Makinah Manik instead of 7UGF.

Comparison of Text to Scene in the Four Narratives[25]

In reviewing these four narrative themes, it becomes apparent that they divide easily into two pairs, based both on event and format. In one pair, represented by the scene of the woman and deer with the Old God dying and the scene of the Old God mating before the effigy bundles, a two-part format combines an interior thronelike setting with an undefined exterior space, the two often linked visually by a turning figure. Both scenes continue the association of mating and death seen in nonstandardized form on the early Princeton Vase (Fig. 14-3), although their placement is reversed: the male-female pair is now placed in the exterior, and the sacrificial deities appear on the throne. The second pair, represented by the scenes of the young dancing lord and the Cauac altar sacrifice, is instead laid out in a hierarchic format with a single focus, in which the passive victim is symmetrically flanked by his attendants or assailants. In both, the setting may be suggested by a dark wash in the lower part of the field. Unlike the more idiosyncratic combination of throne room and mating scene, these "symmetrical sacrifice" scenes are common in the ceramics of other sites throughout the Peten.

Within each of these pairs of themes one may discern an important contrast in both the scenes and their

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[25] On a few vases, the same personages occur, but without the framework of the four established narratives. For example, on one early style vessel (Robicsek and Hales 1981:no. 140) the Young Goddess entices a deer and the Old God (God N) seduces another female deity. Robicsek and Hales (1981:nos. 56, 108) also published two vases in which the Old God (God N) is seated before paired sacrificers.

associated verbal clauses. The two-part scene of the woman and deer with Old God dying and the symmetrical scene of the young dancing lord both share several features that do not occur in the other members of their respective pairs. First, they share the incorporation of the Headband Twin sacrificers identified by their snake and jaguar markings. Second, they frequently include naming glyphs which identify the Headband Twins, the Young Goddesses, the deer, and both the Young and the Old Gods. The naming glyphs are consistent between these two types of scenes. The sacrificial twins are named by the glyphs, here paraphrased as Hun Chicchan-Ahau and Yax Balam-Ahau; and the focal male deity, whether he is shown as an Old God (God N), a Young Lord, or a coarse-featured male, is always identified by the name 1 Ahau or Pauahtun. Third, the verbal clauses, which in both scenes are placed in one or more columns at the center of the scene, are closely related to the painted image. In fact, the same glyphs may function simultaneously as a naming text and as the subject and object of the verbal clause (Fig. 14-4). Furthermore, the event expressions, which are phonetic compounds in both cases, appear to closely describe the events portrayed. Although no translation of either verb has been published, that associated with the young dancing lord appears in the same contexts of war and sacrifice in the monumental inscriptions, as on Tikal Stela 31 (D23, G28) (Schele 1982:232).

The remaining member of each compositional pair shares several traits which together create a greater opposition between image and text. First, naming texts are rare in either the scene of the Old God mating or the Cauac altar sacrifice. Second, by the end of Phase III, the verbal clause in both scenes was moved from the normal central column position to a new placement unique to the specific scene. Thus, the verbal clause in the mating scene is relegated to a separate column outside the figural scene, whereas in the Cauac altar sacrifice it is arranged in a horizontal band beneath the rim[26] (see Figs. 14-2, -9). Third, despite the complete differences in their imagery, both verbal clauses share important elements. Both employ the day signs Muluc and Cib, both use verbal expressions which are more pictographic than phonetic, and both name the subject as "7 Upturned-vessel, Green Fish." Whereas in the woman and deer or young dancing lord themes the subject and object of the clause are easily identifiable by their relation to the figures portrayed and their simultaneous use as naming glyphs, the deity 7UGF, who becomes the subject of clauses in the Old God mating or Cauac altar sacrifice scenes, is not readily identifiable. There is evidence that this name phrase refers to the Flare God (God K), who appears in several of the mating scenes and occasionally in the more experimental versions of the Cauac altar sacrifice (Robicsek and Hales 1981:no. 37a), but never with a naming text. Similarly, the events indicated by the verbal expressions in these two clauses—birth and the holding of a Flare God (God K) scepter—are never illustrated in the pictorial scene. Since opposition between text and image is not characteristic of Maya art, the manner in which the Metropolitan Master manipulates this contrast demands further investigation.

These contrasts between text and image are best illuminated by referring again to the two thematic and compositional pairs, remembering that one member of each pair includes a text which explains the scene and identifies the participants and that the other member involves a text that opposes the image. The pair of themes characterized by two-part compositions juxtaposing scenes of mating and death are discussed first. In the scene of the woman and deer, both naming texts and verbal clause refer to the event and participants illustrated, providing a standard against which the text in the alternate scene may be judged. This alternate scene of the Old God mating, although analogous in meaning, appears with a completely opposed text that clearly refers to the birth of 7UGF. The clause itself presents no contradictions. The subject, perhaps the Flare God (God K), is entirely appropriate to an expression of birth, since this deity is often shown in Maya art emerging from the jaws of an earth-mother snake, and he apparently represents the reborn Sun-Maize deity as well as an emblem of divine rulership. Perhaps the finest combination of these themes of solar, vegetal, and dynastic rebirth is the image of Pacal on the great sarcophagus of Palenque, where he is shown with the characteristics of both the Flare (God K) and Maize (God E) gods. Although the Flare God (God K) appears in later versions of the mating scene, the clause cannot be said to parallel the image. The act portrayed is one of mating, not birth, and it is associated with paired sacrificial god-effigy bundles.

Although not parallel, the image and clause in this mating scene are yet not unrelated. Rather they appear to refer to two interdependent events: mating and birth. These are the opposite poles in the Maya transformational cycle, which in mythological terms begins with the mating and death of the Old Sun God and culminates with his rebirth as the young Maize-Sun deity, often depicted in art as the Flare God (God K). In a late version of this mating scene (Robicsek and Hales 1981:no. 10), the Metropolitan Master applied the forehead flare to the Old God (God N) as well as the Flare

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[26] The unusual verbal clause inserted in the Phase V version of the young dancing lord theme (Robicsek and Hales 1981:no. 95) follows the placement characteristic of the Cauac altar sacrifice.

God (God K) to emphasize the transformational continuum between the two.

The central myth of the *Popol Vuh* represents another example of this transformational cycle and shares some important features. For example, in the first portion, the elder twins Hun Hunahpu and Vucub Hunahpu (1 Ahau and 7 Ahau) die at the hands of the death lords, but miraculously mate with the young Earth Goddess Xquic (Blood), a sequence of events which closely parallels the juxtaposition of mating and death of these elder deities in the narrative painting of the Metropolitan Master. In the conclusion of this central mythic cycle, the second generation of twins, named Hunahpu (Ahau) and Xbalanque (Jaguar-sun or Jaguar-deer), undergo several adventures which include emerging reborn from a river as fish-men, defeating the lords of death, and rising into the sky in apotheosis. These adventures of the younger, victorious twins parallel instead the verbal clause associated with the mating scene, in the expression of birth and naming of the subject as a fish. Whereas in the *Popol Vuh* the opposition of mating-death and rebirth-apotheosis appears within the poetic text alone, the Metropolitan Master uses figural imagery to illustrate the initial act of destruction and he uses text to indicate the culminating act of re-creation.

This manipulation of text to complete the image appears in only slightly different form in the scene of the Cauac altar sacrifice. Again, the text may be compared to a standard represented by the hierarchic scene of the Young Lord with his sacrificial attendants (Figs. 14-4, -10, -11), in which the naming text and the verbal clause identify the participants and underline the sacrificial nature of the scene. By contrast, the text appearing with the Cauac altar scene (Fig. 14-2) describes the event of holding a manikin scepter in connection with 7UGF. Again the clause is internally consistent. Not only is the subject likely to be the Flare God (God K) under another name but also the holding-hand verb usually incorporates the emblem of the Flare God (God K) as part of the verbal expression. In monumental sculpture the same verb may appear with a scene in which the ruler actually holds the Flare God (God K) in the form of the manikin scepter, as at Yaxchilan. Although the context of this scepter display varies, it is never associated with destruction. Instead, it always connotes reordering or renewal or the completion of a rite of passage that results in elevation to a higher status, hence its use as an inaugural expression as at Quirigua (Schele 1982:155, 196).[27] Since the scene of sacrifice on a Cauac altar represents a form of destruction and since the holding of the manikin scepter is never shown therein, the text must again be designed to oppose and complete the image, together representing the entire transformation from destruction to renewal.[28]

Although the clauses associated with the scenes of the Old God mating and the Cauac altar sacrifice share a similar opposition to the image as well as the same use of the day signs Muluc and Cib and the parallel naming of the subject as "7 Upturned-vessel, Green Fish," the verbal expressions in these two clauses are sufficiently distinct to require some explanation. Despite the visual similarity of the open hand holding the Flare God (God K) emblem to the image in monumental sculpture of the Flare God (God K) emerging from open serpent jaws, this verb is never substituted for the "up-ended frog" to connote human birth. Perhaps the birth of a human was considered sufficiently distinct from the cyclic renewal of a deity, for whom every birth is therefore a rebirth.

A further clue to the Metropolitan Master's intent in using the holding-hand verb may be found in the two Maya sculptures in which it occurs repeatedly. These are Piedras Negras Lintel 2 (Schele and Miller 1986:149), dated 9.11.15.0.0, at H1, O2, and W4, and the Tablet of Temple 14 at Palenque (Schele and Miller 1986:272), dated 9.13.13.15.0, at B2, B8, A11, and D4. The text on both panels specifies that the reason for performing this rite of "holding the Flare God (God K)" is a memorial ceremony held some years after a ruler has died. In fact, the Initial Series on the Piedras Negras panel is the one-katun anniversary of the death of that city's first Late Classic ruler. Since in both examples the ceremony is dedicated to a ruler who has long since died and been interred, it must refer to the conclusion of the funerary journey in which he is transformed. That conclusion would be his rebirth in a new state of being. In contrast to this rebirth text, the image on the Piedras Negras panel emphasizes destructive imagery of war and sacrifice. The occasion for this congregation of warriors is apparently the heir designation of the present ruler's son, who is grandson to the memorialized ancestor. Typically, an heir designation ceremony is accompanied by a raid to capture prisoners (S. Bardsley, personal communication, 1987), but the

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[27] This holding-hand expression should not be confused with an expression for heir designation, as at Palenque, when objects other than the spiral, inverted *ahau*, or Flare God (God K) emblem are held in the hand. In the Palenque expression, for example, a deer hoof may be held in this context or represented by the analogous T617 (Schele 1982:203, 253, 296).

[28] On one vessel with the Cauac altar sacrifice narrative (Robicsek and Hales 1981:no. 23), the date glyph 7 Ahau appears as a medallion on the base (Robicsek and Hales 1981:fig. 79b). The hieroglyphic is here used in an iconic fashion to underline the sacrificial scene of the narrative. See also note 18 above.

death imagery on this panel may also be explained in terms of the youth, who is undergoing a separation ritual that removes him from the normal course of human life and starts him on the long path to divine rulership.[29] These two events, the separation ritual of heir designation for the youth and the reintegration ritual of ancestral apotheosis for his grandfather, are likely shown together on the Piedras Negras panel because the memorial-apotheosis ceremony allows the deceased ruler's title and divinity to be passed to his grandson. The Metropolitan Master appears to have employed a similar opposition of death-image and rebirth-text to represent a mythic archetype of the cyclic interdependence of destruction and renewal that would be appropriate to the tomb context in which the funerary ceramic would be placed.

The opposition of image and text that appears in the Piedras Negras panel and in both the mating and sacrifice narratives of the Metropolitan Master demands explanation. Why do all share an opposition of death imagery with rebirth text, and not the reverse (i.e., death text with rebirth imagery)? Unfortunately, our present state of knowledge is not sufficient to determine whether the same intent underlies the parallel structure of the stone panel and funerary ceramics. The Piedras Negras panel documents a specific sequence of historical events which cannot apply to the repeated themes on funerary ceramics. Furthermore, the Metropolitan Master made a specific choice in the syntax of this opposition, which suggests a broader intent. His narrative imagery of mating and sacrifice is consistent in both arrangement and content with Maya funerary ceramic painting in general, but the verbal expressions (birth and holding the Flare God [God K] scepter) which appear in the two clauses are more appropriate to monumental sculpture. So closely do these clauses parallel dynastic inscriptions on stone monuments that Hales (Robicsek and Hales 1981:41) assumed "7 Upturned-vessel, Green Fish" to be an historical ruler.

Monumental and funerary art traditions were traditionally distinct among the Maya, even though the transformations they record or magically assist are parallel. That is, the funerary transformation of a deceased ruler both allows and occurs simultaneously with the inaugural transformation of his successor. The unusual iconography of the Cross Group at Palenque seems designed specifically to illustrate this interdependence (Cohodas 1979). The shrine panels show the deceased ruler Pacal together with his successor Chan Bahlum undergoing this simultaneous journey of transformation, allowing the divine right of rulership to be passed from one to the other. Furthermore, the contrast of funerary and inaugural rituals dominates the overall scheme of inscriptions in the Cross Group. Whereas the sanctuary shrines of all three temples are dedicated to the memorial ceremony which was held seven tuns after Pacal's death, the outer inscriptions (temple jambs, *alfardas*, and plaza sculptures) are all dedicated to the eight-year (one solar-venus cycle) anniversary of Chan Bahlum's inauguration. In combining a funerary-style death image with a monumental-style dynastic inscription, the Metropolitan Master highlighted both the distinctions between funerary and monumental art and the interdependence of burial and inaugural rituals. In the use of mythological characters to represent destruction and an imitation dynastic clause to represent renewal, the Metropolitan Master also incorporated the universal structure of cosmogonic myths, which proceed from primordial chaos to the establishment of the present human social order.

The Metropolitan Master also created an opposition of image and text in his late style death series, characterized by the inclusion of the second clause of the Primary Standard Sequence. As noted in the Introduction, the first clause is literally associated with the painting or carving of the vessel and metaphorically associated with death and sacrifice; the second clause is literally associated with the fired ceramic container and its liquid contents and metaphorically associated with fertility and renewal. Consistent with Maya tradition, the deities and animals which dominate the Metropolitan Master's late death series are all associated with death and destruction, whether they represent active predators and sacrificers (Barbel God [God B], Death God [God A], jaguar, dog, toad) or passive prey and victims (Old God [God N], deer, spider monkey, peccary, turkey) and thus parallel the first clause of the Primary Standard Sequence. The juxtaposition of these destructive images with the text of the second, rebirth-associated clause thus constitutes another example of completing a death image with a rebirth text.

Summary

The Metropolitan Master's four narrative themes did not share the same history of frequency or modifi-

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[29] The three temples of the Group of the Cross at Palenque appear to document this path in greater detail. The central theme of the Temple of the Sun, in the west, is the heir designation of Chan Bahlum, accompanied by images of war and destruction. The Temple of the Cross, in the north, is associated with Chan Bahlum's inauguration, the central point in this process. Finally, the Temple of the Foliated Cross, in the east, is associated with the memorial ceremony for the deceased Pacal, which ends his period of influence over Chan Bahlum's reign. The period between the heir designation of Chan Bahlum and the memorial transformation of Pacal thus represents a kind of joint rulership, at least partially analogous to the "guest katun" system in Colonial Yucatan (Tozzer 1941:168–69, n885).

cation. Judging from the large corpus available, the theme of the woman and deer with the Old God dying never became popular and was not imitated by the Master's colleagues. This theme always retained its parallel text, but in the single Phase V example (Robicsek and Hales 1981:no. 15) the second clause of the Primary Standard Sequence is uniquely inserted into the narrative, probably to provide the usual contrast of destruction and renewal. Although the theme of the young dancing lord was often painted by the Metropolitan Master and widely imitated by his associates in the late phases, the sacrificial clause was curtailed and almost eliminated. In the Phase V example (Robicsek and Hales 1981:no. 95), a completely new clause appears, with new day sign and verb and arranged in a horizontal band in the manner of the Cauac altar sacrifice.

In contrast to the decline in both frequency and codification of the death-associated or parallel clauses, the rebirth-associated clauses which complete the death image increase in popularity and standardization as well as in distinctiveness: the columnar inscription in the mating scene contrasting with the horizontal band text in the Cauac altar sacrifice scene. At the same time, the mating scene is simplified, ultimately losing the throne and god-effigy bundles, resulting in a three-part symmetrical composition (Robicsek and Hales 1981:no. 10). As the woman and deer theme drops from the Master's repertoire, all three remaining narrative scenes (young dancing lord, mating of Old God, and Cauac altar sacrifice) now share the same unified symmetrical format. This selection of a uniform symmetrical format for narrative scenes creates a stronger opposition to the processional format of the death series.[30]

The opposition between narrative and death series compositions of the Metropolitan Master's late phases appears not only in the contrast of symmetrical versus processional formats but also in the nature and layout of the hieroglyphic text. The Primary Standard Sequence is limited to the death series, since they share a similar linear format. The verbal clause appears instead with narrative scenes not only because it may relate an action but also because the syntactical structure of the Maya clause, with date and subject separated by a verbal expression, parallels the confrontational format of the narrative scene.[31] Furthermore, the Primary Standard Sequence is a conventional feature of Maya funerary art, in contrast to the two verbal clauses which remain popular through the end of the Sequence and which employ birth and holding-hand expressions drawn from monumental art. The contrast of funerary and monumental traditions noted for the opposition of image and text within these narratives is thus expressed in a broader opposition between narrative and death series formats.

CONCLUSION

The dramatic change which occurs in the art of the Metropolitan Master at the end of his Phase I, and which affects several of his most talented associates, may provide a unique insight into the changing context and function of funerary ceramics in Maya society. The elaborate symbolism, historical names, and workable Calendar Round dates featured on the earlier and more complex compositions such as the Princeton Vase (Fig. 14-3) are compatible with a procedure of manufacture on commission for specific elite tombs. By contrast, the standardized and repetitive images produced in quantity during the remainder of his career, lacking either specific historical names or workable dates, as on the Metropolitan Vase (Fig. 14-2), suggest production intended for sale to a larger group, perhaps a mercantile class or *nouveaux riches*. Maya society was undergoing radical changes in the late eighth century. Judging from the transformation in the image of the aristocrat on funerary ceramics found throughout the Southern Lowlands, it would appear that privileges and wealth formerly limited to a small group of

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[30] The subtler aspects of composition, involving rhythm and unity, were not ignored by the Metropolitan Master. Despite this contrast in formats one may discern behind the confrontational structure of the narrative a linear flow of figures that encourages the viewer to turn the vessel. On the other hand, the Master overlaid on the processional format of the death series a unifying symmetry created by adjusting the heights of the figures and often by turning the legs of one figure back to face the others.

[31] The Metropolitan Master often played with the parallels between the structure of a confrontational narrative and a verbal clause. In some works he created five-glyph clauses in which the two compounds that form the date and the two compounds that give the name and title of the subject are clearly designed to symmetrically flank the single verbal compound between them (Kerr photographic rollout #2213). In one example (Robicsek and Hales 1981: no. 95), this arrangement exactly parallels the narrative scene, with the young dancing lord flanked by two attendants on each side. The Master's concern for arranging text to parallel the scene is evident from his earliest phase, when the Primary Standard Sequence was still included with narrative scenes. As evident on the Princeton Vase (Fig. 14-3), the Metropolitan Master juggled the selection of glyphs and the placement of their affixes to create an overlay of bilateral symmetry on the linear format of the Primary Standard Sequence. When the Primary Standard Sequence was dropped from narrative compositions, the verbal clause took on the same structure; and when the Primary Standard Sequence clause was revived for the late phase death series, with their processional format, the symmetrical structure was appropriately absent.

royal families were now extended. In particular, Reents (1985) has shown that painted funerary ceramics were no longer restricted to the elite, but were now available to middle- and lower-class families as well, often through mass production with a concomitant decrease in quality.

The Metropolitan Master's response to this new situation was unique. Although he simplified the format and its component elements in ceramic painting, he increased the quality of the composition and deepened its symbolism. Freed from the necessity of conveying specific historical information, he could instead integrate the text with the image, adapting it to nonliterary approaches of form and symbolism. Ultimately, the selection, organization, delineation, and arrangement of the texts followed precisely the same rules that governed the figural images, as image and text became so completely interlocked that at times they are difficult to distinguish. The texts also take on the symbolic function traditionally limited to the image, opposing and completing the meaning of the figural imagery.

The growing preoccupation with opposition in the late works of the Metropolitan Master is consistent with the widespread use of dualistic structures that underlie much of Maya art and mythology. However, his attempts to streamline the opposition, eliminating redundancy to heighten the contrasts, represents an artistic choice. By contrast, the master who designed the sculptural program of the Cross Group chose the techniques of elaboration and repetition to explore the same opposition of funerary and inaugural rituals.

The sustained quality of the later designs produced by the Metropolitan Master and some of his associates is difficult to reconcile with Reents's (1985) model of the relationship between quality and social class. In quantity, these wares should correspond to middle-class consumption, whereas the quality would suggest elite usage. Indeed, the only Site A ceramics which are comparable to the best products of Naranjo in both complexity and historicity are those which the Metropolitan Master produced at the beginning of his career (Figs. 14-3, -5, -6), when he may actually have been imitating the finer products of the Naranjo workshops. How may the temporal sequence from complex and unique historical ceramics to standardized and nonhistorical versions at Site A be reconciled with an economic division between elite and middle classes at Naranjo?

The tomb under Temple I at Tikal offers an instructive example in this context. The only vessel in the tomb with sufficiently high artistic quality and sufficient complexity of figural arrangement and dynastic inscription to suggest an elite commission appears instead to have been imported from another site (Coggins 1975:502–12). The extreme range in quality among the other painted-figure cylinder vases interred in this tomb cannot be explained either by economic or chronological distinctions, since all of the ceramics were buried at the same time in the tomb of one of the most powerful Maya rulers. In order to explain this variation in quality, Coggins (1975:545–46) suggested that visiting lords attending the funeral might have been asked to paint these vessels as part of their contribution to the ceremony.

Neither Reents's economic nor Coggins's ritual explanation for the range in quality of ceramics in the Tikal tomb seems entirely satisfactory. However, Reents's reconstruction of the extended family workshop might be applied to arrive at a more practical explanation. The same potter might have made the group of pots for a single workshop, and after the leading artist had painted one example, his relative/apprentices would have been instructed to use his model in painting their own. To the Maya, it may have been more important to increase the quantity of ceramics available for burial within a short time than to sustain a high artistic quality throughout the funerary offering. The same reconstruction might explain the differences in quality and complexity among the many versions of repeated themes at Codex Style Site A. At present we lack evidence to determine in what contexts superior artistic quality in ceramic painting, as in the works of the Metropolitan Master, would be taken into consideration. We do not know who, outside of the artist himself, would have appreciated his subtle and unique interplay of text and image.

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Maya Kingship, Cosmology, and Ritual

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Yucatec Sacred Breads through Time

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Ritual Humor in Classic Maya Religion

15

Dead Kings and Living Temples: Dedication and Termination Rituals among the Ancient Maya

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INTRODUCTION

A majority of the participants at the Burg Wartenstein Seminar on Maya Cultural Development in 1962 considered it highly probable "that the lineage system was an organizational principle that extended from top to bottom in the Maya social system" (Vogt 1964b:400). Vogt (1964a:26–27, 390) has even diagrammed the relationship of patrilineages and patrilineal clans to the Classic Maya settlement pattern and has suggested further that the ceremonial center pyramids "may have been erected as ancestral shrines for certain lineages." As such, the pyramids may have represented the sacred mountains the Tzotzil associate with the patrilineage in their ancestor worship (Holland 1964:303, 305). This view is consistent with Michael Coe's (1956:388; 1965:110–11) suggestion that the new constructions the Classic Maya so frequently superimposed on the old were to commemorate the interment in the "lineage mountain" of an important member of the patrilineage. (Erasmus 1968:182)

Historical events should not be given precedence over process. The study of process enables us to review an event in a larger comparative framework. In doing so, we are led to observe and analyze aspects of an event which might otherwise go unnoticed or neglected. Since our description or knowledge of a reconstructed event is dependent to some extent on this amplification, the "reality" of the event becomes inseparable from the "reality" of the process it abstracts. (Erasmus 1968:191)

These last words are deliciously ironic, and the first wonderfully prophetic, reflecting the theoretical state of Maya studies twenty years ago (a katun, as the Maya would say). Epigraphic insights are rapidly precipitating into the translation of the New World's only true Precolumbian literature, giving form and substance to an ancient history beyond the imagination of Erasmus and the New Archaeologists he sought to defend. This history is beginning to confirm the essential validity of Vogt's hypothesized "genetic" continuity between the civilized Maya and their descendants in the face of acknowledged pressures to syncretize (Vogt n.d.). Some pyramids *were* lineage "mountains" (Stuart 1987:16–24); the Classic Maya called them *witz*, as the modern Zinacantecos call them *vitz* (Vogt 1976). The Maya fashioned images of these *witz* that show them to have been living beings, great monsters. Where we have sufficient textual evidence, as in the case of Structure 10L-26, the Temple of the Hieroglyphic Stairs at Copan (Schele and Stuart 1986), and the Temple of the Cross at Palenque (Schele 1987), we know that they were indeed dedicated by divine kings in commemoration of their lineages and dynastic ancestors. Further, we know that great kings did indeed command the construction of some living mountains to house their dead remains, as in the case of the Temple of the Inscriptions at Palenque and Temples 1 and 2 at Tikal (Jones, this volume; A. Miller, this volume), although others were designed principally to facilitate royal accession rather than burial (even Ah Cacaw's lintels in Temple 1 of Tikal commemorate the rededication of the Great Plaza area early in his career rather than his demise).

Maya ancient history may be an imperfect and biased vision of their world, to be employed cautiously and skeptically in the interpretation of past actualities (Houston 1988). Nevertheless, it opens exciting opportunities to test the anthropological questions of long-term continuity and change generated by students of the post-Conquest Maya and thereby to contribute to cultural evolutionary theory. Herein lies the irony: Maya historical events can evince a concreteness, specificity, and empirical independence (because they are anchored in natural spoken language) rivaling if not surpassing the "hard" material data undergirding inter-

pretations of the processes justifiably promoted by the New Archaeology.[1] The generalization of such specific events into categories and from categories of event fixed in time into transforming or evolving categories (processes) is more promising than ever before. Contrary to anticipation, however, processes derived from historical interpretation conjoined with archaeological analysis will initially constitute an abstraction from events rather than the reverse, as is, in fact, normal practice in the study of living and historical peoples. To be sure, these are mutually interdependent and reinforcing domains of inquiry, but the event is about to take its properly equal role in the enterprise.

IDENTIFYING MAYA EVENTS: DEDICATION RITUALS

The rituals dedicating places and objects provide eventful junctures between what ancient Maya scribes declared to have been real through their texts and what modern scholars suggest really occurred through their analysis of excavated contexts. Archaeologists have known all along that the Maya performed dedication rituals because they have found the cached offerings associated with buildings, stelae, and other special contexts (see W. Coe [1959] for an extensive analysis of Classic period cache contents). Indeed, Mayanists unabashedly design the excavation of large structures partly to discover such high information contexts. Among other things, intact ceramic vessels in caches are chronologically potent in the interpretation of architectural history and stratigraphy.

But there is much more to the creation of dedicatory contexts than has traditionally met the archaeological eye. The scribes tell us that these rituals spanned multiple discrete, but sequentially integrated, events over periods of time. The archaeological outcome of this anthropologically unsurprising fact is that the cached offerings routinely reported by Maya archaeologists are likely only components of complex ritual behavior involving multiple contexts and diverse materials, together comprising a linked series of primary deposits. The possibilities for interpretation are intriguing. Before we pursue the archaeology further, some review of the current thinking on the historical side is in order.

[1]The independence derives from the generative rules of the spoken language, which are as unaffected by the speculations and analytical frameworks of archaeologists as are the rules generating variety in pollen or in the trace elements of obsidian. That the Maya texts are anchored in spoken language is no longer a matter of conjecture (Stuart 1987).

THE EPIGRAPHIC EVIDENCE FOR DEDICATION RITUALS

In 1973, Michael Coe in *The Maya Scribe and His World* identified a special text he called the Primary Standard Sequence (PSS), which appears with high frequency on the rims of pottery and stone vessels. Coe (1973:21) originally suggested that the PSS referred to the descent of the soul into the Underworld and he purported that it never occurred in monumental inscriptions.

Although it took more than a decade of work to unravel the mysteries of the PSS, Coe's identification has proven to be pivotal in the identification of a large and important category of ritual actions involving the inscriptions on both portable and monumental objects. Work by David Stuart (n.d. and 1987:1–11), Nikolai Grube (in press), and others in recognizing substitution patterns within the PSS have revealed its basic syntax and its function as a dedication text recording the action of carving or writing on the vessel, the kind of vessel it is, perhaps its function, and its owner (patron), and more rarely its artist/scribe.

Although Coe was correct in suggesting that the PSS never occurs in its pottery form on monumental texts, it does occur in a form adapted for exactly the same function in recording the dedication of stelae, altars, houses, and other kinds of objects. Further, David Stuart's current epigraphic work (personal communication, 1985–88, 1986; Schele and Stuart 1986) at Copan provides the identification of the glyphs for a set of objects dedicated in these rituals, including "stela," several kinds of altars, "seat," and temple, as well as the already known glyph for "house."

By extending this new interpretation of the PSS and the Copan inscriptions to the entire Maya corpus, a set of verbs associated with the dedication or erection of the sculptural and architectural monuments of the Maya world can be identified (Fig. 15-1). These verbs fall into three categories: (1) a set of glyphs describing particular rituals performed at dedication ceremonies; (2) a set that includes the God N verb and its substitutes and T79 in its various forms for which no satisfactory readings have yet been proposed; and (3) actions having to do with the placing or erecting of carved and inscribed monuments.[2]

[2]This category includes the verb first identified as *tz'ap* by Peter Mathews as a word for 'perforate' on Stela 2 of Bonampak. Nikolai Grube (personal communication, 1987) has proposed the same reading for the erection of stelae by associating the terms with the Yucatec term *tz'ap* 'to pierce the earth for planting'. This is a particularly good metaphor to use for stela erection since *te-tun* 'tree-stone' was the word for stela (Schele and Stuart 1986). Another of these verbs is the same as used in the 819-day count, a glyph which has not

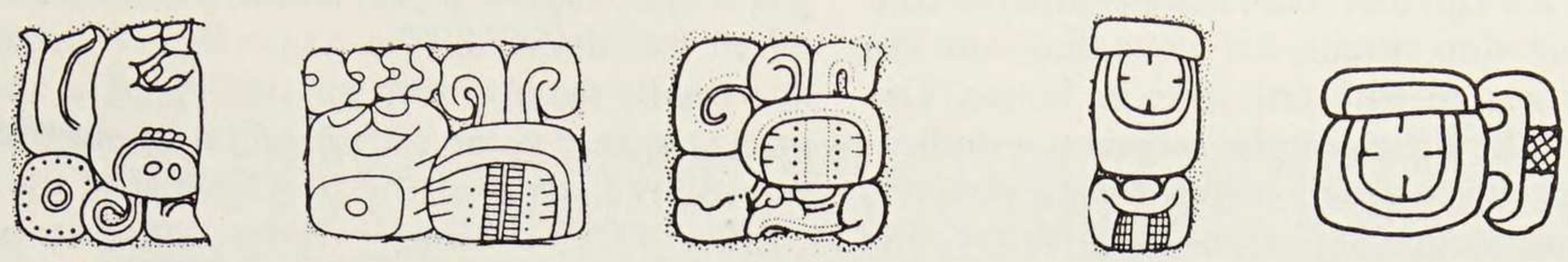

Figure 15-1. Examples of glyphic expressions associated with dedication rites.

The chronologies and histories associated with these events at various sites give us some insight into the timing of these dedication rituals, for more than one ritual could be associated with one stela or house. The stelae of Machaquila, for example, record the dedication of monuments up to 340 days after the period endings they celebrate. Stela A at Copan appears to record the "planting" of the "tree-stone" on 9.14.19.8.0 and the dedication rituals for that monument 260 days later on 9.15.0.3.0.

The dedication of buildings could also consist of a series of different rituals conducted over several days. The rituals could also be timed according to astronomical alignments with the summer solstice, especially favored at Yaxchilan (Tate 1986), and Jupiter-Saturn alignments, which play a prominent role at Yaxchilan and Palenque (Lounsbury 1982; Dütting and Aveni 1982).

The dedication rituals for the Group of the Cross at Palenque began on 9.12.18.5.16 2 Cib 14 Mol, a day when Jupiter and Saturn were frozen at their stationary points less than two degrees apart in the constellation of Scorpio with the moon and Mars in close alignment. On the next day, the reigning king, Chan-Bahlum, dedicated the temples and two days later he let his blood in a vision ritual. A different set of rituals began about six months later on 9.12.19.14.12 in which the sanctuary (called *pib na* in the inscriptions [Schele 1987; in press]) in each temple was dedicated. Each sanctuary was named for the central image on its inner tablet. These dedication rituals were directly associated with the member of the Palenque Triad who was the patron of each temple and, in fact, the gods themselves were portrayed as the actors. We suspect that the rituals brought the gods to reside in each *pib na*, or perhaps the ritual activated the portal[3] within each sanctuary so that the god could be materialized in ritual.

Structure 23 at Yaxchilan has a different set of actions, but it too has several different rituals recorded in its dedication sequence. Historical information central to the meaning of the building was inscribed on the lintels spanning four of the five doors leading inside the temple. The focal historical event appeared on the underside of the lintel and was tied chronologically to a dedication event inscribed on the front surface.[4] The building's sculptured facade, probably the relief work in stucco on its exterior, was dedicated on 9.14.11.15.1 (August 5, 723). Some five months later, Lintel 26 was dedicated on 9.14.12.6.12 (February 12, 724), and finally the building was dedicated as a *yotot* 'house' on 9.14.14.13.17 (June 26, 726). This later event was conducted by Lady Xoc, the protagonist of the history recorded in the building and presumably its patron. The "house dedication" was inscribed both on the front edge of Lintel 26 and on Lintel 23, which was set over a door in the east end of the building leading into a rear chamber.

One of the most widespread of these dedication events is written with the head of God N or its substitute in the PSS, a glyph consisting of T41 and the profile image of a stepped pyramid or stairway (M. Coe 1973:21). No one has yet proposed accepted readings of these two glyphs, but they occur both on pottery and in "house" and "monument" dedication contexts. Perhaps the most striking example is on the Early Classic cache vessel from Tikal designated MT 140 (Fig. 15-2). The text begins with the Introductory Glyph to the PSS and the pyramid version of the God N dedication verb. These two glyphs are followed by *yotot* 'house' and *k'ul na* 'holy building' or 'temple.' This vessel was made specifically to use in the dedication rituals of Structure 5D-46 (Coggins 1975:203). It was placed in a cache on the central axis of the building. Inside were figurines cut from spondylus shell, nine imitation stingray spines, jade, wood, and possibly some textiles.

Moving to an even earlier time, dedication rituals can be detected in inscriptions written during the Late Preclassic period, when both texts and the institution of divine kingship initially emerge in the Maya Lowlands (Freidel and Schele 1988). One of the earliest Lowland Maya inscriptions, the reused Olmec jade plaque in the Dumbarton Oaks collection (Fig. 15-3; Coe 1966), features the Introductory Glyph and the "pyramid" variant of the God N verb from the PSS as the first two words of the text. By analogy with later Classic usage, these glyphs record the dedication of the plaque by the Maya king, the ahau, who recarved it for his own purpose to commemorate his accession to office among other things (Schele and Miller 1986).

The textual evidence confirms the antiquity and complexity of dedication rituals. Despite the gaps in our present knowledge and the variety of particular actions implied by the verbs, from what we can detect it is certain that Maya dedicated both places and objects which they often deposited within buildings. Further, the texts show the extended sequentiality of dedication rituals. We now turn back to the archaeological record to consider some potential parallels.

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yet been read, but which very likely means 'to set in place' or some equivalent.

[3]Evon Vogt (1976:44) in speaking of the crosses which are the ritual foci on Zinacanteco mountains, among other places, says: "All of these crosses serve symbolically as 'doorways' or 'entryways'; that is, they are means of communication with deities and boundary-markers between significant units of social space."

[4]The front edge of Lintel 24 was destroyed when the lintel fell from its position just before Maudslay's workers prepared it for shipment to the British Museum (Graham 1977:54).

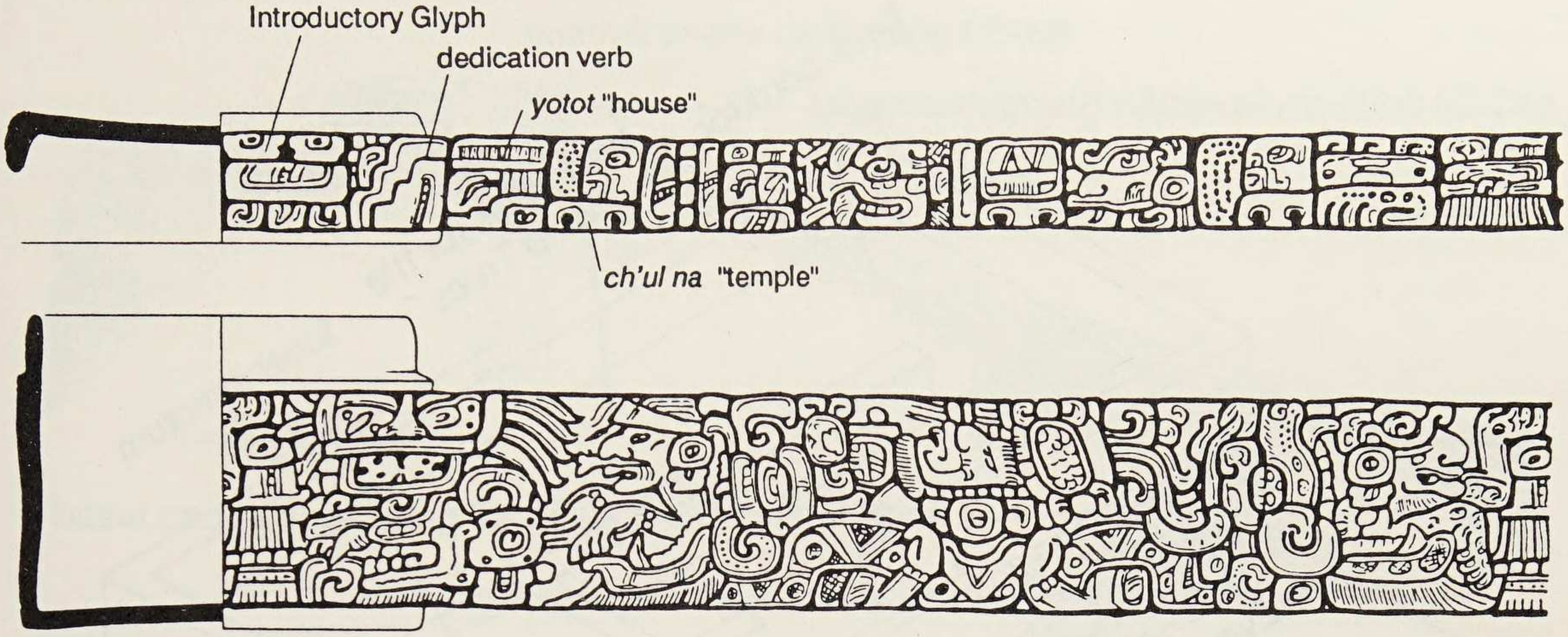

Figure 15-2. MT 140 from Tikal (after W. R. Coe 1965).

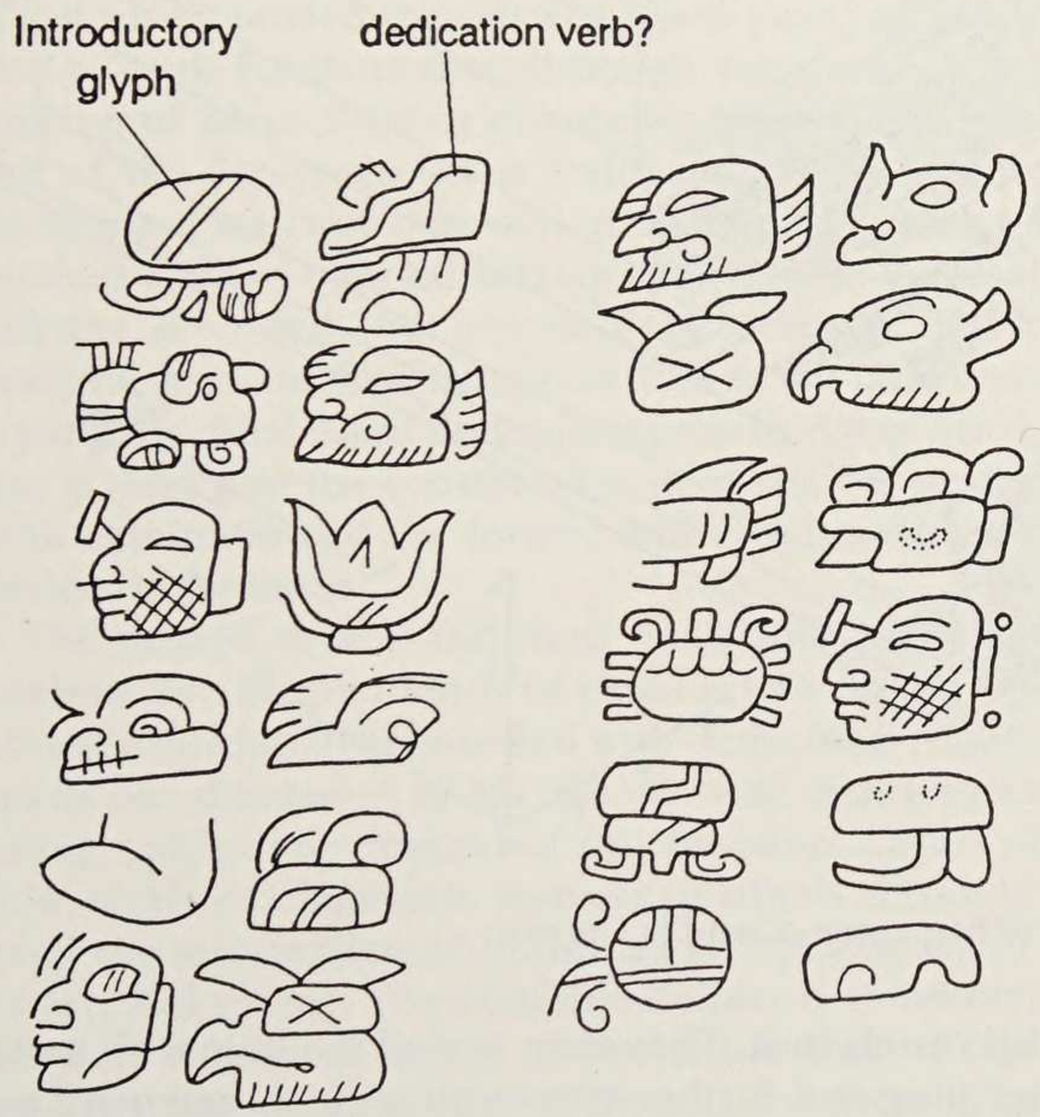

Figure 15-3. Inscription from the rear of the Dumbarton Oaks Plaque.

DEDICATION AND TERMINATION: A LATE PRECLASSIC EXAMPLE

Excavations in the Late Preclassic period monumental architecture at Cerros, Belize (Freidel 1986b), revealed substantive evidence for prolonged and complex rituals not only of the dedication of buildings but also of their termination (Robertson-Freidel 1980; Garber 1989). The case of the earliest royal temple at the site, Structure 5C, illustrates the sequentiality of linked events found in the epigraphic record. Structure 5C-2nd was an extraordinary and elaborately decorated temple (Fig. 15-4) built over the remains of perishable buildings in a nucleated village. The iconography of the building suggests that its primary function was to serve as a spatial context for shamanistic royal ritual (Freidel and Schele 1988) with a particular focus for action upon its long stairway.

Although the excavations revealed no primary cached deposits associated with Structure 5C-2nd, the people who buried this building employed both caching activity and its counterpart, the ritual layering, sprinkling, scattering, and burning activity of termination. Structure 5C-2nd, clearly a masterpiece by any standard, must have been particularly important to the Maya of Cerros, for it was left open long after a much larger acropolis raised to the south had cut off its accessibility and centrality to the community. When the building was finally buried under another temple, Structure 5C-1st, this new construction was much simpler (one decorated terrace rather than two). At the same time, its patrons embedded much more elaborate evidence of their rituals. This combination gives the impression that the primary function of Structure 5C-1st was to bury and contain Structure 5C-2nd. A detailed description of the burial of 5C-2nd and the dedication of 5C-1st is now in order.

In contrast to the loose rubble core construction of Structure 5C-2nd, the internal stratigraphy of Structure 5C-1st was unusually elaborate (Fig. 15-5), far more complex than the requisites of structural stability would determine but commensurate with the highly ritualized nature of this building activity. The stratigraphic

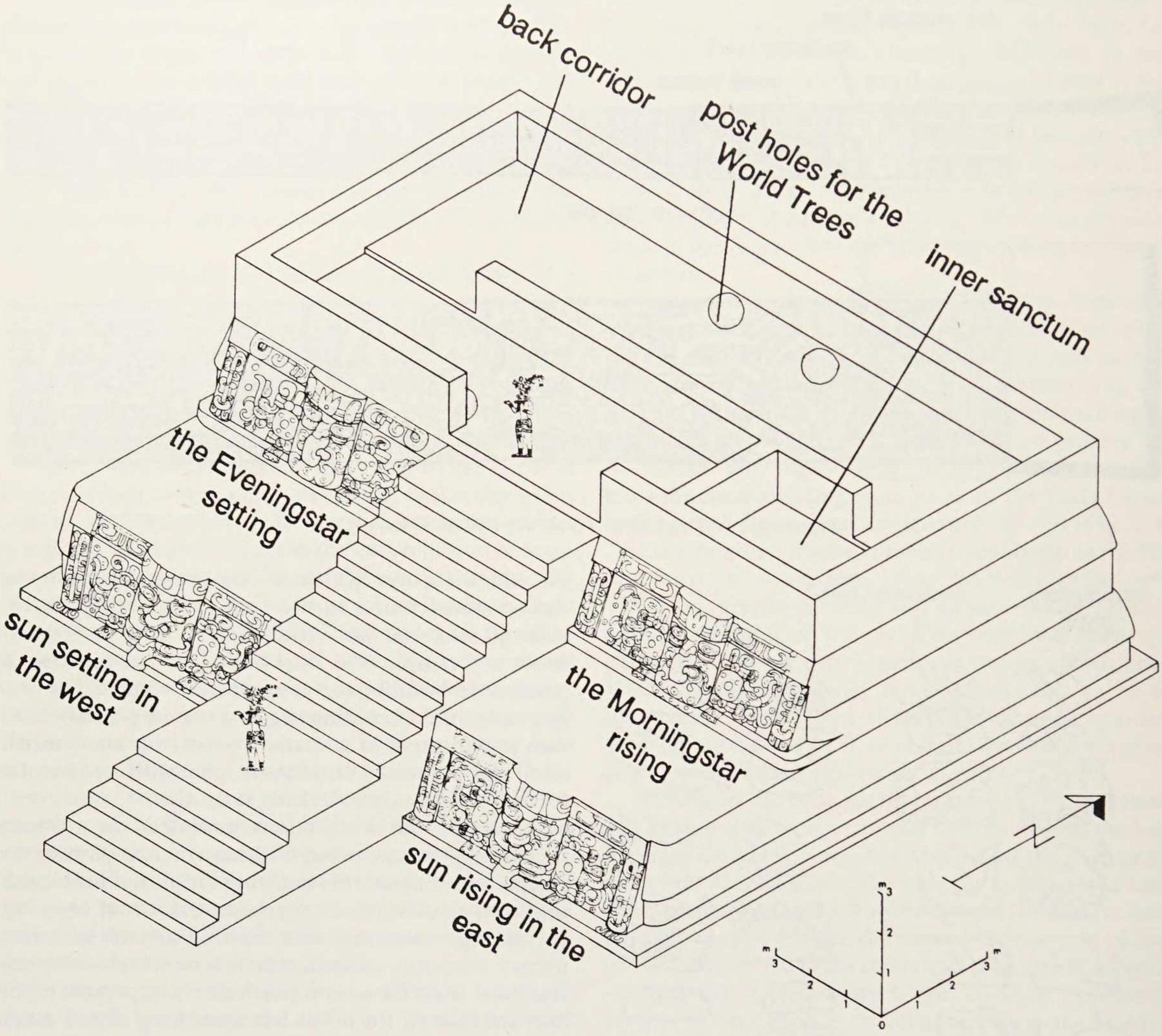

Figure 15-4. Restoration isometric of Structure 5C-2nd at Cerros.

sequence on the plaza surface of Structure 5A (the plaza fronting the building to the south) registered this ritual activity. On the center line of the stairway of Structure 5C-2nd and directly south of its basal tread, ritualists dug a hole through the plaza floors of Structures 5A and 5A-Sub.1[5] and placed an offering of two lip-to-lip vessels in it. They then sealed the hole with a plaster plug and further covered it with an extensive new plaster pavement.

This pavement, plaza floor 1a of Structure 5A, did not extend over the surface more than 10 m south of the Structure 5C stairway or about half the length of the plaza. The peculiar pavement was banked up against the second tread of the stairway of Structure 5C-2nd and hence was laid while that stairway was still open. At the same time, the pavement also appears to have been banked up against the basal molding of the

[5]Structure 5C-2nd was originally built as the focus of a small acropolis, the lower raised surface of which is termed Structure 5A-Sub.1. This acropolis design is typical of the Late Preclassic royal architecture, as seen for example in the prototype of the North Acropolis at Tikal (W. Coe 1965). Structure 5A is the extended plaza surface that raised a broad area around the original little acropolis to the same height and made Structure 5C-2nd part of a much larger acropolis complex.

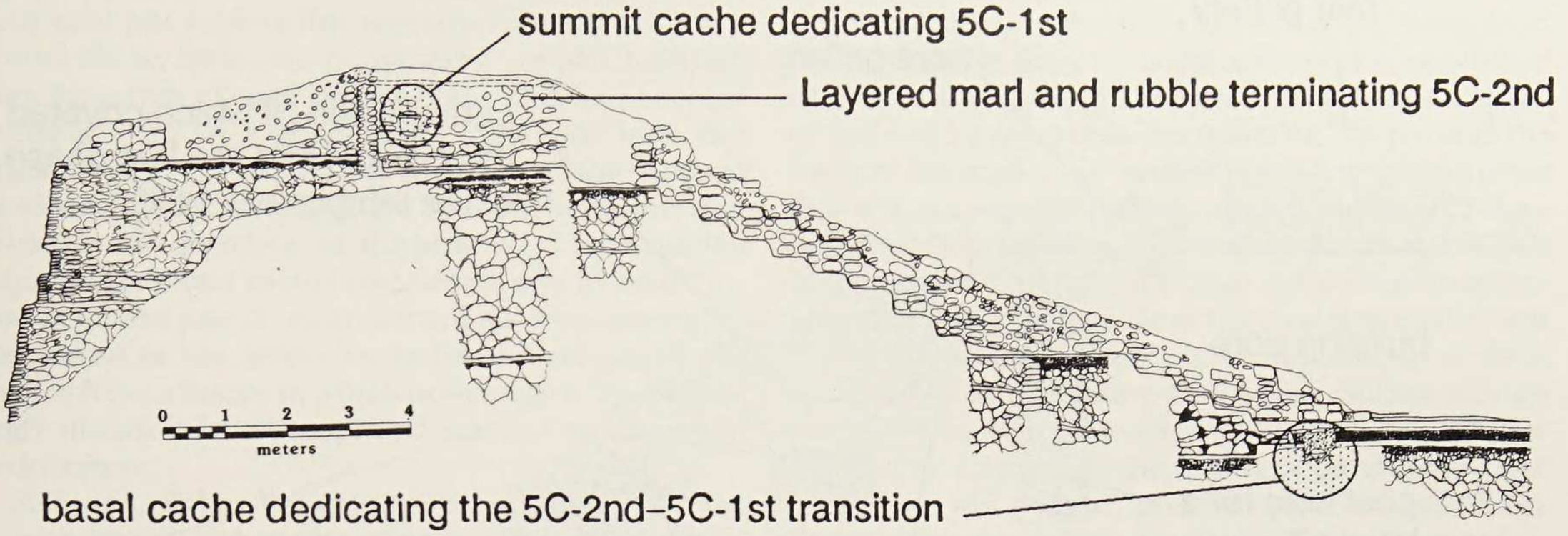

Figure 15-5. Section through Structure 5C at Cerros showing dedication events.

lower east panel of Structure 5C-2nd and thus was laid while this panel was still open. However, plaza floor 1a was banked up against the lower west wall of Structure 5C-1st, which buried the western lower panel of Structure 5C-2nd. Furthermore, although the marl underflooring of plaza floor 1a ran under the western side wall of the Structure 5C-1st stairway to bank against the original stairway side wall of Structure 5C-2nd, its finished and red-painted surface lipped up to the final stairway side wall that encased the original. These stratigraphic data show that plaza floor 1a was laid down as part of a ritual event punctuating the burial of Structure 5C-2nd and the construction of 5C-1st, before the final termination of the former and also before completion of the latter.

The cached vessels and their associated pavement combine two distinct kinds of ritual action. Intact vessels are traditionally identified with dedication rituals, and as our discussion of MT 140 of Tikal shows, there is epigraphic confirmation of this function. Layers of white marl are diagnostic features of rituals accompanying the termination of buildings and places at Cerros (Freidel 1986a). The combined effect is to neither complete the ritual action of burial nor that of construction, but rather to span them and link them in an extended sequence of rituals such as registered in the epigraphic evidence.

The embedding of an important ritual event in the middle of the process of construction poses the possibility that other aspects of this purportedly straightforward activity were also ritualized. Part of the sequence of ritual actions in this case apparently included the burial of the elaborate facade of Structure 5C-2nd. The flanking terrace retaining walls of Structure 5C-1st were constructed directly in conjunction with the burial of Structure 5C-2nd. The masons created an intricate series of marl layers between thin layers of rubble and gravel. The use of marl layers in loose rubble construction is a standard Maya strategy for enhancing vertical stability, but the number of such "pauses" in the core fill of Structure 5C-1st reduced the rubble and gravel to the appropriate thickness of underfloorings for marl pavements and increased these pavements to the frequency found in termination rituals elsewhere at the site. These pauses were anchored directly into the masonry retaining walls of Structure 5C-1st both on the lower masonry walls behind stucco decoration and on the upper terraces behind the stepped facade which replaced the upper panels (Fig. 15-6).

The evidence for termination ritual activity here goes beyond the stratigraphy. The facades of Structure 5C-2nd were deliberately and systematically defaced, for sections of the masks and flanking earplug assemblages were not only torn away but were also then removed from the area to be deposited elsewhere.[6] Moreover, graffiti were etched on the masks and painted on the flanking wall of the stairway. Finally, large fragments of smashed decorated pottery were scattered into the marl layers as found in other termination ritual contexts at Cerros.

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[6] An applique stucco circular droplet element of the kind that decorated the earflares on Structure 5C-2nd and other such facades was found in another termination ritual in a tomb chamber at the summit of Structure 4B at Cerros. Debra Walker discovered that smashed ceramics from the summit of this pyramid fitted back together with ceramics from in front of the flanking facade below, documenting that the rituals on this building involved the decorated stucco panels below (Debra Walker and Robin Robertson, personal communication, 1988; Walker n.d.). Hence, some removed facade plaster was further incorporated into extended programs of ritual actions involving other contexts away from the terraces of pyramids.

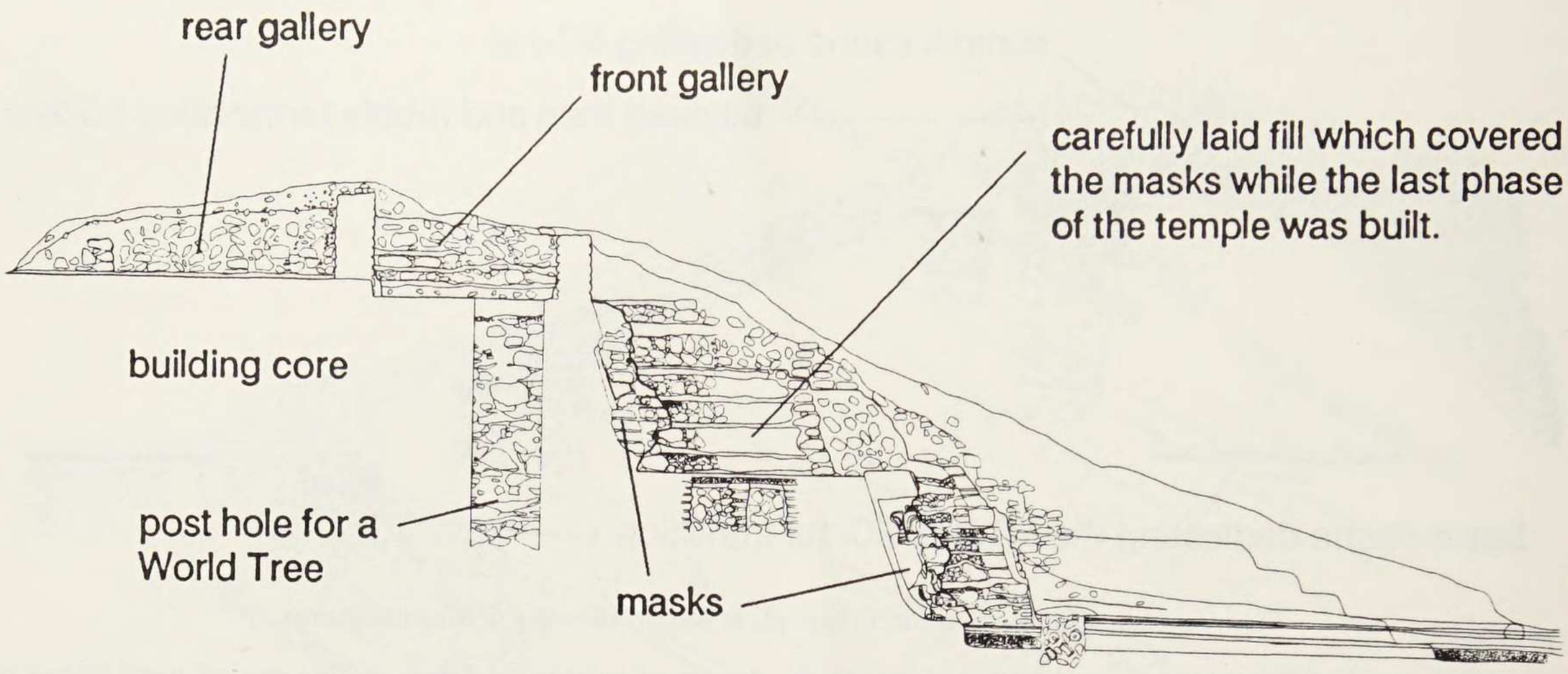

Figure 15-6. Sections through Structure 5C showing termination layering of construction fill over the masks.

Because of the superstructure surmounting Structure 5C-2nd, with masonry walls on the front and in the middle at least, burial required less elaborate core stabilizing than was actually employed by the builders of Structure 5C-1st. Again, the stratigraphy showed thin layers of marl, rubble, and gravel and the sherds of decorated pottery. Interestingly enough, a mason's wall was not found extending across the wide doorway of the superstructure where one might expect it in order to stabilize the fill within. Rather, there was a mason's wall along the edge of the first long step, or the threshold. This deviation from expected technique may have been intentional, for a circular black smudge from a fire scarred the surface of this threshold. Although there was no evidence of ashes or carbon from a fire in the marl layers covering this smudge, neither is there evidence that such burning was a repeated or routine activity in this location during the use of the building.

A large pottery bucket and plate lid were deposited as a formal offering on top of one of the construction pauses on the central axis of the front room of the superstructure. Subsequently, the stratigraphy broke down and distinct pauses were not observed in the upper fill of the superstructure. Clearly, these vessels, like those at the foot of the stairway described previously, were deposited in the course of construction of Structure 5C-1st and also in the course of the termination of Structure 5C-2nd. Not only was there the absence of any pit outline from the surface but also the vessels were deposited in conjunction with the laying down of construction fill levels in the superstructure. Finally, there were patches of plaster flooring on the summit which might well have constituted the open surface of Structure 5C-1st.

In summary, Structure 5C-1st was designed to encase and bury Structure 5C-2nd. This is demonstrated

by the overall dimensions of the structure which were such as to just achieve this objective.[7] Further, as mentioned above, Structure 5C-1st was a simpler building than Structure 5C-2nd and its plaza area had become overshadowed by a much larger acropolis with vast plaza areas to the south. The intricacy of the internal stratigraphy of Structure 5C-1st, however, belies any simplicity in the objectives of the builders. The extended sequence of ritual events embedded into its construction marked a past in which a small but exquisite building served as the power focus for the community at Cerros from a future in which power was to be increasingly manifest in an amplified scale of monumental architecture.

Recently, Robin Robertson, the ceramicist for the Cerros project, asked one of us to give an assessment of the stratigraphic evidence for temporal sequencing of the pottery from the cache at the base of Structure 5C-2nd, from the cache at the summit of Structure 5C-1st, and from the construction fill of 5C-1st. Freidel replied that there is no major time separation between the deposit of these materials, for they constitute components in a single extended program of ritual events. We can speculate that the smashed pottery in front of the western facade preceded the basal cache and that the cache at the summit was last, but if the epigraphic examples are a useful guide, we are dealing with a matter of several years at the most. The temporal contiguity of these events parallels a spatial integrity. Maya archaeologists are used to identifying isolated formal offerings as primary depositional contexts, but in the case at hand, all salient aspects of the burial of Structure 5C-2nd and the construction of Structure 5C-1st are implicated in a single, sustained, program of sacred intentional work. To assume that contexts are secondary and associations are accidental or incidental in such a situation is to invite the destruction of data.[8]

BACK TO THE GLYPHS: TERMINATION RITUALS

The example of Structure 5C not only confirms the antiquity of the sequential rituals of dedication implied by the Dumbarton Oaks plaque but also demonstrates a dimension of these rituals not easily extracted from the texts alone: the connected actions of creation and destruction. We have glossed the destructive dimension of the ritual program as "termination" to parallel the creative dimension of "dedication," but these are no doubt simplistic descriptions of what the ancient Maya thought of such matters. There are some potential leads in the textual materials to encourage further investigation of the destructive side of the rituals presently covered by the rubric of dedication, but analysis of these clues would be premature at this time. Suffice it to say that the material evidence from archaeological contexts, when engaged in the testing of epigraphic interpretations, will not only provide opportunities of confirmation or disconfirmation but will also generate new challenges to be addressed by epigraphers in their continuing dialogue with the original Maya scholars.

EVENTS TO PROCESS: A GLIMPSE OF THE PAST'S FUTURE

This brief paper is intended to offer a fairly simple example of what the potential students of the Maya can expect to find in the collaboration between experts in the ancient history and experts in archaeological field contexts. But having thrown down the gauntlet to processual analysis, we must at least give an indication of how the analysis of events like dedication rituals will yield a better brand of evolution. In another paper (Freidel and Schele 1988), we have argued for the fundamentally shamanistic nature of royal charisma beginning in the Late Preclassic period. The rituals of creating a powerful space within which divine kings could communicate with the supernatural include, among many other actions, the dedication events we have described in this paper. It is no accident that the imagery accompanying the dedication text on MT 140 shows a king of Tikal grasping a great double-headed snake whose body is decorated like the Vision Serpent and from whose mouths emerge the Paddler Gods born in the blood of royal autosacrifice (Stuart 1984). Insofar as the sacred mountains were alive, we have no doubt that they were endowed with spirit through the actions of divine kings and their attendants.

It is an intriguing empirical fact that, so far, no archaeologist has found any dead kings in the living mountains of the Late Preclassic period.[9] Put simply, these early temples do not seem to contain tombs. Like any other empirical generality, this one could be over-

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[7] The dimensions of Structure 5C-2nd were 17 by 15 m at the base, 4.5 m high; 5C-1st was 24 by 21.4 m at the base, 6 m high.

[8] In fact, Freidel did make the mistake of only partly hand-troweling and screening the extensive termination ritual deposits associated with the final abandonment of Structure 5C-1st along its southwestern side. His supposition was that the material was in a secondary deposit out of architecturally sealed context and hence of limited use in chronological analysis. Fortunately, the pattern of such primary termination ritual activity was sufficiently clear by the time that the parallel southeastern side was excavated to insure its more careful excavation and the complete retrieval of materials.

[9] Some Preclassic king intended to have his earthly remains buried at the summit of Structure 4B at Cerros, but never occupied his tomb. Instead, the community experienced political collapse.

thrown before the ink dries on the page, but the number of Late Preclassic buildings excavated by archaeologists is becoming fairly respectable and is sufficient to suggest that these buildings were initially designed as public arenas for ecstatic shamanistic performance and that the mortuary functions of the Classic-period royal temples registered institutional evolution. Why put dead kings in living mountains? One clue is that Late Preclassic Maya did bury their dead both in the patios and under the floors of their homes (e.g., Cerros [Cliff 1986]) and that the convergence of the lineage practices of the home and the liminal shrines of the community's spiritual leaders was one way to think through and legitimize the lineage-based descent of kings.

With time, the Classic texts and images make it clear that the supernatural agents these shamanistic rituals were designed to access were precisely the lineage ancestors. Dedication-termination rituals and their textual descriptions are likely to reveal not only important variation at any moment in time but also a process of institutional change through time as the Maya followed the path of kingship to dynasty and, ultimately, beyond it in the Early Postclassic dedication rituals of Chichen Itza (Krochock, in press). If the ethnography of Evon Vogt (1976) and other specialists on modern Maya is a useful reflection of current developments, then the dynamic relationship between the power of family inheritance and its concomitants in Cargo Hierarchies, Cofradias, and similar organizations on the one hand, and the power of shamans on the other, is alive and evolving through the medium, among others, of dedication rituals.

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16

The Dynastic History of Naranjo: The Late Period

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INTRODUCTION

Naranjo is an ancient Maya site located in Guatemala, about 45 km east-southeast of the great Classic Maya city of Tikal. It contains numerous hieroglyphic inscriptions, many of which are poorly preserved. However, some are in excellent condition and together with those which are partially preserved, there is sufficient information to give a good account of the dynastic history of the site. Earlier researchers (Proskouriakoff 1960: 464–67; Berlin 1968; Berlin 1973; Marcus 1976:58–62, 165–69) had difficulty in obtaining satisfactory pictorial records of the Naranjo inscriptions, a problem now remedied by the appearance of parts 1–3 of volume 2 of the *Corpus of Maya Hieroglyphic Inscriptions* (Graham and von Euw 1975; Graham 1978, 1980). In addition, there is a body of ceramic material containing hieroglyphic inscriptions which is now recognized as originating at Naranjo (Grube 1983).

The inscriptions at Naranjo fall into three general periods. An early period accounts for monuments sculpted from 9.8.0.0.0 to 9.10.10.0.0, a middle period for those from 9.13.10.0.0 to 9.14.15.0.0, and a late period for those from 9.17.10.0.0 to 9.19.10.0.0. According to the Thompson 584,285 correlation of the Maya and Christian calendars, these periods correspond approximately to the intervals A.D. 593–642, A.D. 702–726, and A.D. 780–820. A gap of nearly forty years separates the latest date in the middle period from the earliest date in the late period. However, the gap may be more apparent than real for there are some stelae whose Long Count positions are uncertain but which may fall into this interregnum.

Several people have worked on the Naranjo inscriptions but very little of this work has been published. Maria Gaida (1983) has published a complete study of all the Naranjo inscriptions. Also, I have previously presented my own interpretations of the dynastic history of Naranjo during the early and middle periods (Closs 1984a, 1985). The purpose of the present article is to summarize the results I have obtained for the late period.

There are eleven stelae from the late period at Naranjo that have glyphic texts which permit them to be securely placed in the Long Count. The chronological data on these monuments are summarized in Table 16-1. The Long Count positions are listed in chronological order and are cross-referenced by Calendar Round date and by monument. The monuments are also divided into three groups and it will be seen that each group corresponds to the reign of a single ruler. With the exception of Stelae 6 and 11, not included in the table, and the questionable first date on Stela 32, the results in Table 16-1 agree with those of Berlin (1973: table 1). In all cases, the latest dates on the monuments listed in Table 16-1 are in agreement with those previously published by Peter Mathews (Graham 1978:111).

In addition to the stelae in Table 16-1, there are others which can also be assigned to the late period or to the interregnum immediately preceding it. Nevertheless, because there is some question concerning the precise Long Count placement of these monuments, their consideration will be delayed until later in the paper.

THE LAST LORD OF NARANJO

The last of the known rulers of Naranjo is associated with only a single monument, Stela 32. His name glyph (Fig. 16-1a) appears five times in the inscription (Stela 32:D2–E1, O2–P2, T3–Q4, X2–U3, X8–W9). The name consists of two parts, the first of which is a "personal" name and the second a "god" name. Such two-part names are common among the Classic Maya elite and appear to conform to a structure wherein the personal name is characteristic of the individual while the god name may be shared by other members of the same dynastic family or by other persons occupying the same

Table 16-1. Long Count positions and dates from the late period at Naranjo.

		Stelae										
		19	33	36	13	14	12	35	8	10	7	32
9.17. 0. 2.11	12 Chuen 4 Zip					#						
9.17. 0. 2.12	13 Eb 5 Zip						○			○		
9.17. 4. 4.10	9 Oc 3 Zotz'				#							
9.17. 5. 8.12	9 Eb 0 Mol	○										
9.17.10. 0. 0	12 Ahau 8 Pax	○	○	○	○							
9.17.13. 4. 3	5 Akbal 11 Pop					○						
9.18. 0. 0. 0	11 Ahau 18 Mac					○						
9.18. 8. 8.12	8 Eb 5 Uo						○					
9.18. 8. 8.16	12 Cib 9 Uo						○					
9.18. 8. 8.18	1 Etz'nab 11 Uo						○					
9.18. 8.11.11	2 Chuen 4 Zec						○					
9.18. 8.16. 2	2 Ik 15 Ch'en						○					
9.18. 9. 0.13	1 Ben 6 Ceh						○	○				
9.18. 9. 9. 8	7 Lamat 16 Uo						○					
9.18. 9.13.15	3 Men 3 Yaxkin						○					
9.18. 9.14. 3	11 Akbal 11 Yaxkin								○			
9.18.10. 0. 0	10 Ahau 8 Zac						○	○	○			
9.19. 0. 0. 0	9 Ahau 18 Mol									○	○	
9.19. 0. 3. 0	4 Ahau 18 Zac									○	○	
9.19. 2. 4. 6 (?)	9 Cimi 14 Ceh											○
9.19. 3. 3. 3	8 Akbal 6 Zac											#
9.19. 4. 1. 0	13 Ahau 18 Mol											○
9.19. 4. 1. 1	1 Imix 19 Mol											○
9.19. 4.15. 1	8 Imix 14 Zotz'											○
9.19. 5. 9.12	12 Eb 5 Kayab											○
9.19. 9.15. 0	13 Ahau 8 Zip											○
9.19.10. 0. 0	8 Ahau 8 Xul											○

implied date

rulership position. The personal name in this case, TXVIII:1:501, can be analyzed as **WAXAKLAHUN-U-ba**, a phonetic rendering of Waxaklahunub. The god name, T1030d:82, is a God K variant with an additional postfix. This ruler has been previously designated as Ruler IIIc by Berlin (1973), 18 Rabbit by Schele (1982:94), and 18 Jog by Houston and Mathews (1985:17).

Vestiges of the portrait of Waxaklahunub are visible on the front of Stela 32, where he is shown seated on a raised throne. The composition of the scene suggested to Tatiana Proskouriakoff (1960:466) a correspondence to the ascension motif at Piedras Negras. In this she was correct, for the monument commemorates the accession of the ruler at 9.19.4.1.1 (Stela 32:T2–R4). One day prior to his inauguration, the ruler underwent a preaccession rite (Stela 32:M1–R1), comparable to a similar rite celebrated by Ruler 4 of Dos Pilas twenty-two days before the latter's inauguration (Houston and Mathews 1985:17). The monument also notes that the ruler celebrated the mid-katun ending at 9.19.10.0.0 (Stela 32:X5–X9), at which time the stela would have been dedicated.

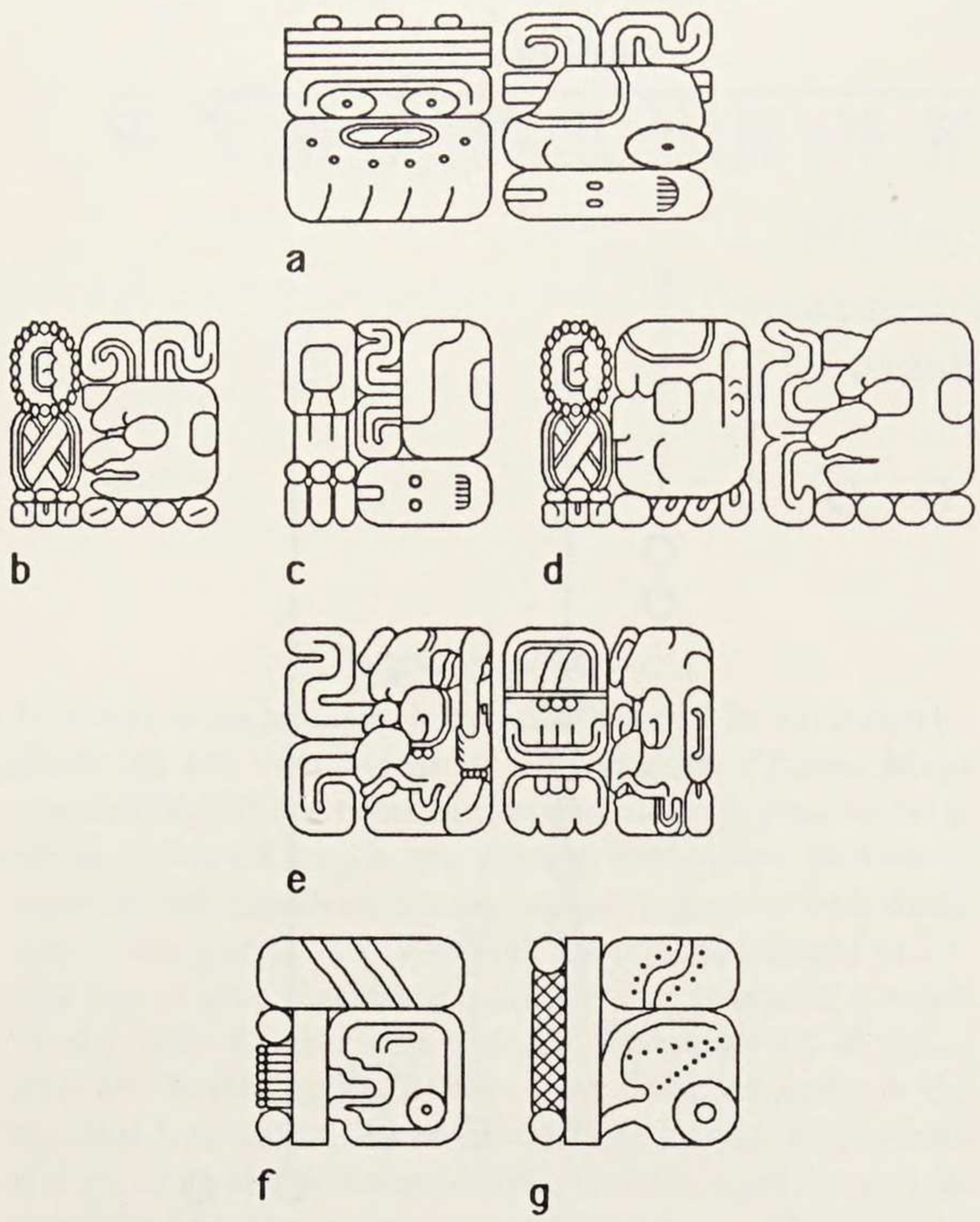


Figure 16-1. Rulers from the late period at Naranjo. (a) Waxaklahunub, God K; (b-d) SHIELD, God K; (e) SMOKING AXE, Sky God B; (f, g) AXE BLADE.

SHIELD

The middle grouping of monuments in Table 16-1 are all associated with the reign of the penultimate ruler of Naranjo. His name glyph (Fig. 16-1b-d) is usually expressed in two parts. The first of these, the personal name, consists of an ornamented shield which may or may not be combined with a "human" head (cf. Fig. 16-1b and -1d). The optional occurrence of the head suggests that it may act as a determinative for a male name. The second part, the god name, is once again a God K variant. I label this ruler SHIELD after the key element in his personal name. He has been designated as Ruler IIIb by Berlin (1973). Name glyphs of SHIELD occur at least fifteen times in the Naranjo inscriptions (Stela 7:A2; Stela 8:B6, F1; Stela 10:B2–A3, B8, A11; Stela 12:A2–A3, B3–C3, C6b, F13–G13, L; Stela 14:A7–A8, D12; Stela 35: E5–F5, F10–E11).

Proskouriakoff also identified, with some uncertainty, the accession of SHIELD at 9.17.13.4.3 on Stela 14:C1–E3. The surviving remnants of the verb at D9–C10 conform very closely to a known accession verb. Since the date in question is the first for SHIELD, after that of his birth, and since another ruler is known to have been on the throne at 9.17.10.0.0, only a few years earlier, the identification seems to be secure.

SHIELD also recorded his celebrations of the katun ending at 9.18.0.0.0 (Stela 14:A1–B4), the mid-katun ending at 9.18.10.0.0 (Stela 8:C1–E4; Stela 12:G11–G15; Stela 35:E7–F11), and the katun ending at 9.19.0.0.0 (Stela7:A1–A3a; Stela 10:A5–A9). The latest date in his reign, at 9.19.0.3.0, celebrates a tun anniversary in his personal chronology (Stela 10:B9–B11). The anniversary in question is very likely the two katun anniversary of his birth. The actual interval from the birth date to the anniversary date is two katuns and eight days, so that this anniversary is approximate to the nearest uinal.

It can be inferred that SHIELD did not survive his anniversary for very long, for as has been seen, his successor Waxaklahunub was inaugurated only a few years later at 9.19.4.1.1.

SMOKING AXE

The first grouping of monuments in Table 16-1 is associated with another reign at Naranjo. They all carry dedication dates at 9.17.10.0.0 and it can be assumed that they were all erected during the mid-katun festivities at that time. Although the monuments are necessarily closely related, the dynastic situation is complicated by the existence of two dissimilar names in their texts, in positions which mark them as principal characters at Naranjo. One of these (Fig. 16-1e) appears five times in the inscriptions (Stela 8:F8–E9; Stela 13:A10–A11, F10–E11; Stela 14:E8–F8; Stela 19:B4–A5). His name consists of two parts, the first being a personal name comprised of a T122 prefix, interpreted here as 'smoke' and an anthropomorphic head merged with an arm holding a stone axe. This combination of a head with an arm plus axe occurs with a T87 **te** postfix in a compound signifying *b'ateel* 'warrior' (Closs 1984b). Since a **te** postfix is missing in the present case, it suggests that the glyph should have the logographic value **BAT** for *b'at* 'axe'. As a result, I label this ruler as SMOKING AXE. The second part of the name is made up of the glyph T561a:23, signifying *kaan* 'sky', prefixed to a God B glyph. The SKY GOD B name was also used in the middle period at Naranjo, where it appears as the god name of the ruler SMOKING SQUIRREL (Closs 1985). SMOKING AXE has been designated as Ruler IIIa by Berlin (1973). In the published work, there has been some confusion and misprints in applying Berlin's terminology to the rulers of Naranjo (see, for example, Schele 1982:82 #15, 16; 146 #6; 160 #7; 323 #14).

SMOKING AXE is thrice named as the celebrant who presided over the mid-katun ending at 9.17.10.0.0 (Stela 13:A1–A12, E1–E12; Stela 19:A1–A10). On each of these

occasions, he is also designated as Lord of Naranjo by the Naranjo emblem glyph which follows his name. Therefore, it is clear that SMOKING AXE was ruler of Naranjo at this time.

AXE BLADE

The second principal character named on the monuments erected during the reign of SMOKING AXE appears twice in the inscriptions (Stela 19:C5; Stela 33:B4). His name is also found twice on ceramic vessels (Grolier 47:U [Coe 1973:102–3]; Vase of the Palace: M [Robicsek 1978:141]). The name (Fig. 16-1f,g) is composed of three elements, a T12 prefix commonly found with elite Maya names, an upper element T257 which can be identified as a stone axe blade, and a lower element which is not recorded in the Thompson (1962) catalog. I refer to this individual as AXE BLADE after that component of his name which is recognizable. The identification of T257 as an axe blade is justified by its usage in Maya iconography, where it appears as both an axe blade (see, for example, the axes in the glyphs on Naranjo Stela 13:A10; Palenque Palace Tablet: P14; Tikal Stela 5: C6, C12; also see the axe in the scene on Dumbarton Oaks Relief Panel 2) and a spear tip (see, for example, the spears carried by persons depicted on Naranjo Stela 19 and Yaxchilan Lintel 45).

The references to AXE BLADE on Stelae 19 and 33 as well as the reference to him on the Vase of the Palace did not use the Naranjo emblem glyph title with his name. However, in his designation on Grolier 47 the emblem glyph title was employed as was the title T58.187(520). I have referred to the latter title elsewhere as the "Naranjo rulership title" and have noted that it behaves much as—and sometimes replaces—the emblem glyph title at Naranjo (Closs 1984a). These titles suggest that AXE BLADE should be numbered among the Naranjo rulers.

Not only does Stela 19 name SMOKING AXE as the Lord of Naranjo and as the celebrant of the mid-katun ending at 9.17.10.0.0, it also refers to AXE BLADE in a secondary sentence, but does not record any royal titles with his name. This treatment is particularly significant in light of Stela 33, which was dedicated at the same time as Stela 19. AXE BLADE is the sole protagonist of Stela 33, yet he is not recorded with royal titles and he is not declared as a celebrant of the period ending. This would seem to indicate that AXE BLADE was not ruling Naranjo at 9.17.10.0.0 and that he had a subsidiary relationship to SMOKING AXE at that time. Nevertheless, the data from Grolier 47 also suggest that AXE BLADE eventually achieved rulership at Naranjo. The problem of the precise relationship between AXE BLADE and SMOKING AXE and the problem of delimiting AXE BLADE's reign is examined in more detail after consideration of the genealogical relationships documented in the late period records of Naranjo.

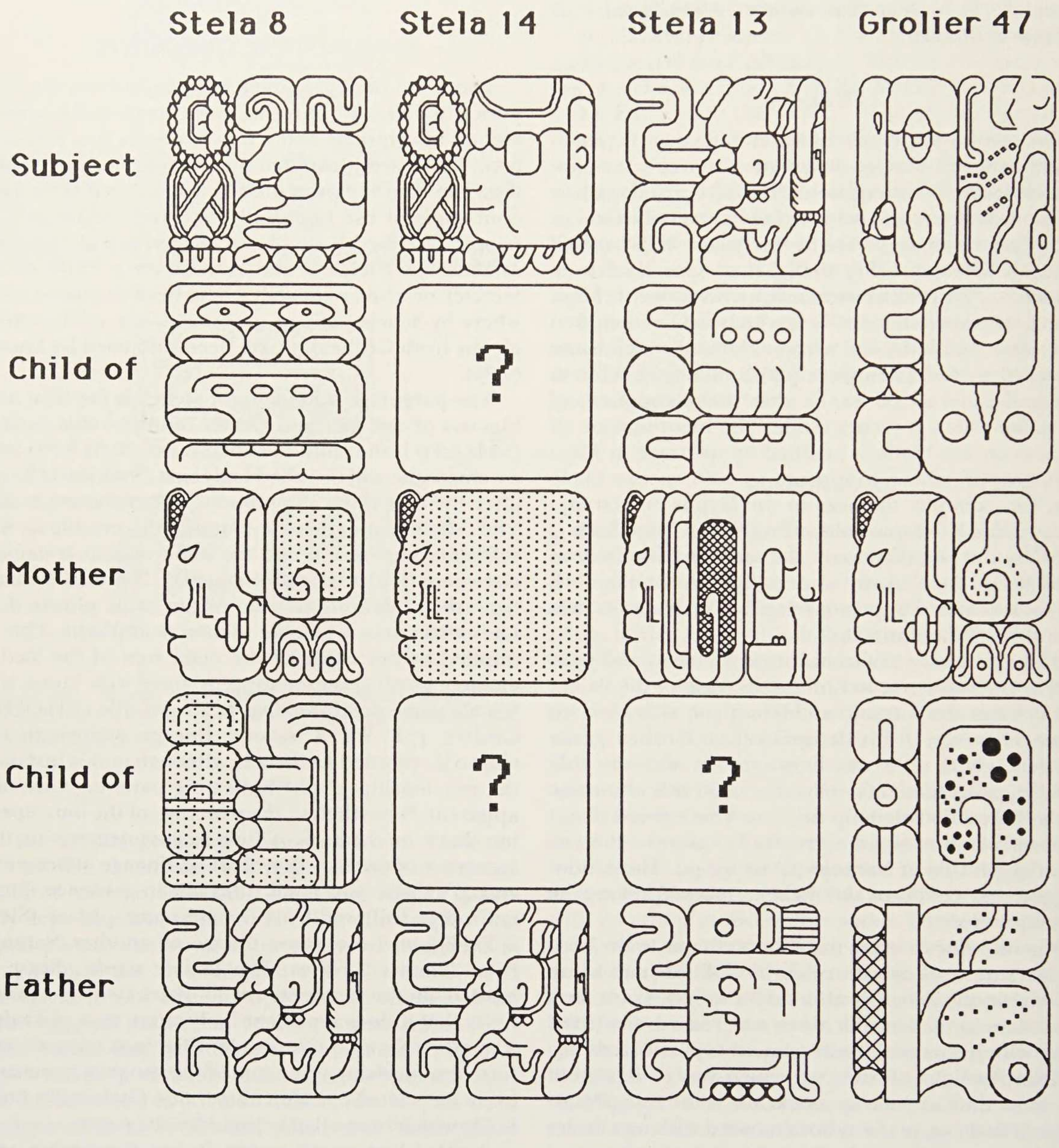
GENEALOGICAL STATEMENTS

There are four parentage statements from the late period at Naranjo. Three of these occur in the monumental inscriptions and a fourth occurs in a ceramic text. These are illustrated and summarized in Table 16-2. The data are presented in a simplified form and omit some of the titles and secondary names of the people described. Examples of relationship glyphs such as those on Stelae 8 and 13 indicating 'child of (a female)' or 'child of (a male)' have been discussed elsewhere by Schele (1982:30–32, 321–24). The relationship glyphs from Grolier 47 have been discussed by Stuart (1985).

The parentage statement on Stela 8 is the least ambiguous of the four and clearly indicates that SHIELD (Stela 8:F1) is the child of SMOKING AXE (Stela 8:F8) and a woman who will be called Lady SHELL STAR (Stela 8:F5), after the first three components of her name phrase. The "shell" component is partially discernible in the reference on Stela 8, and the same woman is named elsewhere (Fig. 16-2a) (Grolier 47:D′). It is also evident from the remaining portion of the name phrase that Lady SHELL STAR is a noble woman from Yaxha. This is implied by her usage of the main sign of the Yaxha emblem glyph (Justeson 1975) prefixed with T1002, the female name determinative, as a royal title (Stela 8:E6; Grolier 47:E′–F′). A second lineage statement for SHIELD is recorded on Stela 14, although in this instance the relationship glyphs indicating parentage are not apparent. Nevertheless, the structure of the long opening clause on the back of Stela 14, commemorating the accession of SHIELD, is typical of lineage statements. SHIELD's name and royal titles are in evidence (Stela 14:C11–E3), followed by a female name phrase (Stela 14:F4–F5) and the name phrase of another Naranjo ruler (Stela 14:F7–F10). The female name phrase is eroded but the remnants are consistent with the possibility that it does represent Lady SHELL STAR of Yaxha. The other Naranjo ruler is identifiable as SMOKING AXE from the surviving remnants of the two-part name and by an associated "3 katun ahaw" title (Stela 14:F7; Stela 8: E8) which immediately precedes the name.

A third lineage statement, listing the mother and father of SMOKING AXE, is recorded on Stela 13. I refer to the mother as Lady *u*-SHELL-X, after the first part of her name phrase (Fig. 16-2b) (Stela 13:G4–G6), and to the father as SMOKING *ta*-X, after the first part of his name phrase (Fig. 16-2c) (Stela 13:H10–G11). The second part of the father's name is the same god name, Sky God B, as employed by the son. There is a general similarity of the father's name phrase to that of SMOKING

Table 16-2. Genealogical statements from the late period at Naranjo.



SQUIRREL, the great Naranjo ruler of the middle period (Fig. 16-2d). Note also that the three glyphs which precede the name of SMOKING *ta*-X on Stela 13 (G9–G10) also precede the name of SMOKING SQUIRREL on Stela 21 (A6–A8). Nevertheless, there are problems with the hypothesis that the two rulers represent the same individual. The two heads which serve as main signs appear to be different and the presence of a T59 **ta** superfix distinguishes the name on Stela 13 from that of the earlier SMOKING SQUIRREL. In addition, as mentioned, SMOKING AXE is listed as a "3 katun ahaw" in the parentage statements on Stelae 8 and 14. Since these references are posthumous, it can be concluded that when SMOKING AXE was alive and celebrating the mid-katun at 9.17.10.0.0 he must have been less than 60 tuns in age (according to the usual interpretation of the

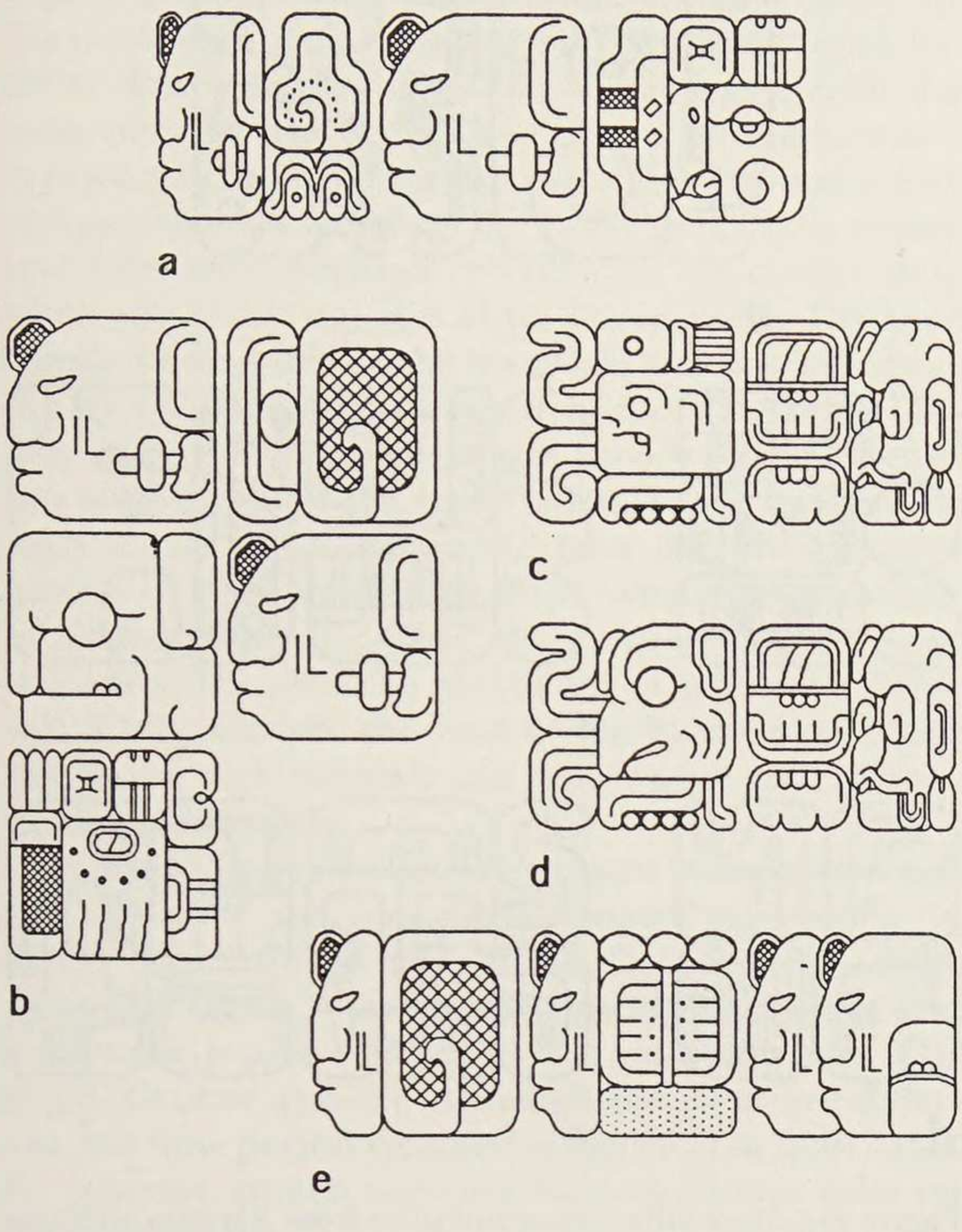


Figure 16-2. Some elite names from Naranjo. (a) Lady SHELL STAR, Lady of Yaxha; (b) Lady *u*-SHELL-S, Lady tu-b'a-ahaw; (c) SMOKING *ta*-X, Sky God B; (d) SMOKING SQUIRREL, Sky God B; (E) LADY SCROLL, Lady 1(?)-DOUBLE COMB-?, Lady MULUC.

katun ahaw notation). Now, according to the extant epigraphic record in the middle period (Closs 1985), SMOKING SQUIRREL was no longer ruling at 9.14.10.0.0. Thus, SMOKING AXE was born at a time when SMOKING SQUIRREL was already dead, or possibly taken captive. This indicates that caution must be exercised in attempting to identify SMOKING AXE's father, SMOKING *ta*-X, with the SMOKING SQUIRREL of the middle period.

There is a woman named in association with SHIELD on the front of Stela 8. I refer to her as Lady SHELL-DOUBLE COMB-MULUC after the components of her name phrase (Fig. 16-2e) (Stela 8:B1–B3). It is apparent from her name that she is to be distinguished from Lady *u*-SHELL-X, the grandmother of SHIELD, and from Lady SHELL STAR, the mother of SHIELD (cf. Fig. 16-2a, b, e,). I suggest that she be identified as the wife of SHIELD. This is supported by the interesting fact that the wives of the rulers of the two previous generations also utilize the "shell" glyph in the first portion of their names. I believe that the "shell" glyph can be safely identified as a shell and has the logographic value **BOX**, signifying *b'ox* '*cáscara, concha*' (shell, seashell) (Barrera Vásquez et al. 1980). The unusual shape of the "shell" glyph in Lady SHELL STAR's name (Fig. 16-2a) and the series of small dots inside the shell are found elsewhere in Maya iconography (cf. Copan Stela 11) and serve as iconic clues to its proper identification. The cross-hatching found in the shell components of the names of Lady *u*-SHELL-X (Fig. 16-2b) and Lady SHELL-DOUBLE COMB-MULUC (Fig. 16-2e) reinforces the reading since it is generally known that such cross-hatching signifies the color black. In this regard, one may note that the term *b'ox* also signifies '*negro*' (black, dark) (Barrera Vásquez et al. 1980).

From the above results it is possible to establish a three-generation genealogical sequence during the late period at Naranjo. This is illustrated and summarized in Table 16-3.

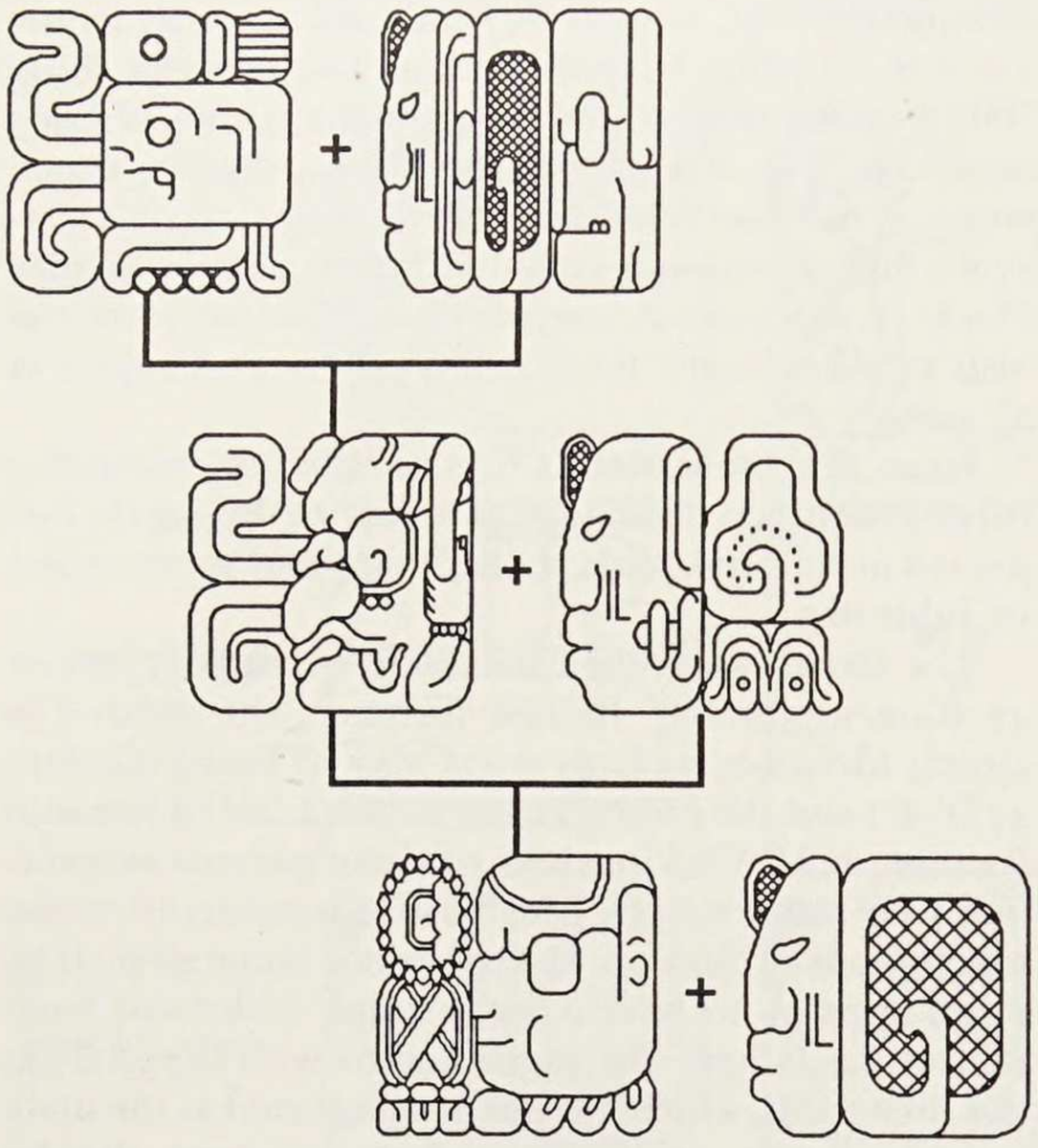
The fourth parentage statement occurs on Grolier 47 (Coe 1973:102–3). In this instance, the mother is clearly identified as Lady SHELL STAR of Yaxha (Grolier 47:D′–F′) and the father as AXE BLADE, Lord of Naranjo (Grolier 47:U–V). The child of these parents is someone who has not been previously encountered in the inscriptions of Naranjo. His presumed name glyph (Fig. 16-3a) appears to have a form which is derived from that of the father. The name begins with Glyph T743 (Grolier 47:M), which has been interpreted as the male agentive prefix *ah* by Stuart (1985). It may also be pointed out that an ahaw title (Grolier 47:P) follows the name. However, the person named does not carry any of the usual titles of rulership employed at Naranjo, inferring that the son mentioned here died before assuming power at Naranjo.

AXE BLADE RECONSIDERED

It has been pointed out that the data of Stelae 19 and 33 suggest that AXE BLADE was not ruling Naranjo at 9.17.10.0.0 and that he had a subsidiary relationship to SMOKING AXE. Since AXE BLADE does employ royal titles of Grolier 47, he should fit into the dynastic sequence of Naranjo at some point. Of special interest in this regard is the occurrence of his name in the rim text on the Vase of the Palace (Robicsek 1978:141). An associated secondary text carries a date which can be fixed in the Long Count at 9.18.5.0.0, in the middle of the reign of SHIELD. If this date is contemporaneous, then it is possible that AXE BLADE is an alias of SHIELD. Indeed, Schele (1982:163; also cited in Robicsek 1978:141–42) has reached this conclusion. This might also account for the seemingly subsidiary status of AXE BLADE on Stelae 19 and 33, where he may have been named because he was the son and heir of SMOKING AXE.

Nevertheless, there are cogent reasons for rejecting this interpretation and for believing that AXE BLADE is

Table 16-3. A genealogical sequence from the late period at Naranjo.



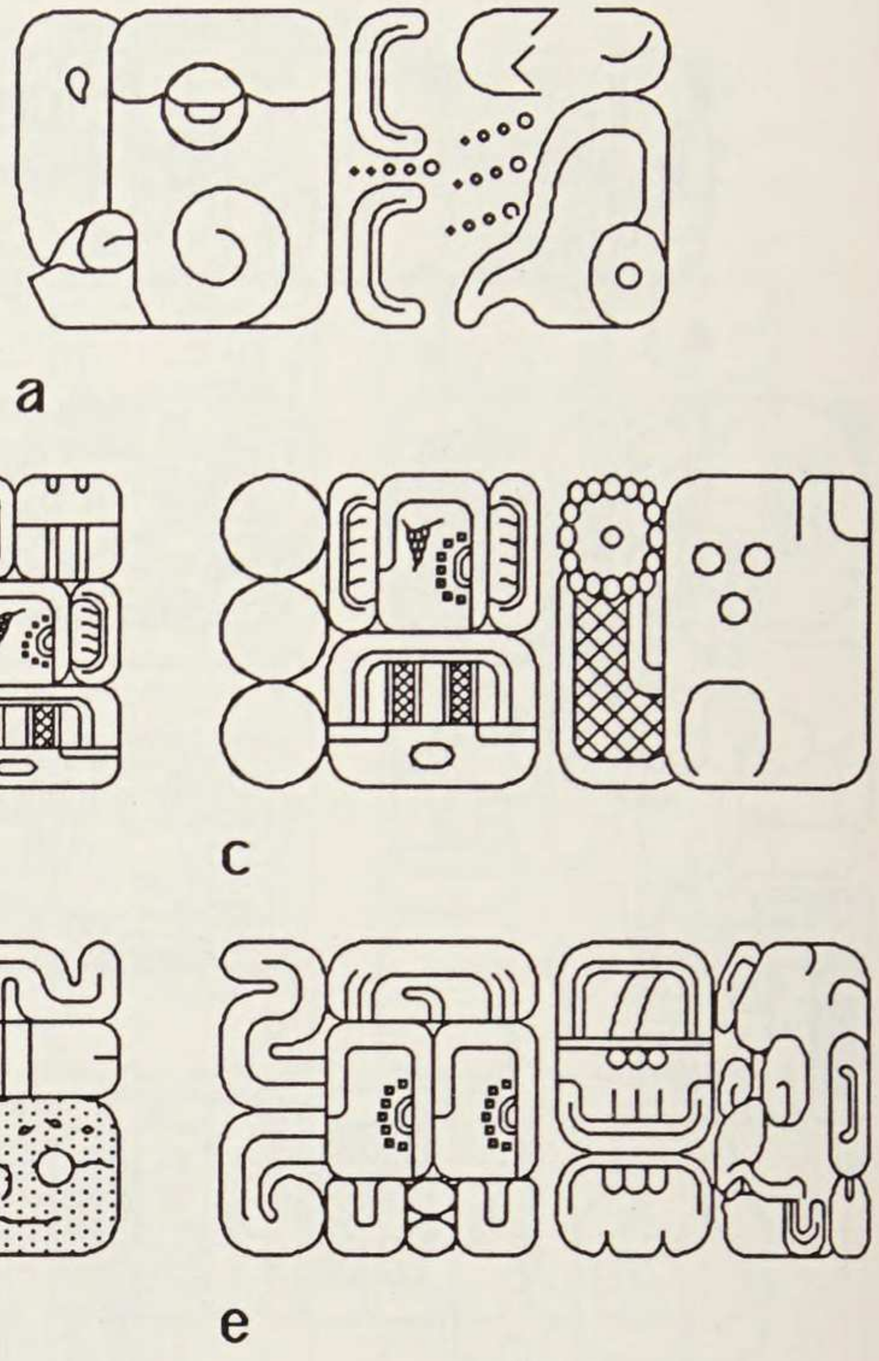


Figure 16-3. More elite names and titles from Naranjo (a) Name glyph of the son of AXE BLADE and Lady SHELL STAR; (b) "3 katun ahaw" title; (c) a 3 katun T93.672 title; (d) name glyph of the lord of Stela 6; (e) name glyph of the lord of Stela 20.

to be identified with SMOKING AXE himself, rather than with SHIELD. Probably the strongest evidence for this is the parentage statement on Grolier 47 which implies that Lady SHELL STAR is the consort of AXE BLADE. However, the parentage statement on Stela 8 implies that Lady SHELL STAR was the consort of SMOKING AXE. Although it is possible that Lady SHELL STAR took more than one husband, it seems unlikely, given present information, that she would form an incestuous relationship with her son. Thus, it is preferable to conclude that AXE BLADE is an alias of SMOKING AXE.

Support for this identification comes from the fact that the inset text on Grolier 47 is more closely linked to the inscription on Stela 13, SMOKING AXE's genealogical monument, than to any other. This is demonstrated by a sequence of nine glyphs on the ceramic vessel (Grolier 47:K′4–K′8) which is more or less identical to a sequence of ten glyphs on the stela (Stela 13:F11–E16). The latter sequence occurs within an extended nominal phrase of SMOKING AXE, and although the subject of the vase sequence (Grolier 47:J′5) is eroded, the surviving portions definitely resemble the name of AXE BLADE. If Grolier 47 is a posthumous memorial to a dead son who never lived to rule, commissioned by a grieving ruler, it would not be surprising to find that the inset text deals with the surviving ruler, whereas the rim text (top and bottom) commemorates the deceased.

The only instance in which the names of SMOKING AXE and AXE BLADE appear in the same inscription is found on Stela 19. On this occasion, the names occur in separate sentences and no relationship glyph links the two. In addition, only a single protagonist is shown in the accompanying scene. On the back of the stela there is a second scene which depicts Lady *u*-SHELL-X, identified in the text below, passing a cord through the tongue of a seated ruler in a familiar Maya bloodletting ritual. Since Lady *u*-SHELL-X is the mother of SMOKING AXE, then the current Lord of Naranjo, there can be little doubt that he is the seated ruler. Thus, the scenes on Stela 19 contain only a single male protagonist and support the notion that only a single male is named in the glyphic texts and, consequently, that SMOKING AXE and AXE BLADE are alternative names of the same individual.

With respect to the date on the Vase of the Palace, it is significant that it occurs in a historical addendum which does not include the name of AXE BLADE. The ruler's name appears in the rim text, presumably in a posthumous memorial. The subject of the dated pas-

sage is a Tikal noble whose name is followed by the Tikal emblem glyph which itself is followed by an anterior date indicator. The Tikal lord's name, with the same peculiar arrangement of glyphs, is repeated as a caption in the scene on the vase. This structure may indicate that the scene on the vase predates the historical reference, perhaps referring to an earlier time when AXE BLADE was still alive. There are no Distance Numbers recorded in the historical text but a likely 14 tun glyph appears at the end of the statement. This may signify that the date at 9.18.5.0.0 is the fourteenth tun anniversary of the event portrayed on the vase. In such a case, the event would have occurred around 9.17.11.0.0, more than three years before the accession of SHIELD at 9.17.13.4.3 and about one year after SMOKING AXE celebrated the mid-katun at 9.17.10.0.0. With this interpretation, the Vase of the Palace would link AXE BLADE with SMOKING AXE rather than with SHIELD, as suggested earlier.

It is also important in the present context to recall that SMOKING AXE was posthumously assigned a "3 katun ahaw" title (Fig. 16-3b) in the parentage statements on Stelae 8 and 14. It is surely significant that AXE BLADE is also recorded with a 3 katun title (Fig. 16-3c) (Grolier 47:S–T). Although the titles are different, the time period spanned is identical in both cases. By contrast, SHIELD does not have any katun titles on his monuments.

One additional argument, of much interest, has been brought to my attention by Thomas Smith-Stark (personal communication, 1983). He has observed that the faces of SMOKING AXE on Stelae 13 and 19 (Fig. 16-4a,b) exhibit distinctive tattoo marks on the side of the lower jaw and that the same marks also appear as a facial characteristic of AXE BLADE on Stela 33 (Fig. 16-4c). By contrast, the well-preserved portrait of SHIELD on Stela 8 (Fig. 16-4d) does not exhibit this feature. In addition, the general physiognomies of SMOKING AXE and AXE BLADE are very similar, whereas that of SHIELD is variant. Thus, the portraits of the rulers provide confirmation for the identification of AXE BLADE and SMOKING AXE suggested by the earlier arguments.

THE LORD OF STELA 6

Proskouriakoff (1960:465–66) first recognized that Stela 6 recorded an accession (Stela 6:A3), but hesitated to assign a firm date to it. She considered that the initial date on the front of the monument (Stela 6:A1–A2), marking the accession, was most likely 9 Ben 11 Muan at 9.18.4.2.13 or 9 Etz'nab 11 Muan at 9.18.17.5.18. Nevertheless, for stylistic reasons, she regarded both of these dates as rather late for the monument. Mathews (Graham 1978:111) has opted for the latter of the two dates, whereas Schele (1982:220) has suggested an earlier date, 9 Akbal 11 Muan at 9.16.17.14.3. In my reconstruction of the chronology of Stela 6, I accept the initial date as 9 Etz'nab 11 Muan, but place it one Calendar Round earlier than Mathews. This placement, at 9.16.4.10.18, reflects other constraints imposed by the text of Stela 6. Although the inscription on the back is badly eroded, I believe that the Initial Series (Stela 6:D1–E3) can be read as 9.16.17.10.18 and leads to the date 9 Etz'nab (6 Ceh) (Stela 6:D4). This reading is consistent with the second position in the 9-day cycle (Stela 6:E4–D5) and with the 23-day moon-age (Stela 6:E5–D6) also recorded on the monument. In addition, I read a following Distance Number (Stela 6:F3–F4) as 1.5.7.2. In the associated sentence (Stela 6:G2–G11), the Distance Number is not immediately followed by a Calendar Round date, but there is a reference to the accession collocation (Stela 6:F5). Such a structural arrangement indicates that the Distance Number is to be counted from the accession date as a prior event to reach the date of the current event. If this is done, the reconstructed Distance Number leads from the proposed accession date to the mid-katun ending at 9.17.10.0.0.0. Since SMOKING AXE presided over that mid-katun ending, the proposed chronological readings from Stela 6 imply that the lord on the monument is SMOKING AXE under yet another name (Fig. 16-3d) (Stela 6:A4). They also create the rather unusual situation that this monument and the other four SMOKING AXE monuments were all dedicated at the same time and employ no less than three distinct names for the same ruler.

It should be mentioned that the proposed accession date is sufficiently early to serve as an accession date for SMOKING AXE and that the Initial Series on the back of Stela 6 marks its 13-tun anniversary. However, if one were to opt for either of Proskouriakoff's later placements, the accession date would then fall within the reign of SHIELD. This would suggest that the lord of Stela 6 is to be identified with SHIELD, but such a notion runs into immediate problems. Indeed, the accession date on Stela 6 conflicts with the accession date of SHIELD recorded on Stela 14 referred to previously.

Finally, as noted earlier, Smith-Stark has pointed out the significance of the facial portraits of the Naranjo rulers. In this case, the lord of Stela 6 (Fig. 16-4e) has exactly the same tattoo marks on his lower jaw and the same general physiognomy as SMOKING AXE and AXE BLADE (Fig. 16-4a-c). Hence, once again, the facial portraits corroborate the other data suggesting that the lord of Stela 6, SMOKING AXE, and AXE BLADE are one and the same individual.

THE LORD OF STELA 20

Proskouriakoff (1960:466) also recognized an accession date on Stela 20. She considered that the Calen-

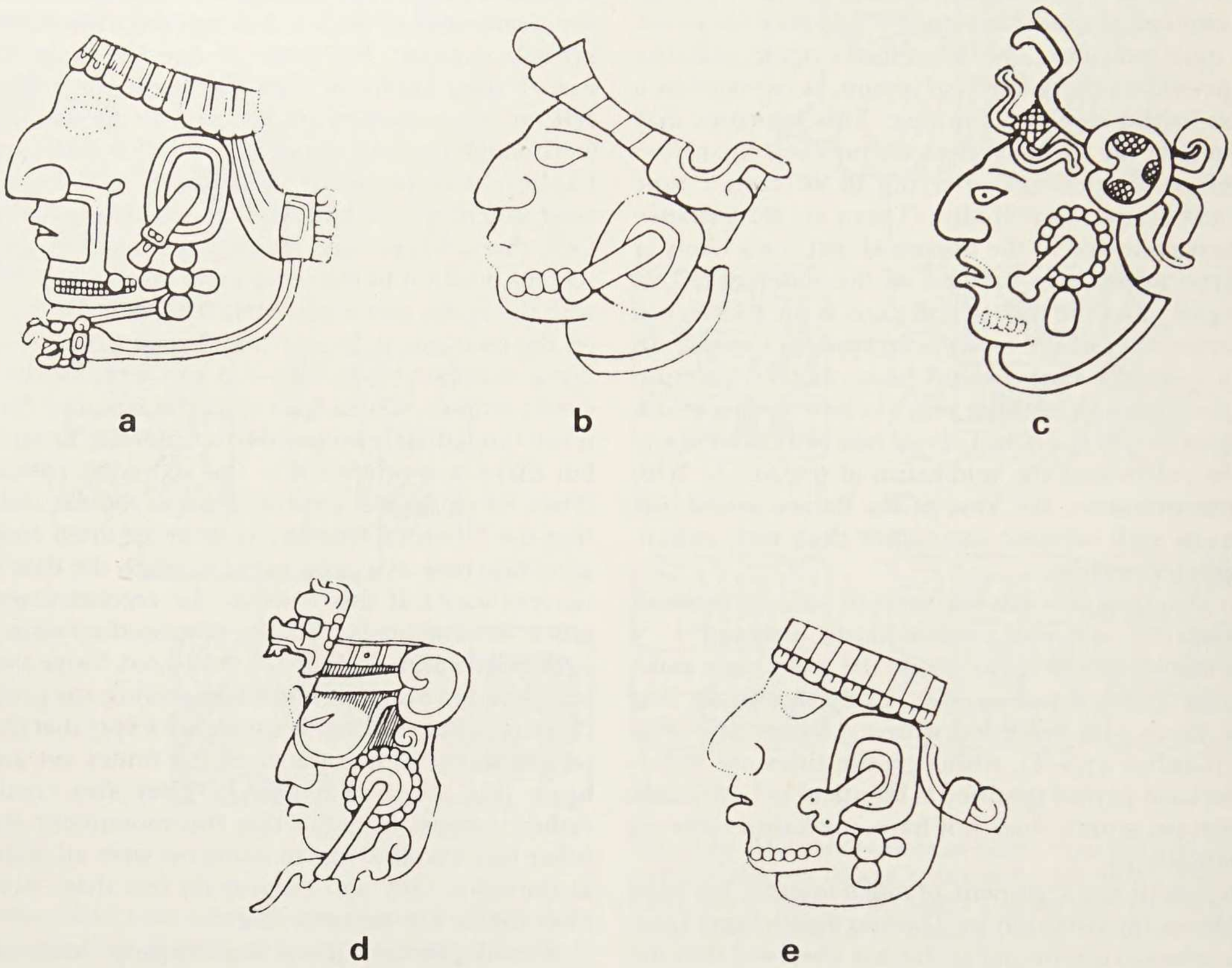


Figure 16-4. Some facial portraits of Naranjo rulers. (a) SMOKING AXE, Stela 13; (b) SMOKING AXE/AXE BLADE, Stela 19; (c) AXE BLADE, Stela 33; (d) SHIELD, Stela 8; (e) the lord of Stela 6 (from Graham and von Euw 1975; Graham 1978, 1980).

dar Round date, not fixed in the Long Count, was either 7 Cib 19 Ch'en or 17 Cib 19 Yax. It is now clear that the month coefficient is 14 rather than 19. In his list of Naranjo dates, Mathews (Graham 1978:111) proffers the reading 7 Cib 14 Ch'en at 9.14.2.12.16. Schele (1982:195) posits a variety of readings beginning with 7 Cib 14 Yax at 9.13.2.8.16 and ending with Mathews's reading. All of these Long Count placements presume the identification of the lord of Stela 20 (Fig. 16-3e) with SMOKING SQUIRREL (Fig. 16-2d), the great Naranjo ruler of the middle period.

The main sign in the personal name of the lord of Stela 20 (Fig. 16-3e) is the baktun collocation and I refer to him as SMOKING BAKTUN. At one time, it was thought that the baktun could be interpreted phonetically as **ku-k(u)** for *kuk* 'squirrel, cycle', but opinion now appears to be turning against such a viewpoint. It may also be noted that the affixes carried by the main signs in the name glyphs of SMOKING SQUIRREL and SMOKING BAKTUN are different. In addition, SMOKING SQUIRREL's accession occurred on 5 Cauac 2 Xul at 9.13.1.3.19 and this is incompatible with the accession date on Stela 20.

The reigns of the rulers of the late period which have been documented in this paper also limit the possible Long Count placements of the date of Stela 20.

As a result of these considerations the only viable date for Stela 20 is 7 Cib 14 Yax at 9.15.15.3.16. Hence, Stela 20 falls almost exactly into the middle of the interregnum separating the middle and the late periods.

SUMMARY

A partial chronology of Naranjo in the late period, according to the interpretations offered here is outlined in Table 16-4.

Table 16-4. A partial chronology of Naranjo in the late period.

9.15.15.3.16	Stela 20: A1–B4	accession	SMOKING BAKTUN
9.16.4.10.18	Stela 6: A1–B2	accession	SMOKING AXE alias
9.16.17.10.18	Stela 6: D1–F2	13-tun anniversary	SMOKING AXE alias
9.17.0.2.11	Stela 14:F11	implied birth	SHIELD
9.17.0.2.12	Stela 10: A1–B4	birth	SHIELD
	Stela 12: B1–B4	birth	SHIELD
9.17.10.0.0	Stela 6: G2–G11	(midkatun)	SMOKING AXE alias
	Stela 13: A1–D12	midkatun	SMOKING AXE
	Stela 13: E1–E12	midkatun	SMOKING AXE
	Stela 19: A1–A10	midkatun	SMOKING AXE
	Stela 33: A1–B6	(midkatun)	SMOKING AXE alias
9.17.13.4.3	Stela 14: C1–E2	accession	SHIELD
9.18.0.0.0	Stela 14: A1–B4	katun ending	SHIELD
9.18.10.0.0	Stela 8: C1–E4	midkatun	SHIELD
	Stela 12: G11–G15	midkatun	SHIELD
	Stela 35: E7–F11	midkatun	SHIELD
9.19.0.0.0	Stela 7: A1–A3a	katun ending	SHIELD
	Stela 10: A5–A9	katun ending	SHIELD
9.19.0.3.0	Stela 7: A3b–A5	(tun anniversary)	SHIELD
	Stela 10: B9–B11	tun anniversary	SHIELD
9.19.4.1.1	Stela 32: T2–R4	accession	Waxaklahunub
9.19.10.0.0	Stela 32: X5–X9	midkatun	Waxaklahunub

ACKNOWLEDGMENT

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17

Builders of Tikal: Archaeology and History

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University Museum
University of Pennsylvania

Decipherment of Maya hieroglyphic texts has added a new dimension to our understanding of the ancient culture. Names and portraits of rulers, beginning and ending dates of reigns, statements of age, parentage, capture, and victory have permitted a transformation of the field from a description of behavior set within broad time periods to one in which events can be placed within specific years and even months. Culture history remains the ultimate objective of the inquiry and general trends the basis of explanation, but the discovery of sovereigns and reigns allows us to see these trends in a broader and far richer context.

The data base for Maya history includes much more than what can be read in the hieroglyphic texts. Maya archaeology is blessed not merely by the survival of many contemporary texts but also with a well-built and well-preserved public architecture. Maya buildings were constructed of stone and mortar with solid foundations and plastered masonry surfaces. The broad platforms which surround them were paved by thick gravel floors with plaster surfaces. Structures and platforms were built over the remains of earlier ones. Therefore, the excavation of a Maya center where the public architecture was concentrated has the potential of providing long sequences of construction events.

If stratigraphic connections have been recorded in detail by the archaeologist, these construction events can be put in order relative to each other in a stratigraphic column of great precision and reliability. Furthermore, if some of these events can be fixed to the Maya calendar by associated inscriptions, they can also be added to inscriptional histories to give a more complete picture of the dynamics of the period. This paper stresses the potential which exists in combining epigraphy and stratigraphy in Maya archaeology, citing as an example the excavations at Tikal in Guatemala.

The University Museum of the University of Pennsylvania excavated in Tikal between 1956 and 1970. Deep and intensive excavation of the North Acropolis and Great Plaza area under the direction of William R. Coe provided an especially large and stratigraphically integrated body of data on structures, platforms, burials, caches, and monuments. One of the objectives of my 1964 and 1965 excavations in the adjacent East Plaza (Fig. 17-1) was to seek stratigraphic connectives as a means of chronological ordering. Even though the East Plaza buildings were separated by wide platform spaces, a platform-wide sequence of five successive pavements were distinguished by means of connecting trenches and similarities in floor sequences and types (Fig. 17-2).

The earliest platform of the East Plaza (Platform 5D-2: Floor 5) was built over altered bedrock and had two structures of unknown size and shape in its center. Floors 4 and 3 had no buildings in this central area. Floor 2 supported twin four-stairway pyramids (Structures 5D-Sub. 16 and 5E-Sub. 1) in the center of the plaza space, and Floor 1 was laid with a ball court (Structure 5D-42 and 5E-31) covering the pyramids and with a building with Mexican terraces (Structure 5D-43). Later, thin pavements laid over Floor 1 were associated with a "market" quadrangle of long low buildings in the eastern half of the plaza (Structure 5E-32 and others).

Some chronological control within this sequence was provided by the presence of Manik Ceramic Complex sherds and the lack of Ik Ceramic Complex sherds in the fills of the twin pyramids and Floor 2, suggesting a Manik date. The ball court fills contained Ik pottery but no sherds of the later Imix Ceramic Complex. The quadrangle buildings contained Imix sherds within their fills. Thus, the ceramics confirmed the stratigraphic sequence. In addition, several caches of "Early Classic" type were found in the twin pyramids and, being primary deposits, provided more definite control. These lines of evidence helped to date the East Plaza features, but only in the broadest terms with no direct reference to the Maya calendar.

In 1962, before excavations began in earnest in the East Plaza, Aubrey Trik had excavated a tunnel through Structure 5D-1-1st (Temple I) from front to back and

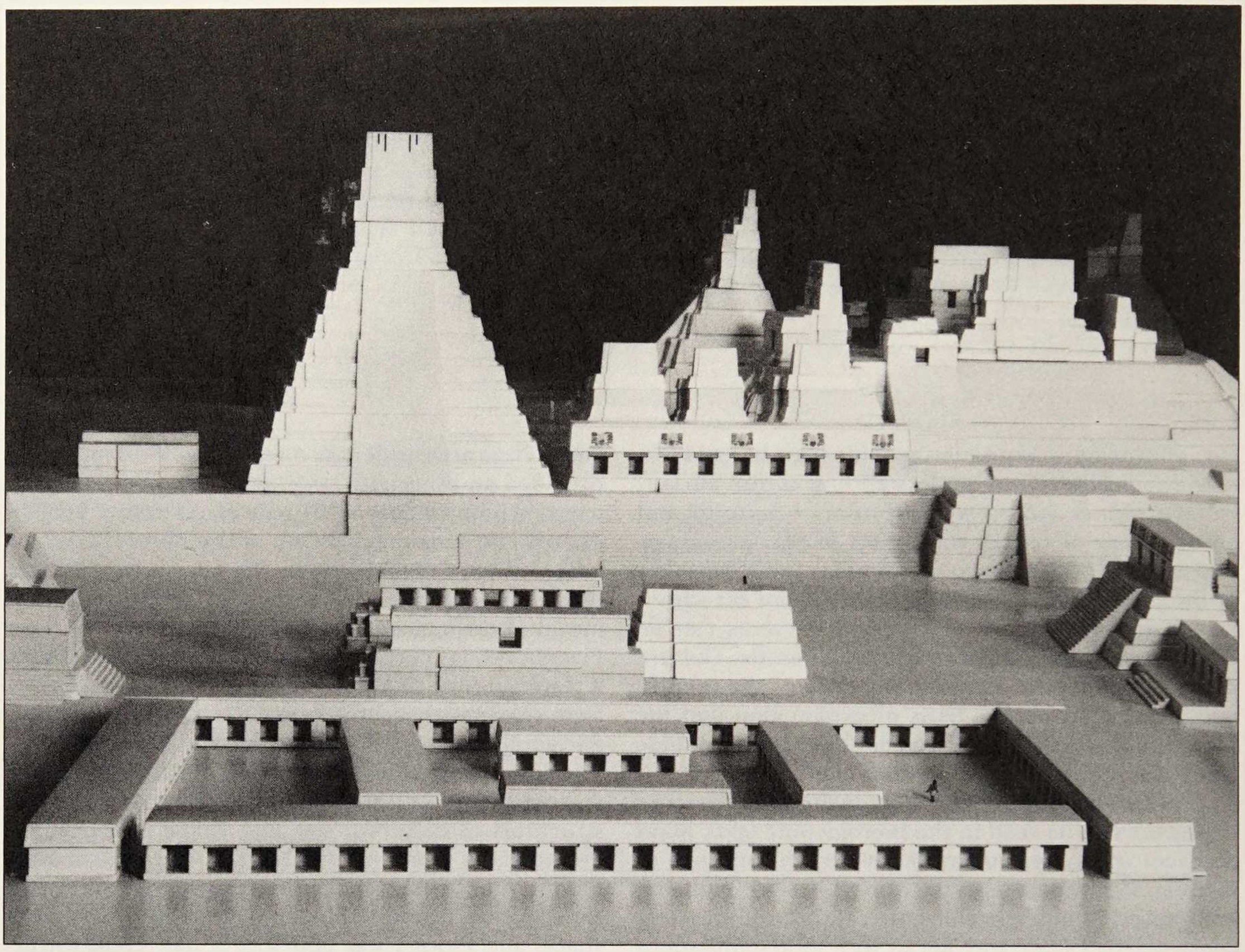

Figure 17-1. The East Plaza of Tikal. Model for the University Museum by Christopher Ray; photograph by Harry Kalish.

down to the floors of the East Plaza. Through this long connecting excavation, evidence can be presented that East Plaza (Platform 5D-2) floors are contemporary with certain Great Plaza (Platform 5D-1) surfaces (Fig. 17-2).

Contemporaneity between floors and structures is not as easy to verify as superimposition. However, when an abutting floor at the base of a wall appears to cover a gap between the wall and the underlying floor, a judgment can often be made that the abutting floor must have been laid in order to complete the structure—that is, the time interval between structure and floor is insignificant. If the same floor is traced to other structures and completes them as well, then the archaeologist might be justified in suggesting that an extensive construction project took place which involved more than one structure and was intended to be finished together.

Using this principle, it is clear that Floor 5 in the East Plaza was built at the same time as an early terrace wall of the Great Plaza. The floor abuts the wall base and both entities overlie a continuous thin layer of hard-packed earth over the bedrock. Floors 2 and 1 likewise are contemporaneous with two later Great Plaza terrace bases. The rip-out lines of these three terraces were traced up through the tunnel to the Platform 5D-1 floors under Temple I and equate to Floors 4A, 2A, and 1, respectively.

Floors 4 and 3 of the East Plaza abut the same terrace base as Floor 5. Consequently, their contemporaneity with Great Plaza floors above cannot be verified by the same sort of direct observation. However, Floor 3

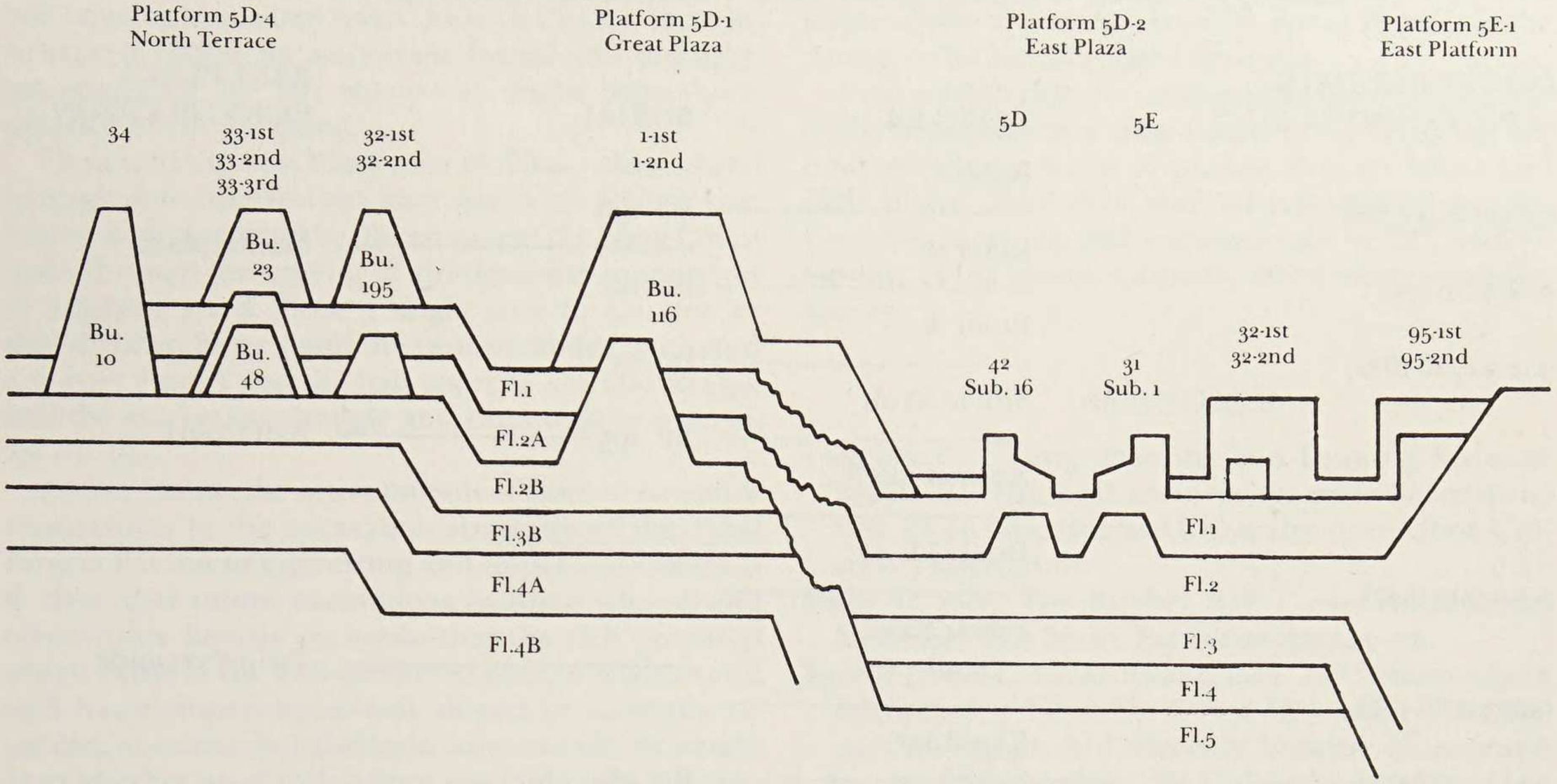

Figure 17-2. Selected stratigraphic connections from the East Plaza to the North Terrace.

below and Floor 2B above are each the first of their sequences to have a hard flinty gravel aggregate which gives off an odor of ozone when scraped with a steel trowel. This characteristic smell is not produced by the earlier floors or Floor 1 in either area. In fact, the floor sequences above and below are strikingly similar in appearance, suggesting that the two areas were rebuilt as a unit again and again, as is suggested by the three contemporaneous juncture points behind Temple I.

Table 17-1 is a selection of possible connections between East Plaza features and Maya Long Count dates. Approximate death and burial dates of rulers are provided by the inaugural dates of their successors and in one case (Burial 48) by a date on the wall of the burial chamber. Arguments for the identification of burials with specific rulers have been presented in Jones and Satterthwaite (1982:124–31).

Stratigraphic connections to burials are usually provided through the structures erected over them. In some cases, such as those of Burials 116 and 195, the structures seem to have followed the burial almost immediately. Burials 10 and 48, on the other hand, appear to have been covered by structures only after a noticeable passage of time, perhaps several years in length. In general, lapse of time between construction events is harder to determine in stratigraphic analysis than superimposition and contemporaneity.

Floors 5 and 4 of the East Plaza are not associated with hieroglyphically dated burials, because they are Preclassic. Floor 3 is probably contemporary with Floor 2B of the Great Plaza which precedes the deposition of Burial 10 without a lengthy passage of time. The interment is probably that of the ruler Curl Nose, as suggested by the style date of the burial contents and the location of the burial behind that ruler's Stelae 4 and 18. This extensive and important rebuilding of the site centers thus probably preceded the A.D. 426 (8.19.10.0.0) inauguration date of his son and successor, Stormy Sky, and should be the work of Curl Nose himself, late within his reign. It is significant that Curl Nose, who might have been an outsider to the Tikal dynastic line and who displayed such non-Maya tastes in his burial furniture, was apparently able to oversee such a huge expenditure of labor and materials.

Platform 5D-2 (East Plaza) Floor 2, with its central twin pyramids and the huge Platform 5E-1 on its eastern edge, appears to belong to the same construction effort as Floor 2A in the Great Plaza. This was not laid down in connection with an identifiable burial, but it does precede the erection of Stela 10, which carries a probable dedicatory date of 9.4.13.0.0 (A.D. 527). Floor 2 thus occurs either very late in the reign of Jaguar Paw Skull or following his death. Katun 4 (A.D. 514 to 534) was a period of dynastic controversy and rapidly changing artistic styles, in which we have no known inaugural dates.

The twin pyramids built with Floor 2 were used for many scores of years after construction, as is indicated

Table 17-1. A Tentative Linking of East Plaza Constructions and Long Count Dates

INAUGURAL DATE LONG COUNT (A. D.)	IN RULER	BURIAL	EAST PLAZA CONSTRUCTION
	Ruler C		
9.16.17.16.4 (768)		Bu. 196	
	Ruler B		Marketplace
9.15.3.6.8 (734)		Bu. 116	
	Ruler A		
9.12.9.17.16 (682)		Bu. 23	
	Shield Skull		
		Bu. 195	Ball Court
	Animal Skull		
	Double Bird		
9.5.3.9.15 (537)			
	Jaguar Paw Skull		Twin Pyramids
9.2.13.0.0 (488)			
	Kan Boar		
9.1.1.10.10 (457)		Bu. 48	
	Stormy Sky		
8.19.10.0.0 (426)		Bu. 10	
	Curl Nose		Floor 3
8.17.2.16.17 (379)			
	Jaguar Paw		

by the renovation of their stairways. In form and probably in function, they are forerunners of the later twin pyramid groups which were built anew every twenty years and which probably housed the katun celebrations for the city. Thus the date of their first appearance is extremely important for our understanding of that uniquely Tikal phenomenon and its role among the Maya.

The stratigraphic links of Floor 1 and the large East Plaza ball court which replaced the twin pyramids indicate a contemporaneity to Structure 5D-32-1st, the building erected to seal Burial 195. Ceramic plates within the burial chamber name the occupant as "Animal Skull" and call him the twenty-second ruler of Tikal. This person is thus the successor to the twenty-first ruler, Double Bird, who was ruling as late as A.D. 557. Wooden boards in the tomb, carefully recovered in plaster molds, carry a hieroglyphic date of 9.8 or 9.9.0.0.0 (A.D. 593 or 613).

The ball court and its related Mexican-style building plus the extensive rebuilding of the Great Plaza terrace walls therefore probably belong within the first decades of the seventh century and to the reign of the successor to Animal Skull. The successor might be Shield Skull, known only to us as the father of Ruler A and thus probably ruling to A.D. 692. It is clear, however, from the prominent location of the burial of Animal Skull that his successor held him in high regard. The new ball court might even have been built in honor of this man who was buried with a wooden ballgame yoke and rubber ball (Jones 1985). We have hardly any texts from the seventh century, and yet it appears from this stratigraphic evidence that the period was rich in constructional activity.

A final stratigraphic link to the Long Count is provided by a thin floor (Unit 40 of Platform 5D-2) laid over the northern and eastern parts of the East Plaza. This flooring follows Structure 5D-1-1st (Temple I) and is contemporary with the final Mendez Causeway to the north, the Maler Causeway to the southeast, Structures 5D-40 and -30 on the north side of the plaza, and the full version of the huge "market" quadrangle in the east half of the plaza (Structure 5E-32 and others). Thus, these major building projects follow by some time the construction of Temple I and the temple seals Burial 116 in which Ruler A was interred just before the inauguration of Ruler B in A.D. 734. It seems to have been, therefore, Ruler B and not Ruler A who saw to these enormous transformations of Tikal's central area and approaches. This is consistent with the independent hieroglyphic dates which indicate that Temple IV, the Stela 20/twin pyramid group, and pos-

sibly Temple VI at the far ends of the causeways were built during that same reign. As with Floor 1, the constructions follow an important burial and although accomplished by the successor, might have been planned by the deceased.

Hence, in the East Plaza area of Tikal, where dated hieroglyphic inscriptions have not been found, construction projects can be linked to specific Long Count dates through the tracing of stratigraphic connectives to adjacent areas. Floor 3 might date to A.D. 400 or slightly later, Floor 2 and the twin pyramids to around A.D. 500, Floor 1 and the ball court to A.D. 600 to 650, and the market quadrangle and causeways to soon after A.D. 734.

In conclusion, the active pursuit of floor-to-structure connections in the excavation strategies of the Tikal Project has led to interesting and important results. It is clear that future excavations in Maya sites should concentrate heavily on exploiting the rich potential which exists in the well-preserved plaster surfaces and wall bases. Superimpositions should be carefully recorded, of course, but also indications should be sought as to whether an abutting floor was laid down immediately upon finishing a structure or much later. Such judgments can often be made convincingly and their implications of contemporaneity are as important for dating as the fact of superimposition.

Firm and thoughtful stratigraphic analysis is especially important at a time when the inscriptions are now revealing a flood of precise data on rulers and their reigns. More than ever, all information on construction dates can aid tremendously in our understanding of the complex tapestry which makes up Maya history.

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18

Jaguar and Serpent Foot: Iconography as Astronomy

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The Pleiades are a prominent cluster of stars resembling the spots of a jaguar. Near the beginning of Baktun 9, as recorded on Tikal St. 31 at C5 and Yaxchilan Lintel 21 at C2, the Maya were recording achronical risings of the Pleiades with a glyph representing a jaguar head. Two to three centuries later this symbolism had evolved into jaguar protectors and impersonators at Tikal; jaguar kilts and capes at Palenque; and jaguar headdresses, pectorals, and sandals at Yaxchilan. By analyzing the dates associated with this iconography, it can be shown that the Pleiades were often at conjunction, heliacal rising, or achronical rising when jaguar paraphernalia were being worn (Table 18-1).

Mercury is a seldom-glimpsed planet because it is always in the vicinity of the sun and its light is often obscured by the sun's greater light. In exploratory work (Schlak 1985:chap. 2) it was found that when serpent-footed God K scepters or variant God K staffs were held, Mercury was often near maximum elongation and hence observable (Table 18-2). The rest of this paper will support these hypotheses by examining the iconography, calendrics, and astronomy of Tikal, Palenque, and Yaxchilan.

TIKAL

Although a preoccupation with astronomy dates to the Early Classic at Tikal, Jaguar and Serpent Foot are best studied on the *zapote* lintels of its great Late Classic temples. As Jones (1977:36) has shown, Lintel 3 of Temple I records the accession of Ah Cacau at F8-F11. The date of this accession is 9.12.9.17.16 5 Cib 14 Zotz, the equivalent of 682 May 1. (Dates, unless otherwise stated, are Julian, employing the GMT correlation constant 584,283).

The iconography of Temple I, Lintel 3 (Fig. 18-1), shows Ah Cacau seated on the Tikal throne, holding a serpent-footed God K scepter and round Maya shield. Above him hovers the image of a giant jaguar protector. If the hypotheses stated in the opening paragraphs of this paper are correct, we should expect the Pleiades and Mercury to have been prominent on the accession date (F8–F11). Tuckerman (1964:359) reveals that Mercury was 25° from the sun on the day of Ah Cacau's accession; its maximum elongation varies between 17.9° and 27.8°. The Pleiades were undergoing their annual solar conjunction (Aveni 1980:116).

Lintel 2 of Temple IV also depicts a jaguar protector (Fig. 18-2) hovering above Ah Cacau's successor, Yax Kin (Jones 1977:36). Here, the protector is given more human form, but retains a jaguar ear and jaguar markings. The bar-and-dot number seven on his left cheek represents the number of stars visible to the naked eye in the Pleiades and brings to mind the following Navajo ethnographic data collected by Father Haile:

> When Black god entered the hogan of creation, people noticed that the Pleiades constellation was lodged at his ankle. . . . [Black god stamps his foot three times and the Pleiades move each time higher up his body.] But when he stamped his foot the fourth time he located the Pleiad cluster along his left temple and "there" he said "it shall stay!" (Haile 1947:2)

Although interpretation of this passage is difficult, movement of the Pleiades from ankle to left temple seems to correspond to the cluster's motions throughout the year with respect to the sun. Such motion is apparently paralleled in Classic Maya iconography by the wearing of jaguar-skin sandals, jaguar-skin kilts, and jaguar-skin headdresses. Maya costume may reflect the location of the Jaguar/Pleiades.

Returning to the jaguar impersonator in Figure 18-2, we find a Venus glyph under his left elbow. Continuing in approximately a straight line, we come to the sun-shield held by Yax Kin together with a serpent-footed God K scepter. Although the Pleiades were not at any of the heliacal or achronical rise-set positions, they were visible in the morning on the associated

Table 18-1. Jaguar Iconography Compared with the Pleiades Phenomenon of Date.

Monument	Iconography	Long Count	Julian Date	
1. Tikal St. 31, IS	Jaguar head at C5	9.0.10.0.0	445 Oct 16	A.R.
2. Yaxchilan L21, IS	Jaguar head at C2	9.0.19.2.4	454 Oct 13	A.R.
3. Pal. TIe, A10–B10	Kilts on piers	9.3.8.7.17	503 May 22	H.R.
4. Pal. TIe, IS	Kilts on piers	9.4.0.0.0	514 Oct 14	A.R.
5. Copan HS, Date 1	Jaguar head at 18	9.5.19.3.0	553 May 22	H.R.
6. Pal. TS, P12–P13	b. Chan-Bahlum	9.10.2.6.6	635 May 18	H.R.
7. Pal. Tab., F6–E7	GI–GVII at F10–13	9.10.18.17.19	651 Oct 14	A.R.
8. Pal. House A	Kilts on piers	9.11.15.15.0	668 May 18	H.R.
9. Pal. TIw, O7, R1	Kilts on piers	9.12.3.6.6	675 Oct 15	A.R.
10. Yaxchilan L25	Jaguar headdress	9.12.9.8.1	681 Oct 18	A.R.
11. Tikal I, L3	Jaguar protector	9.12.9.17.16	682 May 1	CONJ.
12. Yaxchilan L24	Jaguar sandals	9.13.17.15.12	709 Oct 22	A.R.
13. Tikal St. 20	Jaguar throne	9.16.0.0.0	751 May 3	CONJ.
14. Yaxchilan L29–L31	acc. Bird Jaguar	9.16.1.0.0	752 Apr 27	CONJ.
15. Yaxchilan L21	Jaguar head at C2	9.16.1.0.9	752 May 6	CONJ.
16. Yaxchilan L6, L43	Jaguar paws	9.16.1.8.6	752 Oct 10	A.R.
17. Yaxchilan L8, L41	Jaguar capes	9.16.4.1.1	755 May 3	CONJ.
18. Yaxchilan L3	Jaguar headdress	9.16.5.0.0	756 Apr 6	H.S.
19. Xultun St. 3	Jaguar manikin	10.0.3.3.8	833 Apr 30	CONJ.
20. Xultun St. 10	Jaguar manikin	10.3.0.0.0	889 Apr 28	CONJ.

All dates employ the GMT correlation constant 584,283. CONJ. = conjunction, H.R. = heliacal rising, A.R. = achronical rising, H.S. = heliacal setting. Dates 3, 5, 6, 7, 8, 11, 12, 13, 14, 16, and 19 also found Mercury visible.

9.15.10.0.0 3 Ahau 3 Mol date. Their Right Ascension, together with the longitudes of Venus, Mercury, and the sun were as follows:

Pleiades	38.7°
Venus	71.5°
Sun	95.6°
Mercury	113.6°

I have previously (Schlak 1986) advanced the hypothesis that the iconography of Palenque's Temple of the Cross (TC) and of certain Tepeu 2 vessels can be read as ecliptical planet charts (i.e., as showing the positions of the planets and zodiacal stars on a given date). The same holds true here. On 3 Ahau 3 Mol (741 June 24), the Jaguar Protector/Pleiades rose first, followed by Venus (the glyph), and then a solstitial sun (the shield). Serpent Foot/Mercury was the evening star, following the sun by some 18°. As in modern astronomy, the Tikal Temple IV, Lintel 2 planet and star chart, is read from right (west) to left (east).

Ten tuns after the scene depicted in Figure 18-2, the Maya of Tikal commemorated the completion of sixteen katuns by erecting St. 20 (Fig. 18-3). Here, the jaguar takes the form of a throne, and instead of a serpent-footed scepter, a staff with three celts is held. But Serpent Foot's God K head with its diagnostic smoking mirror appears in the headdress of St. 20, and what may be a God B variant is found on the backrack. Jones and Satterthwaite (1982:46) note that "the staff, the jaguar throne, the short text, and the single date make this stela unusual, if not unique, among Tikal monuments of its time."

I would suggest this uniqueness stems from the fact that, here, history takes a back seat to astronomy. Specifically, on the associated 9.16.0.0.0 2 Ahau 13 Zec date (751 May 3), the God K/Mercury of the headdress was evening star and both God B/Mars (Schlak 1985:chap. 5) and the Jaguar/Pleiades were in conjunction with the sun. All this is recorded in the iconography of Tikal St. 20, in addition to the fact that Katun 16 fell near a zenith passage, as symbolized by the three-celt staff. The celts apparently refer to the azimuths of solstitial and equinoctial sunrises or sunsets (Schlak 1985:chap. 3), and the vertical staff is apparently a gnomon for measuring shadows.

The iconography of Tikal St. 20 is remarkably similar to that of Temple III, Lintel 2. Here the jaguar throne is replaced by a jaguar impersonator, but the God K headdress, God B backrack, and staffs are likewise in evidence. Jones (1982:101) opts for a Katun 19 placement

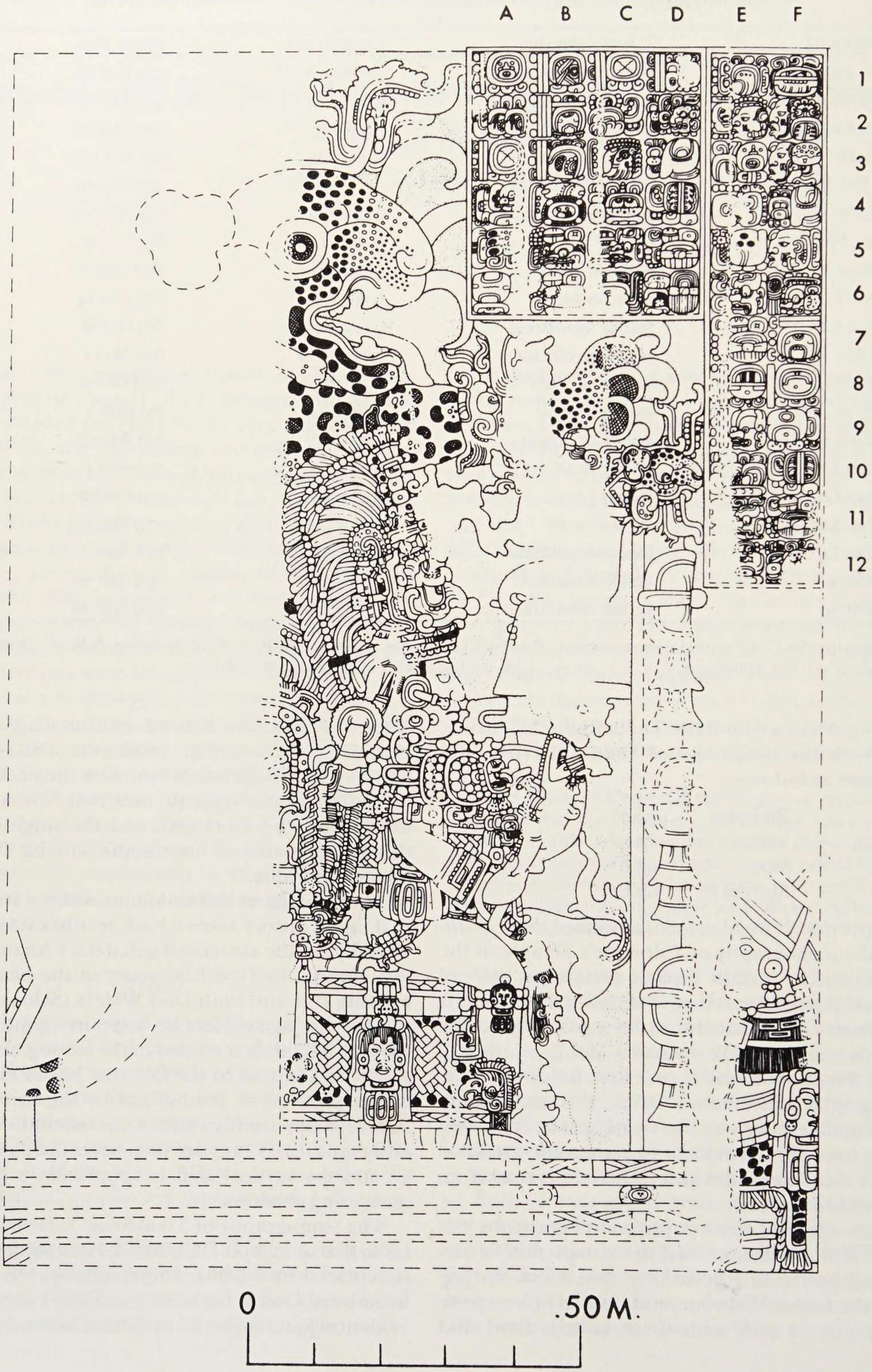
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Table 18-2. Manikin Scepter Dates Compared with Mercury's Elongation.

Monument	Long Count	Julian Date	Elong. (degrees)	Greatest Elong. (degrees)	
1. Tikal I, L_3	9.12.9.17.16	682 May 1	25.13 W	May 2	25.15 W
2. Agua. St. 3	9.15.0.0.0	731 Aug 16	13.02 E	Sep 16	25.37 E
3. Tikal IV, L_2	9.15.10.0.0	741 Jun 24	17.94 E	Jul 17	27.39 E
4. Yax. L_{32}, L_{53}	9.15.18.7.13	749 Oct 13	22.96 E	Oct 16	23.14 E
5. Yax. St. 11	9.15.19.1.1	750 May 29	24.88 E	Jun 3	25.32 E
6. Yax. St. 11	9.15.19.14.14	751 Feb 26	26.96 W	Mar 4	27.79 W
7. Yax. L_1	9.16.1.0.0	752 Apr 27	22.12 E	Apr 26	22.22 E
8. Yax. L_5, L_{42}	9.16.1.2.0	752 Jun 6	19.18 W	Jun 14	21.33 W
9. Yax. L_7	9.16.1.8.8	752 Oct 12	15.87 W	Oct 4	18.50 W
10. Yax. L_3	9.16.5.0.0	756 Apr 6	26.53 W	Apr 1	27.25 W
11. Quir. St. F	9.16.10.0.0	761 Mar 11	18.81 E	Mar 14	19.23 E
12. Yax. L_{52}	9.16.15.0.0	766 Feb 13	23.10 W	Jan 30	26.60 W
13. Quir. St. E	9.17.0.0.0	771 Jan 18	17.67 E	Jan 16	18.23 E
14. Nar. St. 13	9.17.10.0.0	780 Nov 26	16.94 E	Nov 18	20.77 E
15. Quir. Zoo. P	9.18.5.0.0	795 Sep 9	6.68 E	Aug 7	18.25 W
16. Mach. St. 2	9.18.10.7.5	801 Jan 5	20.70 W	Dec 23	23.76 W
17. Mach. St. 3	9.19.4.15.1	815 Mar 29	25.83 W	Apr 5	27.10 W
18. Mach. St. 4	9.19.10.0.0	820 Apr 30	24.74 W	May 3	25.05 W
19. Mach. St. 8	9.19.15.0.0	825 Apr 4	17.66 E	Apr 14	21.21 E
20. Mach. St. 7	10.0.0.0.0	830 Mar 9	26.81 W	Mar 2	27.77 W

Elongations for sunrise or sunset were computed with Bretagnon and Simon (1986) and Duffet-Smith (1981:52). Calendar date and value of greatest elongation were computed for the author by Jean Meeus.

for the effaced calendrics, but notes that the throne is similar to those on earlier lintels. In fact, he observes that the iconography of Temple III, Lintel 2, is "remarkably similar to . . . Alt. 5 at 9.14.0.0.0."

Katun 19 placement for this lintel (Fig. 18-4) rests largely on the calendrics of St. 24 at the foot of the temple's stairway. This stela records dates between Katun 17 and Katun 19, and it is assumed that it was erected at the completion of Temple III. But stylistically, as shown above, this placement is too late. In the absence of calendrics, astronomy can be used as a dating control. I shall assume either a katun or lahuntun ending and that the iconography records an astronomical event.

To reiterate, on St. 20 (Fig. 18-3) the God B backrack is associated with a Katun 16 date when Mars was in conjunction with the Pleiades. The God B backrack and jaguar impersonator of Temple III, Lintel 2, would seem to suggest a similar conjunction. In fact, the tri-

Figure 18-1. Tikal Temple I, Lintel 3. Ah Cacau sits on the Tikal throne; his 9.12.9.17.16 5 Cib 14 Zotz accession date is recorded at F8–F11. The giant jaguar protector symbolizes that the Pleiades were in conjunction with the sun that day, and the manikin scepter reveals that Mercury was visible (drawing used with the permission of Christopher Jones).

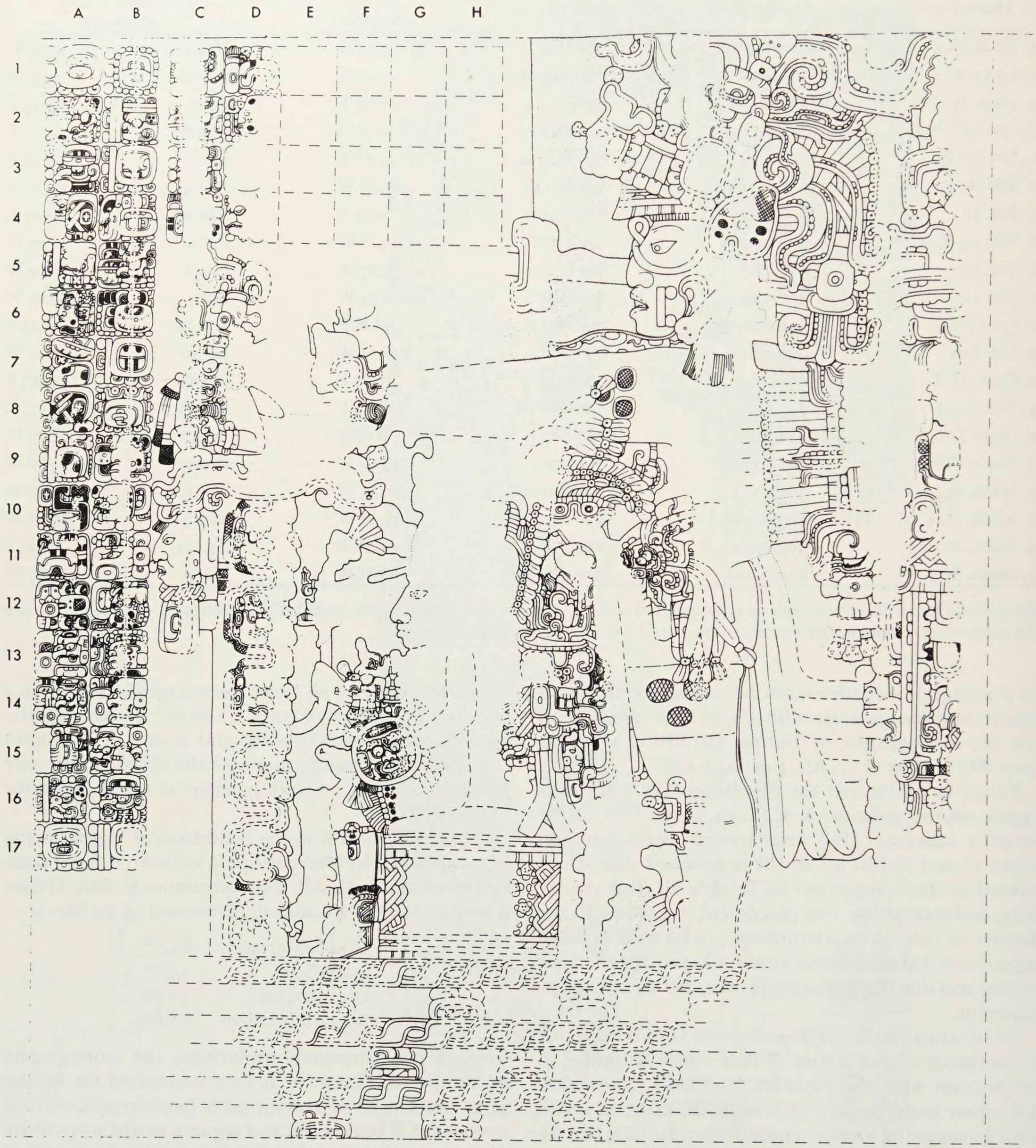
dent flints held by all three personages in Figure 18-4 may refer to the Martian 3 x 260 or 780-day synodic period. Katun 14, Katun 16, and Katun 18 all found God B/Mars in conjunction with the Pleiades, but only Katun 16 fell near a zenith passage, as seems called for by the staffs.

Then, too, God K in the headdress of Figure 18-4 is best explained by Mercury being visible (i.e., near maximum elongation). All this astronomical data is best accounted for by a Katun 16 placement of 751 May 3:

God K/Mercury	65.0°
Staffs/Sun	45.6°
God B/Mars	40.5°
Jaguar/Pleiades	38.8°

In sum, the astronomy underlying the iconography of Temple III, Lintel 2, is best accounted for by the same placement as St. 20. God K headdresses, vertical staffs, God B backracks, and jaguars would seem to indicate a construction date following 9.16.0.0.0 for Tikal Temple III.

Before moving on to Palenque, I should mention the Altár Vase (Adams 1963, 1971) perhaps the finest example of a Maya ceramic depicting a jaguar impersonator. On that vessel a young lord dances in jaguar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headdress and leggings with a perforator for bloodletting hanging from his waist. Heinrich Berlin has placed the associated 3 Ahau 18 Zotz Calendar Round at 9.16.3.0.0, a date when the Pleiades (as symbolized by the jaguar costume) had just disappeared into the light of the sun. The iconographic message of this dancer seems to be bloodletting to commemorate the annual Pleiades conjunction which brought the rains.

PALENQUE

The piers of the Temple of the Inscriptions (TI) at Palenque depict Maya nobles holding a serpent-footed child. Robertson (1983–85, 1, fig. 68) was able to reconstruct the missing head of the child as God K. On some of the piers, jaguar-skin kilts are worn (Fig. 18-5). If the jaguar and serpent-foot hypotheses of this paper are correct, we should expect Mercury and the Pleiades to have been prominent on the associated date.

The associated date of the TI piers is apparently the 9.10.2.6.6 birth of Chan-Bahlum. For one thing the child has six toes, a known physical characteristic of that Palenque ruler (Robertson 1983–85, 1, 33). For another, the iconography of the piers spells out his name, the serpent being in Chol *Chan* and the jaguar-skin kilt *Bahlum*. The serpent undoubtedly also refers to the placenta or afterbirth, which would also point to a birth date.

On that date, 635 May 18 (Julian), the Pleiades were just beginning to rise heliacally before the sun. Linear interpolation from Aveni (1980:116) yields a date of May 20.35 for this phenomenon in A.D. 635. But Aveni's date is Gregorian; Julian dates in the seventh century differed by three days. Thus, modern calculations reveal that the Pleiades first appeared in A.D. 635 on the date of Chan-Bahlum's birth.

This date was also notable for an apparition of Mercury. Linear interpolation from Tuckerman (1964:335) reveals that the longitudes of the sun and Mercury differed on that date by some 23°. Jean Meeus of the Vereniging voor Sterrenkunde, Belgium, has computed that maximum elongation actually occurred on 635 May 20.15 U.T. Therefore, Chan-Bahlum was named for the astronomical phenomena which heralded his birth.

The inscription which gives the temple its name opens at A1–A6 with a 9.4.0.0.0 Initial Series. This date is the equivalent of 514 Oct. 14 (Julian), when the Pleiades were making an achronical rising (i.e., a last appearance in the east after sunset). This Initial Series is followed by a Distance Number of 11.10.3 days, leading back to 9.3.8.7.17 (Thompson 1932), when the Pleiades had risen heliacally (i.e., had made a first appearance in the east before sunrise).

I think such heliacal and achronical risings of the Pleiades account for the dates chosen to open the lengthy inscription. The first date on the central panel is 9.11.0.0.0, when the Pleiades were again rising achronically. At C11–C12, a date far in the future (1.0.0.0.0.0 10 Ahau 13 Yaxkin) also marks achronical rising, as does a date far in the past (6.19.18.6.0 8 Ahau 8 Cumku).

The first date on the TI west panel is 9.12.0.0.0 10 Ahau 8 Yaxkin. Because there is no commensurability between a katun of 7,200 days and a sidereal year, Katun 12, unlike Katun 4 and 11, was not the date of an achronical rising. But following this date at O5–P5 is a Distance Number of 3.6.6, which leads to a 9.12.3.6.6 7 Cimi 19 Ceh achronical rising. The Maya of Palenque here show cognizance of the fact that seven katuns are commensurable with the sidereal year.

Given all these dates in the TI text which coincide with heliacal and achronical risings of the Pleiades, I think it no accident that some of the nobles on the TI piers wear jaguar-skin kilts. The fact that the noble of Pier B (Fig. 18-5) stands on the head of the Sun God points to the importance of the sun's position relative to this cluster. And the fact that these nobles hold the God K child may refer to the observability of Mercury on the day of Chan-Bahlum's birth.

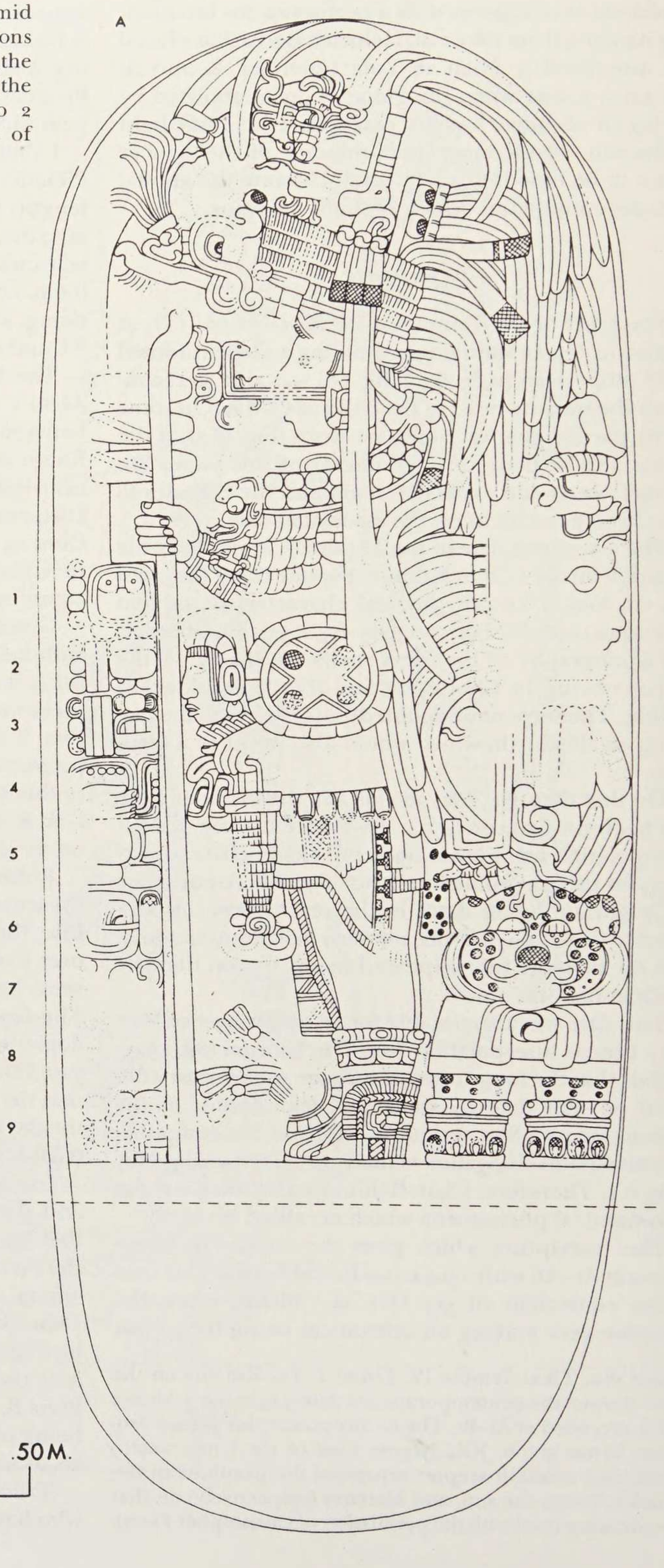
Robertson (1983–85, 3) has carefully reconstructed the iconography of House A of the Palace at Palenque. Like the Temple of the Inscriptions it has stucco figures modeled on the piers. Unlike TI it faces east, toward heliacal and achronical risings of the Pleiades. The iconography of Piers B, C, D, and E is similar, depicting a central noble with jaguar-skin kilt and elongated God K staff. Mathews (and Schele 1974) has shown that the associated Pier A date was either 9.11.15.15.0 or the day before. He has also shown that a God K variant (GII) is recorded at A5.

In light of GII on Pier A, the elongated God K staffs, and the jaguar-skin kilts, it is not surprising to find that Mercury was in conjunction with the Pleiades on the Pier A date and that the cluster was undergoing its annual heliacal rising. This 668 May 18 date marks Chan-Bahlum's thirty-third birthday; on the day of his birth a similar Pleiades-Mercury conjunction and heliacal rising had occurred. I think the God K staffs on Piers B, C, D, and E (Fig. 18-6) are symbols for Mercury being observed on the day of zenith passage. Tikal St. 20, as we have seen, records a similar phenomenon.

Twice, mention is made of seven gods at Palenque, who have been identified as the naked-eye planets, the

Figure 18-2. Tikal Temple IV, Lintel 2. Yax Kin sits on the Tikal throne; the contemporaneous date 9.15.10.0.0 3 Ahau 3 Mol is recorded at A1–B1. The anthropomorphic jaguar protector, Venus glyph, JGU (Jaguar God of the Underworld) shield, and manikin scepter represent the positions of the Pleiades, Venus, the sun, and Mercury (respectively) on that date (drawing used with the permission of Christopher Jones).

Figure 18-3. Tikal St. 20 from Complex P. Ruler amid various astronomical symbols which tell the positions of Mercury (God K atop the headdress), Mars (the backrack), the sun (the shield), and the Pleiades (the jaguar throne) on the associated date 9.16.0.0.0 2 Ahau 13 Zec (drawing used with the permission of Christopher Jones).



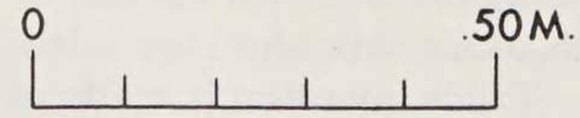
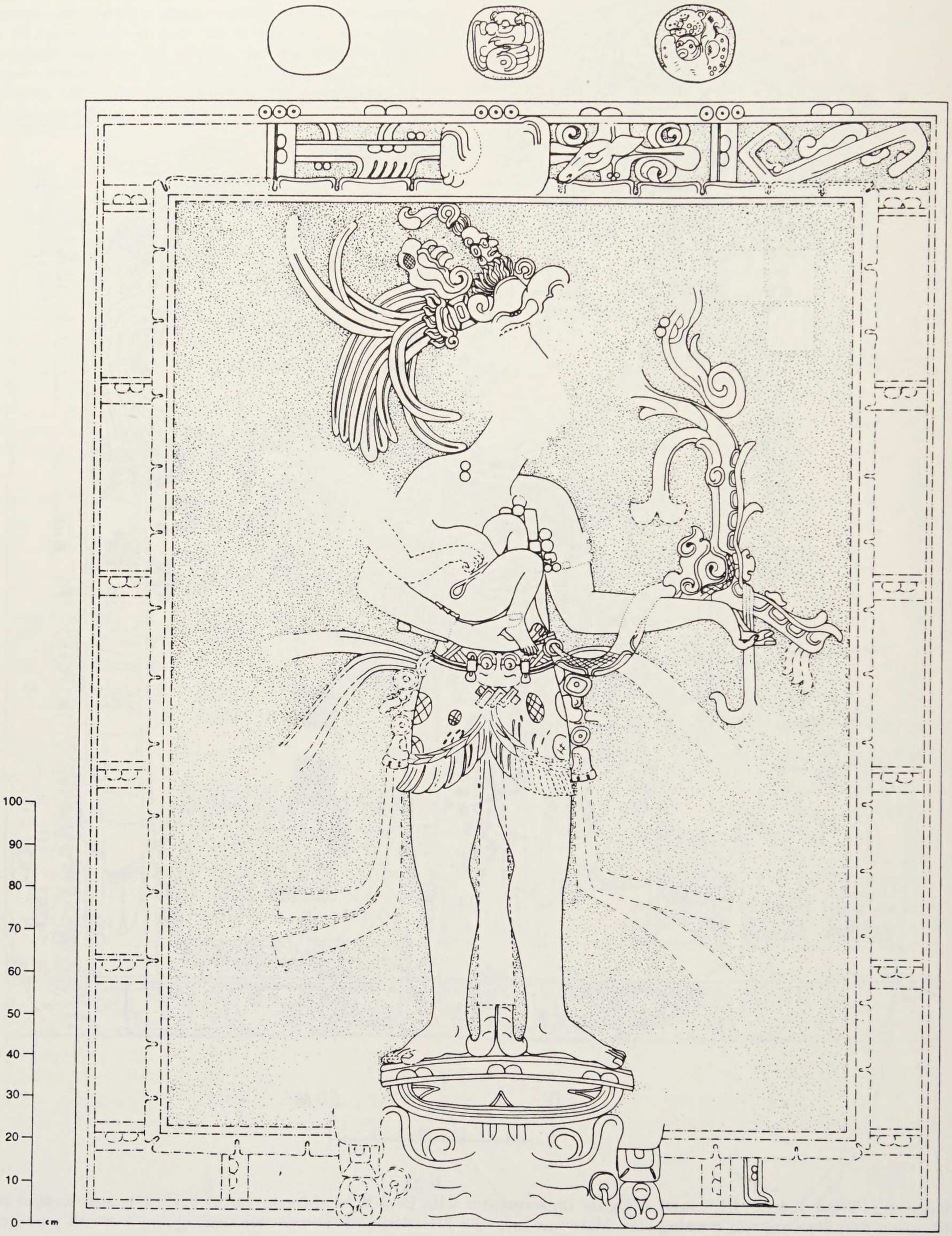




Figure 18-4. Tikal Temple III, Lintel 2. Jaguar impersonator with God K headdress, God B backrack, and vertical staff, indicating that Mercury was evening star, Mars was near the Pleiades, and the sun was undergoing a zenith passage on 9.16.0.0.0 or 751 May 3, Julian (drawing used with the permission of Christopher Jones).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Pleiades, and the sun (Schlak 1985). The better-known instance occurs at 09–N12 of the Temple of the Foliated Cross (TFC) in association with 9.12.18.5.16 2 Cib 14 Mol, when Venus and Mercury rose before the sun; and Mars, Jupiter, and Saturn were in conjunction in Scorpius. The other reference to the seven gods is found on Palenque's Palace Tablet at F10–F13 in association with 9.10.18.17.19 2 Cauac 12 Ceh. On this 651 Oct. 14 date, Mars, Jupiter, and Saturn were morning stars, with Mercury and Venus both prominent in the evening. The Pleiades were rising achronically.

YAXCHILAN

Although the jaguar is mentioned on Lintel 21 at C2, when the Pleiades were undergoing a 9.0.19.2.4 achronical rising, most jaguar references on the Yaxchilan lintels date to the reigns of Shield Jaguar and his son, Bird Jaguar (Proskouriakoff 1963, 1964). On Lintel 25 a god with a jaguar-skin hat emerges from the jaws of a serpent on 9.12.9.8.1 5 Imix 4 Mac. This date is equivalent to 681 Oct. 18, when once again the Pleiades were rising achronically.

At the bottom of this lintel is a woman with bloodletting paraphernalia, suggesting that autosacrifice was performed in honor of the Pleiades. (This cluster lies beside the Hyades, a V-shaped cluster resembling the open jaws of a serpent.) Bloodletting for the Pleiades is the message of the Altár Vase; it is also the message of Yaxchilan Lintel 24. There, a woman lets blood from her tongue, while Shield Jaguar holds a long pipe reminiscent of the smoking god, God K. On the associated 709 Oct. 22 date, Mercury was visible setting after the sun as the Pleiades rose achronically.

Many references to Jaguar and Serpent Foot occur during Bird Jaguar's reign. His accession is recorded on Lintel 30 as having taken place on 9.16.1.0.0 11 Ahau 8 Zec. This 752 April 27 date marked the annual conjunction of Jaguar and Sun, a date when the angle of the ecliptic is such that Serpent Foot is most easily seen as evening star. Thus, on Lintel 1 in association with this date we find Bird Jaguar holding the scepter of Serpent Foot, while only the tail of a jaguar protrudes from the headdress of his companion.

Another instance of jaguar paraphernalia is found on Yaxchilan Lintel 41, where Bird Jaguar wears a jaguar-skin headdress (of Tlaloc?), jaguar-skin shawl, and jaguar pectoral, while holding vertically a spear. This iconography is reminiscent of the east jamb of the Temple of the Cross (TC) at Palenque, where God L/Venus wears a Muan headdress and a jaguar-skin cape. Previously (Schlak 1986) I called attention to the fact that Venus was between Gemini and the Pleiades on 9.12.18.5.16 2 Cib 14 Mol and suggested that Gemini among the Classic Maya was seen as a Muan with frontal eyes.

On Yaxchilan Lintel 41, the date is 9.16.4.1.1 7 Imix 14 Zec, and at A2 Venus is mentioned as being prominent. I think that the Central Mexican equivalent of the Muan was Tlaloc and that both have the same astral referent—Gemini/Castor and Pollux/the twins. The meaning of Lintel 41 thus seems to be that Venus (Bird Jaguar's face) lay between Gemini (the Tlaloc headdress) and the Pleiades (the shawl and pectoral) on 755 May 3, which incidentally approximated a zenith passage (the vertical spear).

A variation on the jaguar and serpent-foot theme occurs on Lintels 6 and 43 at Yaxchilan. On the former, Bird Jaguar holds a jaguar paw; on the latter, he wears jaguar-skin sandals and a jaguar pectoral. On both monuments he holds an elongated God K staff, which we have come to associate with an apparition of Mercury. The date on both lintels is 9.16.1.8.6 8 Cimi 14 Mac, when Mercury was 17° from the sun at a time of the year when the angle of the ecliptic made for near-optimum viewing as the morning star. The Pleiades rose achronically that evening.

Maya records of Pleiades rises are numerous but of Pleiades sets, few. One instance of the latter is recorded on Yaxchilan Lintel 3. There Bird Jaguar and Shield Jaguar's descendants are depicted with jaguar-skin headdresses and God K scepters. The Calendar Round which begins the inscription is 8 Ahau 8 Zotz; its Julian equivalent is 756 April 6. That morning Mercury rose 26° before the sun, whereas the Pleiades were last seen in the evening before sunset. On Lintel 2, cruciform scepters are held on a date (757 April 1) which marked the achronical rising of the Southern Cross (Aveni 1980:115).

One cannot leave Jaguar and Serpent Foot without referring to the Terminal Classic stelae of Xultun. At that site a jaguar cub or possibly a jaguar manikin is often held aloft with the right hand while another manikin is clasped in the crook of the left arm. On Stela 3 the associated date is 10.0.3.3.8 11 Lamat 11 Xul, when Mercury rose 23° before the sun and the Pleiades were in conjunction. On Xultun Stela 10 the date is 10.3.0.0.0 1 Ahau 3 Yaxkin, when the Pleiades were once again at their annual conjunction.

On Xultun Stela 5 a jaguar cub is held aloft and a GI/Venus manikin is held with the left arm. On 9.19.18.3.0 10 Ahau 8 Yaxkin, the date that best accounts for this iconography, Jaguar rose heliacally while in conjunction with GI/Venus. Stelae 24 and 25 at Xultun also depict jaguar cubs, suggesting that they too may

Figure 18-5. Palenque Temple of the Inscriptions, Pier B. This stucco records the birth of Chan-Bahlum. The infant with serpent foot represents Mercury, which was near maximum elongation on 9.10.2.6.6. The jaguar-skin kilt and Sun God head symbolize that the nearby Pleiades were undergoing their annual heliacal rising (drawing used with the permission of Merle Greene Robertson).

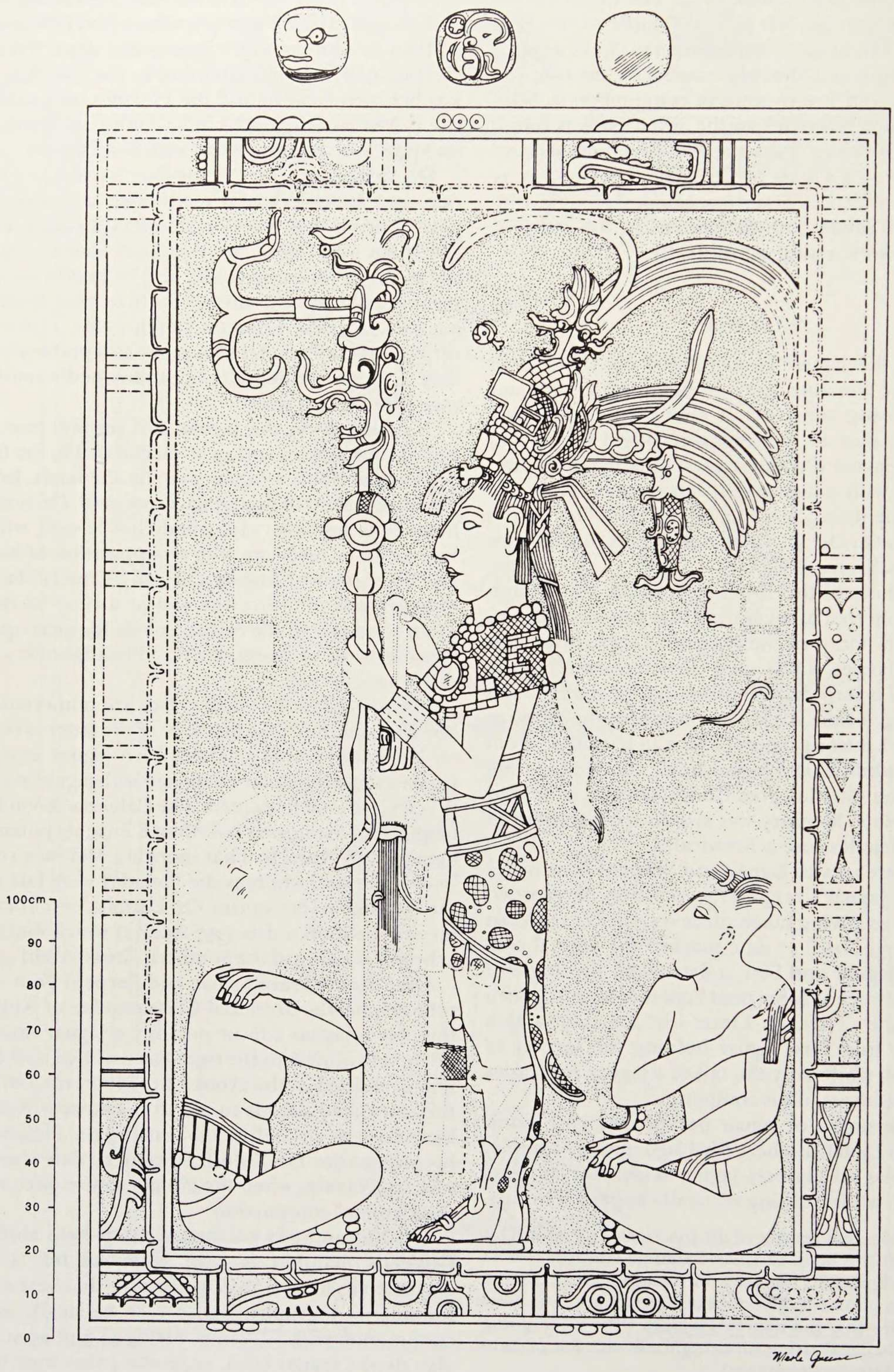
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Figure 18-6. Palenque Palace House A, Pier E. This stucco records the astronomical phenomena associated with Chan-Bahlum's thirty-third birthday. On 9.11.15.15.0, God K/Mercury (the standard) was visible just after a solar zenith passage (the upright staff) near the Pleiades (the kilt), which were undergoing heliacal rising (drawing used with the permission of Merle Greene Robertson).

allude to Pleiades phenomena on the associated Calendar Round dates. Apparently Xultun carried to the Classic Collapse the jaguar and serpent-foot traditions of Tikal, Palenque, and Yaxchilan.

CONCLUSIONS

Based on the ground just covered, iconography and astronomy would seem to indicate a Jaguar/Pleiades lineage or dynasty at Tikal. The same can be said for Yaxchilan, but I have recently made a case for a Quetzal/Halley's Comet lineage at Palenque. At all three sites, and throughout the Maya realm, the serpent-footed God K/Mercury was apparently patron of the ruling house, the precursor of Tezcatlipoca ("Smoking Mirror") of Aztec times.

It has long been known that the Maya practiced a calendrical astronomy; this paper adduces evidence that it was positional as well. But instead of longitudes, latitudes, right ascensions, and declinations, the Maya employed iconographic composition to record the relative positions of stars and planets. For example, on Tikal Temple IV, Lintel 2, the jaguar protector, Venus glyph, shield, and serpent-footed scepter represent the positions of the Pleiades, Venus, the sun, and Mercury on 9.15.10.0.0 3 Ahau 3 Mol.

In 1960, Tatiana Proskouriakoff changed the course of Maya studies by showing that Maya hieroglyphs record historical events. But she was careful not to exclude astronomical interpretation (1960:474). The future of epigraphy and iconography in this area would seem to lie in the direction of combining these approaches. Due to recent advances in astronomy, it can no longer *a priori* be assumed that a Maya date refers to a terrestrial event.

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19

Construction and Cosmology: Politics and Ideology in Lowland Maya Settlement Patterns

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Rutgers University

Few would dispute some presence of ideological underpinnings in Maya settlement patterns. The additional argument raised here is that, by Classic times, Maya rulers were also using principles of site planning based in cosmology as a means to profess and reinforce their membership in the political elite, affiliating symbolically with leaders of the Classic Maya establishment by replicating their surroundings. To illustrate and support the foregoing, this paper identifies a specific layout, with several variants of scale and of constituent elements, and examines the spatial and political contexts in which it has been identified.[1]

SITE PLANNING: COMMUNICATION, COSMOLOGY, AND POLITICS

Site planning refers herein to the deliberate, self-conscious aspect of settlement patterning, at scales from individual structures through regional landscapes. Such planning follows the spatial etiquette of the particular culture or subculture (Fletcher 1977, 1981; Preziosi 1979). In traditional societies, the resultant layouts frequently model some important ideal structure, often the structure of the human body and/or that of the universe (Tuan 1977; Rapoport 1982; Leach 1983). Numerous examples of cosmological bases for ancient Lowland Maya site planning are already widely appreciated. For example, there are the famous "E-Groups," the solstice-equinox tracking facilities named for their first identification in Group E at Uaxactun (Ruppert 1940), as well as a host of other instances reflecting archaeoastronomical bases for architectural layouts (e.g., Aveni 1980). There are, too, the so-called twin-pyramid groups, associated mainly with Tikal, whose arrangement depicts the many-layered cosmos in profile or turned on its side, and about which more will be said shortly (cf. Jones 1969; Guillemin 1968; Coggins 1980). Further, there are analyses arguing that both ancient and modern communities were commonly laid out as microcosms of the four-quartered world, with attendant directional symbolism, as harmonious replication, in miniature, of the encompassing universe (e.g., Coe 1965; Carlson 1981). Indeed, Vogt (1983:114) has recently asserted that Mayanists

> are currently on the track of a cluster of structural and conceptual principles revolving around settlement patterns and their concomitants in social, political, and ceremonial life *and cosmology* that can explain much of the Maya past and present if we can unravel all the threads (emphasis added).

For the Maya and other societies, however, settlement layouts can be rather more than passive maps of the cosmos. They can also serve as political and propagandistic tools and can do so in at least two ways. First, use of accepted planning principles establishes "appropriate arenas" for conducting official actions, whether or not the activities themselves are visible to the public. As Hilda Kuper (1972:421) has put it,

> In discussing any event, it is necessary to understand why particular actions took place on a particular site or sites and not elsewhere; and although the same site may be used for different purposes . . . , each site conveys a limited range of messages, and can be used only for culturally related activities.
>
> In describing "political events," sites such as a courtroom, a Red Square, Whitehall, the White House can be interpreted as giving an emotional effect, comparable to the power of rhetoric, to the voice of authority; . . . in short, there is a condensation of values in particular sites, and transactions that constitute the totality of social life may be spatially mapped with particular sites expressing relatively durable structured interests and related values.

[1] An earlier version of this paper was presented in 1983 in the symposium, "Artifacts and Symbols of Maya Culture," organized by Don S. Rice for the 82nd annual meeting, American Anthropological Association, Chicago. The original as well as subsequent versions have benefited greatly from discussion with a number of colleagues, especially Clemency Coggins, David Freidel, Robert Sharer, Susan Gillespie, Barbara and Dennis Tedlock, Richard Leventhal, Edward Schortman, Patricia Urban, William Fash, and Don Rice.

Persons of high civic rank should live and work in settings befitting their authority and prominence, as well as the importance of their activities. And architectonic ambience is one of the most potent factors in declaring and supporting such eminence (Rapoport 1982:60–61, 78–79). Adopting a cosmic template puts the built environment in harmony with the universe, and when, as with the Maya, specific locations within the cosmos have strong implications of power, the cultural landscape will serve to proclaim the authority of those who occupy power-imbued positions (cf. Glover 1986:6).

A second political function of site-planning is perhaps more obvious: the commissioning of monumental and multibuilding constructions—that is, manipulation of three-dimensional space as well as physical constructional volume—offers a means of expressing personal power and, indirectly, professing affiliation with executors of like projects, whether revered ancestors or powerful peers (cf. Renfrew 1982:25; Freidel 1983:386). For Maya sovereigns, just as sculpted stelae and hieroglyphic texts extolled ancestry, titles, exploits, and alliances, so construction projects expressed their political identity, at least among the cognoscenti. This certainly need not mean that all aspects of Maya site-planning were politically determined.[2] In fact, the pattern that will be described has a distribution much smaller than traditionally recognized hallmarks of subscription to the Maya elite "ethos" (Friedel 1979; Schortman 1986), hallmarks such as sculpted and inscribed stelae, corbel-vault architecture, or elaborate polychrome painted pottery. When, however, the conditions of local wealth and building space were right, use of site-planning to express oneness with the political elite was certainly an available option, and its expressive potential was clearly exploited in multiple instances.

A TEMPLATE FOR CONSTRUCTING MAYA COSMOLOGY

What, then, is the ancient Maya patterning in question, on what cosmological foundations does it rest, and what is the source of the attribution of political function? The pattern is one of a strongly marked north-south axis; mutually complementary functional dualism for construction and spaces at north and south ends of the axis, in which the north stands for the celestial supernatural sphere, and the south, for the Underworld or the worldly; the appendage of subsidiary eastern and western units to form a triangle with the north; the common but not invariant presence of a ball court as mediator between north and south; and the frequent use of causeways to underscore the linkage between various elements, and thereby stress the symbolic coherence of the whole. Various parts of the pattern have certainly been recognized and discussed by other scholars before now (e.g., Coggins 1967, 1980; cf. Guillemin 1968), but the pattern as a whole merits further consideration, toward which this paper offers a brief and necessarily sketchy contribution.

The cosmological bases for the pattern include (1) conceptions of a multilayered universe, with a many-tiered heaven above, wherein the ancestors reside, and a similarly stratified Underworld, the home of various other supernaturals, and the scene of primordial ordeals involving the Hero Twins, (2) temporal unification of these layers by cyclical movement of the sun, moon, Venus, and other deified entities through the upper and underworlds, (3) explicit vertical connectors between the earth and the other cosmic domains, such as the four Bacabs holding up the corners of the sky, mountains mediating between sky and earth, and caves linking earth with the world below, and (4) of less immediate importance in the cited patterning, a horizontal division of the world into four cardinal quarters (plus a center), each with color and life-form associations. Aspects of this cosmological system are and were held in common by non-Maya people elsewhere in Mesoamerica and far beyond, and elements of the cited settlement patterning can likewise be found outside the Maya area. In order, then, to argue that the composite architectonic package can be considered simultaneously cosmological, political, and Maya, I would like to summarize briefly my own course of recognition.

In this account, most of the evidence offered pertains to Late Classic remains. At least in part, this sample bias is due to ancient locational stability and rebuilding practices, wherein later structures overlie and surround earlier ones. Studies of settlement patterns and architecture for any period prior to the Late Classic are all too frequently hampered by an overburden of accumulated (and especially Late Classic) construction. But preponderance of late evidence does not imply the pattern under discussion was exclusively a Late Classic phenomenon. Its fullest, most dramatic expressions (recognized to date) are attributable to that period; but as will be noted, its conceptual and earliest tangible roots would seem to be earlier in age. Moreover, the architectural pattern described here probably had roots rather more complex and diverse than can now be discerned in detail; still, at least some general outlines of its derivation can be offered as hypothesis.

The inquiry began with an attempt to understand site-planning at Quirigua. At that southeastern Maya

[2] Aveni (1980:277) offers an analogous caution against seeking archaeoastronomical bases in every construction alignment.

center several recurrent patterns were isolated in Late Classic monumental architectural groups and clusters (i.e., groups of groups; Ashmore 1981a, 1984), and two important dimensions of these seemed to be (1) the northern placement of the highest summit elevation within a group and (2) the pairing of open, public gathering spaces on the north with enclosed, private (residential/administrative) groups on the south (Fig. 19-1). The latter functional dualism recalled an earlier assertion by several scholars (Coggins 1967; Jones, in Jones, Ashmore, and Sharer 1983; Hammond 1981) that the core of Maya centers comprised complementary paired precincts, one for public ritual, especially as devoted to veneration of the ruler's lineage (e.g., through location there of carved-stone dynastic monuments), and the other, the private residential compound or palace group of the sovereign. Moreover, Coggins (1967) had already pointed out directional associations of that functional dualism, with public/ritual groups to the north and palace groups to the south, in twelve centers within 100 km of Uaxactun, in the Maya heartland of northeast Peten. Furthermore, ball courts were located south of the ritual groups in six of these cases.

The cosmological significance of these locational associations is clarified by examination of twin-pyramid groups, especially in discussions by Coggins (1980) and Guillemin (1968). The earliest known of these groups probably pertain to the early seventh or very late sixth century A.D. (Jones 1969:93–96; but see Coggins 1983:53). Interpreted as arenas for celebration of rituals associated with the 20-year katun periods (Jones 1969), the groups have paired, multitiered pyramids to the east and west of a large plaza, with a small enclosure to the north and a single structure to the south (Fig. 19-2). The northern enclosure is unroofed and houses a single stela and altar pair, in most cases depicting the current ruler (who may or may not always have been the same individual who commissioned construction of the group), and the southern structure has nine doorways. Coggins (1980) has argued convincingly that the twin-pyramid group as a whole is a depiction of the Maya cosmos in miniature, but turned 90°, on its side: that is, the two pyramids, cardinally quartered in plan and vertically layered in profile, mark the rise and set points of the sun's daily passage into, across, and out of the heavens; the nine-doorwayed southern building stands for the Underworld and its Nine Lords; and the northern enclosure represents the zenith of the celestial world.[3] The ruler is thus apotheosized by placement of his portrait monument in the symbolic heaven, to join his venerated and similarly deified ancestors.

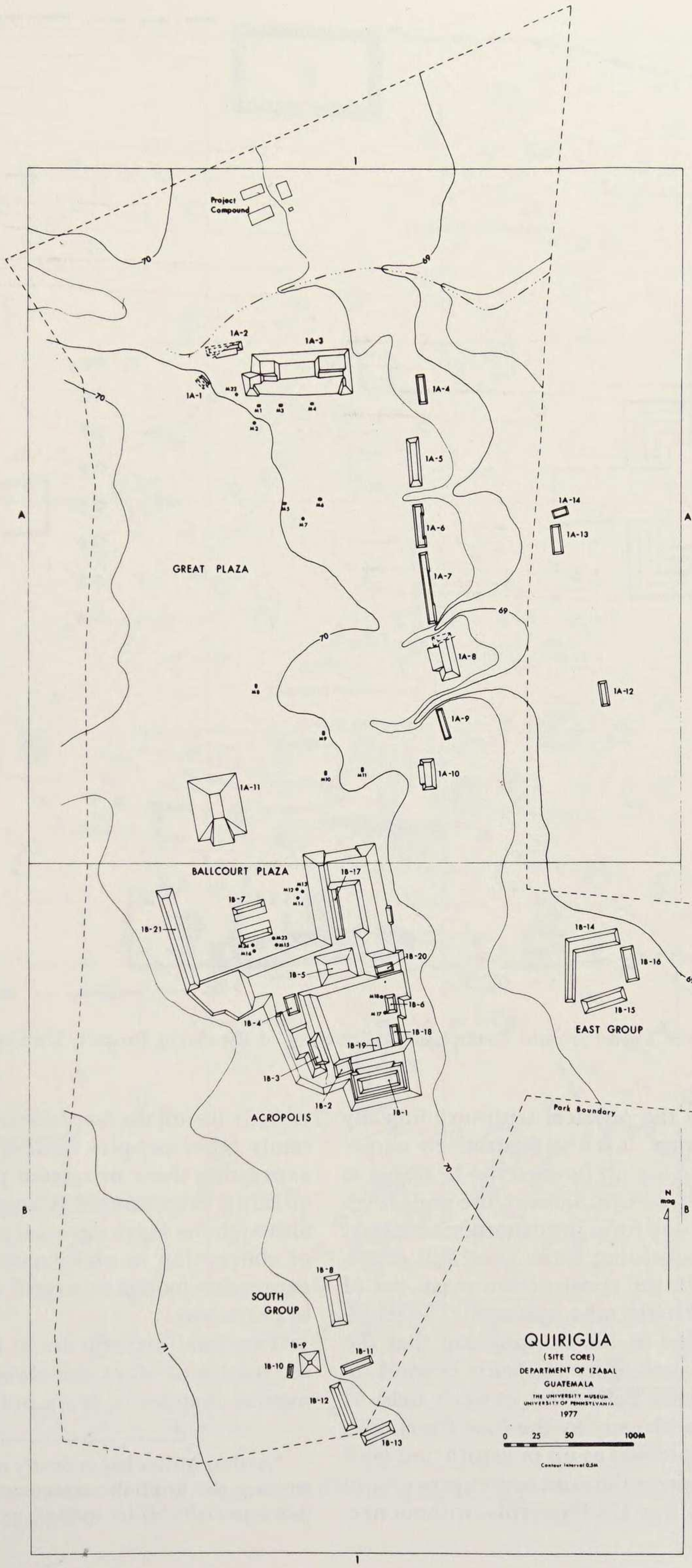
There is a clear resemblance between the twin-pyramid groups and the Late Classic plan of the Tikal North and Central Acropolis complexes (Fig. 19-3). The North Acropolis, known to house the tombs of many of Tikal's early dynasts, is equivalent to the northern enclosure of the twin-pyramid groups. Likewise, Temple I and II equate with the east and west pyramids, and a nine-doorwayed building closes the south side of the open plaza. Once again, the ancestral rulers occupy the heavens, although the construction of Temple I marked an emphatic shift in placement for current and ensuing rulers' burials. In fact, since it was the occupant of Temple I's tomb—Ruler A or Ah Cacau, in Burial 116—who both determined this change and reinforced the custom of building twin-pyramid groups, he may have chosen to substitute symbolic apotheosis in the latter structural context in place of further elaboration and enlargement of the already constructionally crowded North Acropolis (Coggins 1975; Ashmore and Sharer 1975; cf. Miller 1986). At any rate, twin-pyramid groups and the Great Plaza complex derive from the same conceptual mold.[4] Additional elements of importance at the Great Plaza, however, are (1) the association of the palace-compound Central Acropolis with the southern position and (2) the intermediate placement of the ball court on the south side of the Great Plaza, but north of the Central Acropolis palace group.

Clues for understanding the latter attributes and the pattern as a whole were gained from Freidel's analyses of architectonic sculpture at Cerros, a small but imposing Late Preclassic center on the south shore of Chetumal Bay (Fig. 19-4). His analyses have shown the importance of daily or annual charting of solar cycles in the monumental art of Cerros (i.e., at Str. 5C-2nd and 29B), and he has provided a detailed iconographic interpretation of the magnificent masks that flank the stairs of Str. 5C-2nd, relating them to the linked movements of the sun and Venus (Freidel 1980, 1986; Schele and Miller 1986). What is important for this discussion are (1) the location of this important cosmological handbook on a supporting platform at the north end of the site, marking its original baseline (Freidel, personal communication, 1982) and (2) the graphic suppression of elements and aspects happening out of view of the observer. First, north is the visually and conceptually dominant position, this time in a Late Preclassic con-

[3] Guillemin (1968:23–24) interprets the composite profile of the pyramids and the plaza surface supporting them as representing this stepwise cyclical daily transit; the two interpretations need not be considered mutually contradictory.

[4] Guillemin (1968) makes a similar inference, but describes the mold differently.

Figure 19-1. Map of the site core of Quirigua, Guatemala. (Courtesy of the Quirigua Project, University Museum, University of Pennsylvania.)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1A-3
1A-1
M22
M1
M3
M4
M2
1A-4
1A-5
M5
M6
M7
1A-14
1A-13
1A-6
1A-7
GREAT PLAZA
69
70
1A-8
M8
1A-12
1A-9
M9
M10
M11
1A-10
1A-11
BALLCOURT PLAZA
1B-17
M13
M12
M14
1B-7
1B-21
M23
M15
M16
1B-20
1B-5
M18
M17
1B-6
1B-4
1B-18
1B-19
1B-3
1B-2
1B-1
ACROPOLIS
1B-14
1B-16
69
1B-15
EAST GROUP
Park Boundary
70
N mag
1B-8
SOUTH GROUP
1B-9
1B-11
1B-10
1B-12
1B-13
QUIRIGUA
(SITE CORE)
DEPARTMENT OF IZABAL
GUATEMALA
THE UNIVERSITY MUSEUM
UNIVERSITY OF PENNSYLVANIA
1977
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A
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1

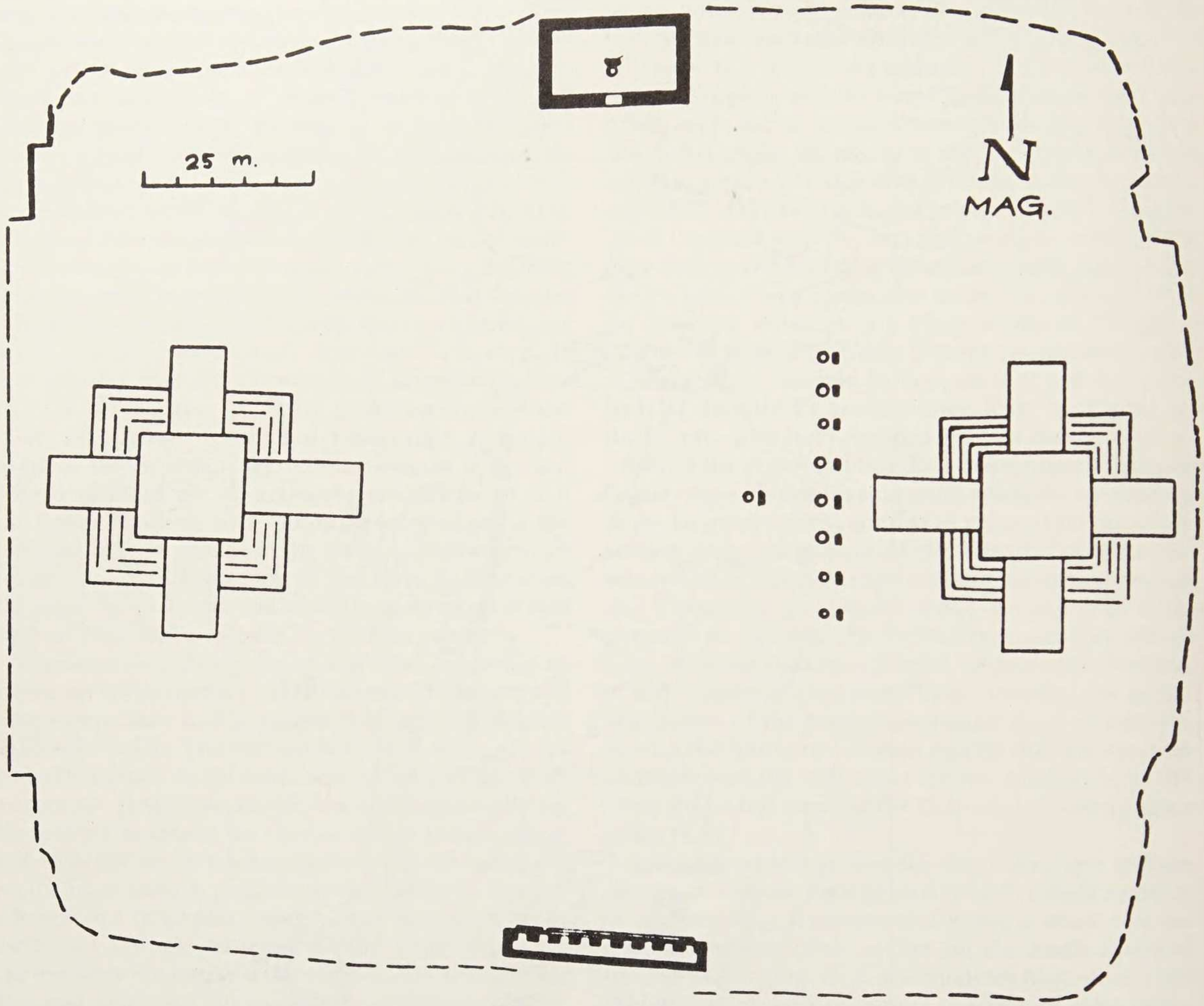

Figure 19-2. Plan of Tikal Twin-Pyramid Group 4E-4. (Courtesy of the Tikal Project, University Museum, University of Pennsylvania.)

text. Thus, not only is the physical sculpture literally elevated above the viewer, it is also figuratively above. One is, in a sense, looking up (toward the heavens) at this northern-placed structure. Second, the sculptures literally emerge from one form into another, as if part of the emerging or subsiding form were still physically embedded within the construction mass, out of view of the beholder (Freidel 1980, 1981a:218). The sculptor has thereby implied in his composition that the viewer should extrapolate other elements beyond direct view, and especially below the viewer's field of vision. In other words, already by the Late Preclassic, (1) north was being expressed as up or zenith and (2) it was acceptable to suppress the concrete expression of elements—such as south or Underworld—without necessarily losing the implication of their presence.[5] Certainly other peoples besides the Lowland Maya were expressing these or related principles by this time, as at Izapa, for example (Coggins 1982). The key is that although the Maya were not unique in having this kind of conception in architecture-related media, a set of expressive modes emerged that were distinctly Maya in execution.

Two final ingredients in the argument concern (1) the nature of Maya site-planning and (2) the developmental changes in Maya politics and art between the

[5] Arthur Miller has recently made similar arguments concerning the symbolic structure of Tikal's North Acropolis (see especially Miller 1986:35, 45, 56–57).

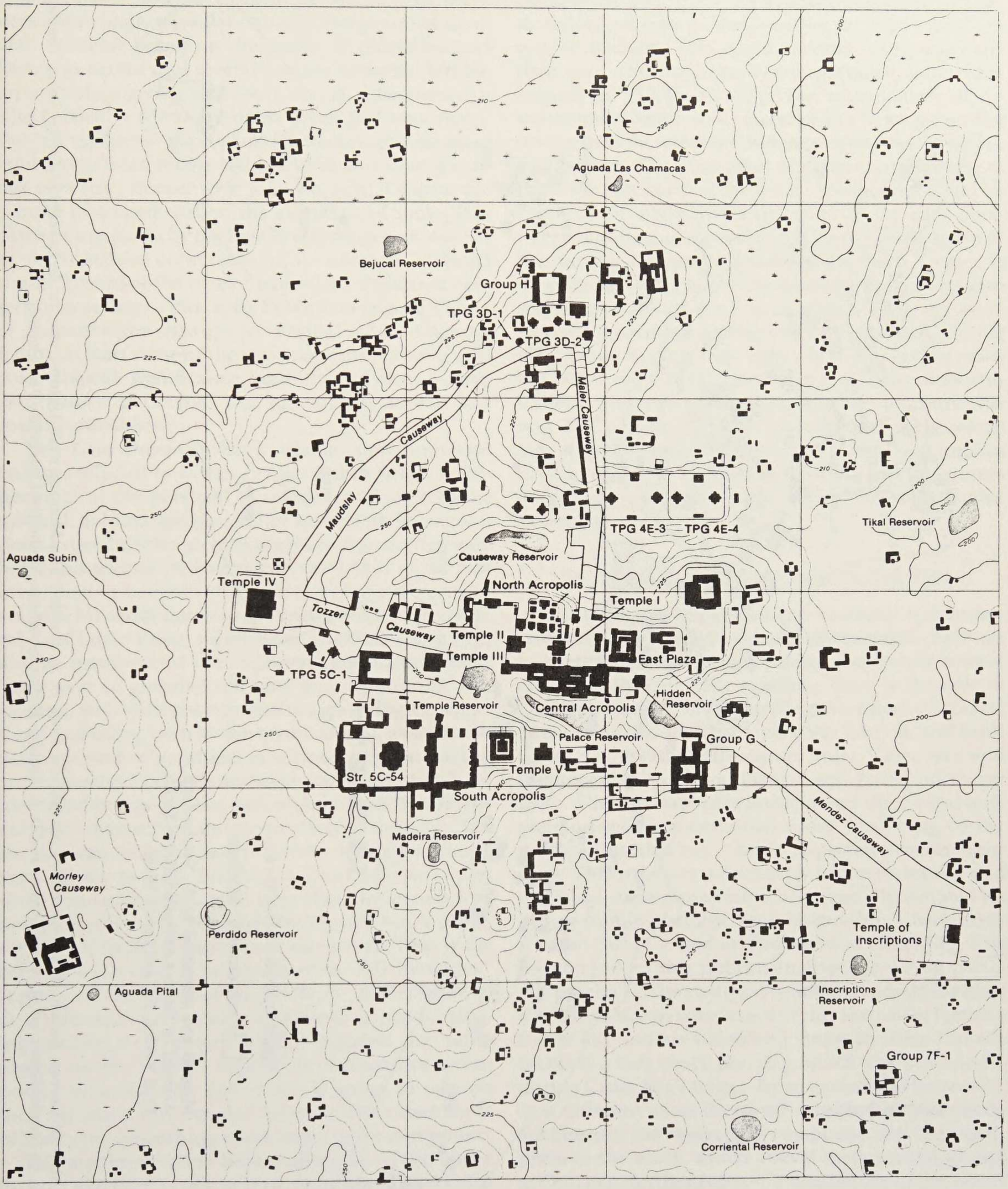

Figure 19-3. Map of the central portion of Tikal, Guatemala. (Courtesy of the Tikal Project, University Museum, University of Pennsylvania.)

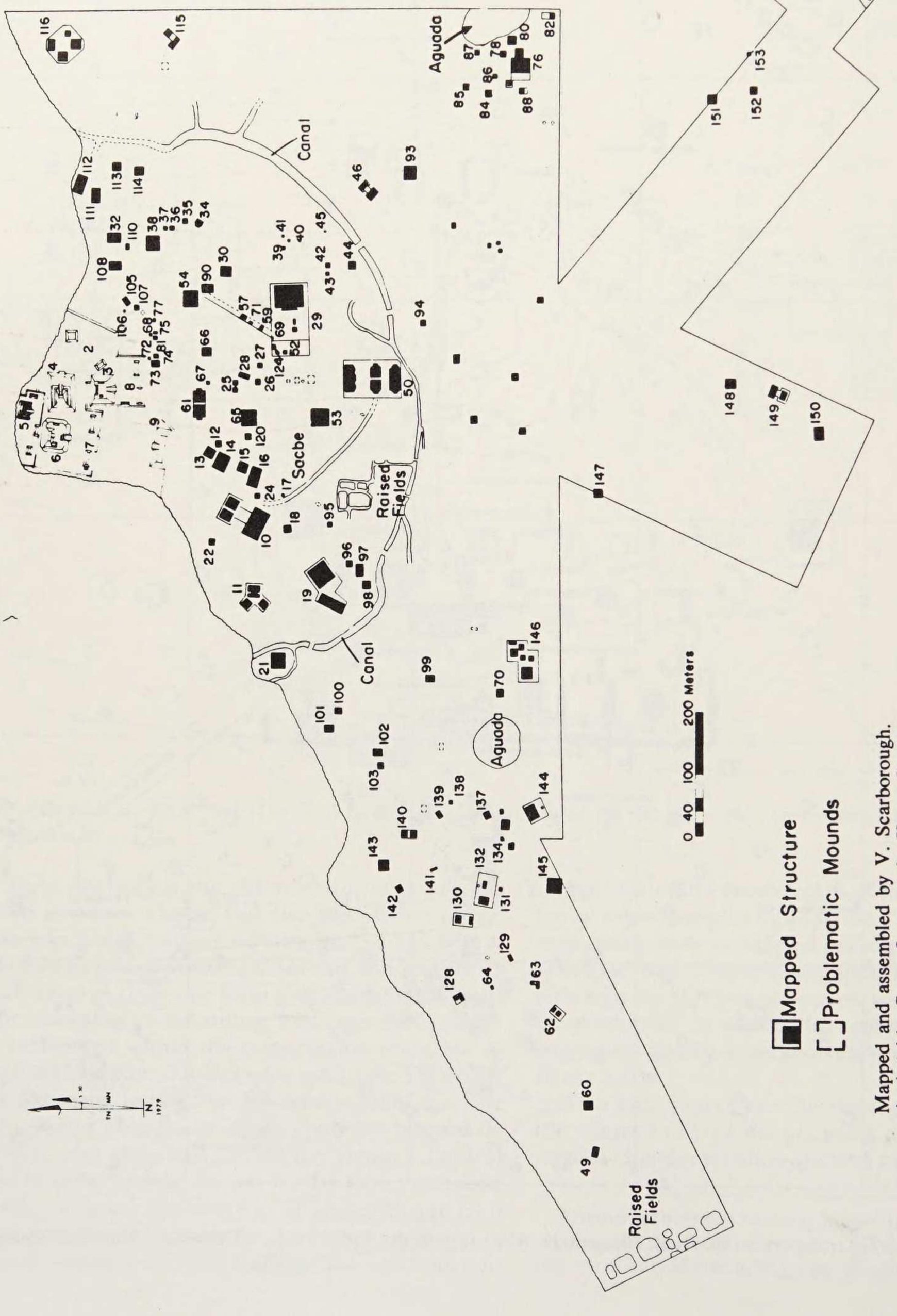

Figure 19-4. Map of Cerros, Belize. (Reproduced by permission from D. A. Freidel, The Monumental Architecture, in *Archaeology at Cerros, Belize, Central America, vol. 1, An Interim Report*, ed. R. A. Robertson and D. A. Freidel. Dallas: Southern Methodist University Press, 1986.)

Late Preclassic and Early Classic period. In plan, Maya sites are strongly modular—that is, composed of modular elements based on the patio- or plaza-centered group, as varied into several particular forms (temple group, palace group, ball court, etc.; cf. Andrews 1975). The particular forms are often developed into identifiable templates or plaza plans (cf. Becker 1971; Ashmore 1981b), reiterated recognizably within and among various sites (e.g., Becker 1972; Johnson 1975). Despite the sample bias cited earlier, the existence of such plaza plans or templates by the Late Preclassic seems attested by the repetitive occurrence of, for example, elevated triadic groups at the core of major Late Preclassic centers such as Cerros (Str. 29B), El Mirador (e.g., El Tigre), or Lamanai (Str. N10-43) (cf. Freidel 1981b; Ashmore 1981b). At least some of the early patterns plausibly had cosmological significance, and the solstice-equinox associations of Cerros's Str. 29B suggest at least one specific possibility.[6]

The Late Preclassic/Early Classic developmental changes alluded to earlier involve a shift from the impersonal to the personal in monumental art (Freidel 1981a; cf. Sahlins 1983:522; Miller 1986), with incorporation of specific references to the sovereign, explicit symbolic and textual statement and validation of his role in mediating between the society and the supernatural, and his assimilation to the realm of the supernatural. In Classic times, rulers were glorified along with and as members of the supreme supernatural elite. They were so glorified not only in sculpture but also in texts, with reference to exalted genealogies, sometimes extending far into the mythical past, as well as to marriage and other alliances with other great houses, and to personal prowess and exploits. Epigraphers have identified strings of titles with which Classic sovereigns endowed themselves; and particularly by the Late Classic, one can describe many of their self-aggrandizing inscriptions as truly bombastic. Peter Mathews (personal communication, 1983) has called my attention to one particular title, relatively little used, but, I think, significant to the arguments of this paper. That is the reference of a ruler to being "He of the Five Pyramids" (e.g., Palenque, Tablet of the 96 Glyphs; Berlin 1968:fig. 2), a reference presumably to success in commissioning architectural projects. This suggests the value placed on the "clout" implied in volumetrically imposing undertakings; and if one is going to take on such a project, why not also imbue it with other kinds of messages concerning one's importance and power?

The argument made here, pulling all of the above threads together, is that at least some Maya rulers also chose to use a site-planning template developed by Classic times (and most probably earlier) to depict the structure of the Maya cosmos and to emphasize graphically their own and their family's importance within that cosmos (cf. Townsend 1979). The main gallery of dynastic monuments was placed in the heavens, on the north, with the earthly residence of the rulers below, to the south. The placement of a ball court likewise to the south, but north of the palace compound, might be taken as an alternative expression to the nine-doorwayed building, to represent the Underworld, scene of the ancient ballgames involving the Hero Twins. As described in the Popol Vuh, however, ball courts also served as conduits used by the Hero Twins to move between the natural and supernatural worlds (Gillespie 1985; Tedlock 1985). The Underworld itself is thus again left below the visible realm, and communication with its denizens is strictly channeled via the ball court gateway. The juxtaposition of the residence of the sovereign with this symbolically critical access point implies his control over such communication, and thus serves to underscore his position as one of consummate power.

USE OF THE ARCHITECTURAL COSMOGRAM

If the foregoing patterns are correctly recognized and interpreted, might we usefully examine their use in particular sites? In my opinion, the answer is most emphatically "yes." For example, there is the case of Quirigua—where this inquiry began—whose epicentral Great Plaza-Acropolis complex was laid out and built under the great eighth-century ruler Cauac Sky and his immediate successors (Sharer 1978; Jones and Sharer 1986). The cited complex incorporates the critical template components described above, beginning on the north with a high and visually imposing structure (Str. 1A-3). This provides a backdrop for seven carved and inscribed stone monuments, all originally elevated on a huge cobble platform (now obscured by alluvium) in front of Str. 1A-3, and all dedicated to Cauac Sky. The counterpart to this public/ritual/apotheosizing northern precinct is the enclosed/residential/administrative/worldly southern compound of the Acropolis, home to Cauac Sky and his household. Between these two elements is a ball court, Str. 1B-7, which was preceded—during Cauac Sky's reign—by an earlier and larger one, in a different exact location,[7] but likewise intermediate between the sovereign's compound and the public plaza to the north. Other coeval monumental groups at Quirigua further stress the dominance of the north/

[6] It has been suggested elsewhere that this complex structure was perhaps a prototype for an Early Classic template, the E-Groups mentioned earlier (Ashmore 1986).

[7] This ball court, Str. 1B-Sub. 4, lies buried beneath Strs. 1B-3 and 1B-4 on the west side of the Acropolis, but northwest of Cauac Sky's putative residence, Str. 1B-2.

south axis; a north/open vs south/enclosed contrast when such groups are juxtaposed;[8] and, in all monumental groups, regardless of degree of openness, the association of northern position with highest (i.e., most skyward) summit elevation.

It was lack of these planning principles in sites elsewhere in the lower Motagua valley (Schortman 1980, 1984, 1986), coupled with independent evidence (epigraphic, sculptural, and ceramic) of colonization or similarly intrusive influence from northeast Peten at Quirigua in the Early Classic that originally led to the attribution of a political factor in the use of these principles in both Early and Late Classic Quirigua (Ashmore 1986). I believe, however, the site-planning data are less necessarily indices of colonization per se than of voluntary and self-conscious symbolic identification of the lesser power with the greater (i.e., of Quirigua with Tikal or with northeast Peten generally; cf. Huffman [1981] regarding use of "templates" from Great Zimbabwe at lesser, related sites and expressing "Zimbabweness"). Epigraphic, ceramic, sculptural, and architectural evidence suggest that such identification began in the Early Classic, in the fifth century (Ashmore 1981a, 1986), and was a well-entrenched tradition by Cauac Sky's reign in the eighth. The latter was an ambitious leader, however, in that he captured 18 Rabbit, then ruler of the much larger polity at Copan, and seems thereafter to have dared to declare himself the fourteenth dynastic sovereign of that place (cf. Riese 1986; Sharer 1978; Jones and Sharer 1986). It should come as no surprise then, that in laying out the now-visible form of the Quirigua site core, he reinforced his authority by re-creating a more extensive version of Copan's core, following norms imported to both centers from the Lowland Maya heartland around Tikal.

Indeed, tantalizing evidence of earlier expressions of the template under discussion can be noted for both Quirigua and Copan. In both these southeastern Maya sites, elite Maya culture was introduced by intruders from Peten in the mid-fifth century (Sharer 1978; Leventhal, Demarest, and Willey 1982), and public expressions of Maya-ness became traditions in the Classic. At Quirigua, the possible early traces of the template comprise small traffic-monitoring sites, such as Loc. 011 (Morley's Group C), apparently established in the Early Classic, adjacent to Motagua tributaries in the Quirigua area. Details of Early Classic layout at these sites are not known, however, and evidence on architectural arrangement in the main settlement for this time frame is severely obscured by alluvial burial (Ashmore 1981a, 1984, 1986). At Copan, however, the layout of the Main Group plaza may have incorporated critical attributes of the template by the end of the fourth century—attributes including, in this case, a ball court (Cheek 1983; cf. Ashmore 1987). The latter data, in particular, suggest the architectural template was influenced by customs and developments in the Guatemalan highlands[9] as well as the central lowlands; but in either case, the target of architectonic allusions would be established capitals of important and powerful societies.

Certainly at Tikal, the patterning described was expressed by Late Classic times in constructions beyond the Great Plaza-North/Central Acropolis area and the twin-pyramid groups (Fig. 19-3). By plotting constructions attributable to the great rulers of the Late Classic, one can see the use of the same underlying template on an even grander scale. The constructions pertaining to Ruler B, or Yax Kin Caan Chac, are particularly grandiose: Temples IV and VI (Temple of Inscriptions) to the west and east, Twin Pyramid Group 3D-2 to the north, the south either vacant or marked still by the Central Acropolis, and the whole united by newly built or refurbished monumental causeways (Jones 1977; Ashmore and Sharer 1975). The set replicates on a quite massive scale the twin-pyramid groups, Great Plaza complex, and perhaps even an earlier version of this megapattern commissioned by Yax Kin's father, Ruler A or Ah Cacau—with the earlier version, in fact, partly obliterated by the larger, later constructions. Recall that Ah Cacau has already been credited with reviving and modifying the cosmic templates in use at Tikal; these acts have elsewhere been argued to be at least partially political in nature, signifying a revitalization movement aimed at restoring both Tikal's self-esteem and its prominence in the political landscape of Peten (Ashmore and Sharer 1975; Dahlin 1976, 1986). In this case, the allusion to established power is to ancestors rather than contemporaries.

Returning to Yax Kin's grand cosmogram, one notes an apparent deviation from the expected arrangement in the positional displacement of Temple VI. This should not be seen as invalidating identification of the cited pattern, however. Instead, it underscores the importance of the explicit causeway links, simultaneously reminding that the symbolic directional associations are more important here than geographic "truth": that is, if the cardinally "correct" space is unavailable or

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[8] Otherwise, the south side remained open.

[9] Both the timing of this construction relative to Peten influence at Copan and the rarity of Early Classic ball courts farther north certainly raise questions concerning the evolution of the template—specifically, how much may be owed to developments in the Guatemalan highlands (Ashmore 1981a: 865–66; 1984:375; Ashmore, Schortman, and Sharer 1983; Brown 1973). Again, Preclassic courts in the central lowlands do offer usage precedents (Scarborough et al. 1982; cf. further discussion of Cerros in text). Still, the Copan data suggest yet unexplored but intriguing complexities of evolution and derivation.

unsuitable, a nearby point can be used instead. The same procedure seems to have been used in the ultimate layout of Seibal, where topographic restrictions against north-south juxtaposition of ritual vis-à-vis palace group (i.e., Groups A and D, respectively) were overridden by the causeway system, symbolically bringing the displaced elements back into "proper" cosmological alignment (cf. Gossen 1974:44–45). Note that there, again, a ball-court (in Group C) mediates between north/up and south/down, and is explicitly joined to them by causeways.

At Palenque, of course, there is the Cross Group. In recent years, much has been learned of Palenque and the complexity of symbolic expressions there (e.g., Berlin 1963; Kelley 1965; Schele 1976, 1981; Cohodas 1974, 1976). It is nonetheless of interest that the arrangement of the Cross Group—as a three-sided group with the northern Temple of the Cross as the highest element and the south side open—reiterates the pattern under discussion here. Culturally important messages are usually communicated in multiple media, including architecture (Preziosi 1979; Rapoport 1982). The Cross Group exemplifies this multimodality eloquently, for its plan declares the antiquity and importance of Palenque and its rulers, simultaneously reiterating and complementing the messages exclaimed so articulately in the associated sculpture and inscriptions (cf. Schele 1974:60).

At the opposite end of the Maya realm, four intriguing further instances of the pattern can be cited—three of them in non-Maya sites. The reader will not be surprised to find Copan listed, for its site core has already been mentioned above, in the discussion of Quirigua. But reference here is to an additional expression of the template, in this case comparable in scale and age with the megaversions at Late Classic Tikal. William Fash described the Copan occurrence, although he did not identify it with this pattern: It is defined by three imposing architectural complexes, each approximately one km west, north, and east of the ball court of the Copan Main Group, and the east and west apices of the triangle thus formed are joined to the Main Group by causeways (Fash 1983:283–86). Considered together with Marcus's (1973, 1976) arguments concerning the cosmic structure of political order in the Maya lowlands as a whole, this particular architectonic cosmogram might be interpreted either as a statement of affiliation with the larger Maya world—or as an indication of competition.

About 100 km east of Copan, the small Classic-period elite center of Gualjoquito lies in what was a Lenca-speaking (i.e., non-Maya) area by the time of Spanish arrival. Archaeologically, the prehistoric material culture of this area would not be identified as Maya (Schortman et al. 1986). Nonetheless, Gualjoquito has a Late Classic site layout (Fig. 19-5) that fits the pattern under discussion, incorporating the north-south axis (skewed counterclockwise) and functional dualism, with a positionally intermediate ball court. The whole appears to be a slightly faulty copy of the Maya template, and that observation is all the more interesting because the site layout was apparently established *de novo* (minus the ball court) in the *Early* Classic. Timing of this development was plausibly slightly later than the Peten-related Early Classic florescence at Copan, and arguments have been presented elsewhere (Ashmore 1987; Schortman et al. 1986) that link Gualjoquito's fluctuating prosperity to that of the Maya center. The leaders of the smaller center are thus believed to have adapted from their most prominently successful neighbor the most accessible media for expressing their own newfound importance. There are no glyphic inscriptions at Gualjoquito, for literacy was probably too esoteric and restricted a practice to be appropriate to such a small and distant center.[10] But monumental architecture was certainly available to provide an appropriate frame for interacting with Copanec visitors as well as a means (symbolically and materially) of reinforcing legitimacy of authority over the local populace. Use of the template in this manner is therefore interpreted as a political statement, whether or not the cosmological base of the statement was fully understood.

Another neighbor of Gualjoquito, non-Maya Los Naranjos at the north end of Lake Yojoa, likewise exemplifies the pattern in question, and in this case on a Preclassic/Early Classic time scale (see map in Baudez and Becquelin 1973). Certainly, the original core of the site seems in accord with the dictates of the template, again minus the ball court, and might therefore be seen as arguing against a Lowland and/or Highland Maya origin for occurrence of the ball court in the southeast periphery. I believe, however, that rather than vitiating the attributions made to this point, it underscores the probable complexity of origins and development of the pattern. Although eastern Guatemala, Honduras, and El Salvador are termed a Mesoamerican "periphery," we cannot assume—the data won't allow it—that these areas were cut off from ideas and developments farther north *or* south. The earliest florescence at Los Naranjos has, for example, been interpreted as tied into the farflung network of the Olmec (Baudez and Becquelin 1973), while other monumental sites may evidence exchange of ideas with cultures of lower Central and South America. The deepest roots of the architectural pattern under discussion may be shared among the Maya and non-Maya sites here named, but

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[10] Schortman (1986) discusses analogous options and exclusions at work among Maya and non-Maya groups in the lower Motagua valley.

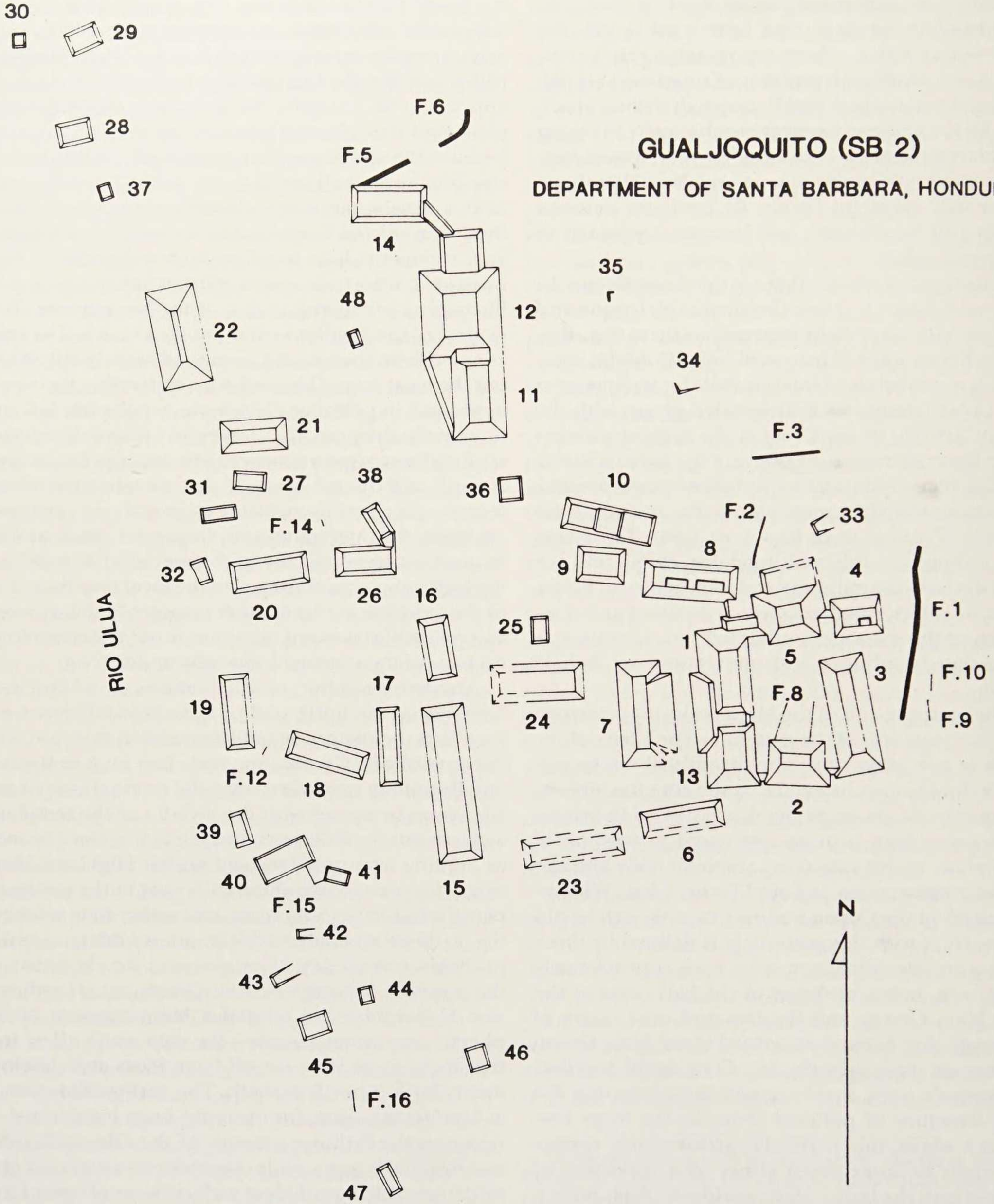

Figure 19-5. Map of Gualjoquito, Honduras.

the complex of material traits (architectural style, construction techniques, stonework, ceramics, exotics, etc.) suggest that the key proximal source for the pattern at Copan was the Maya area, and for Gualjoquito, Copan (cf. Ashmore 1987).

One final instance of the pattern in a non-Maya site reinforces its potential for political use. That site is Cerro Palenque, near the southern end of the rich Sula plain in northwest Honduras (Joyce 1982, 1985, 1986). Late Classic occupation at Cerro Palenque is represented at site CR-44, whose occupation ends in the Terminal Classic. In the latter period, a new settlement (CR-157) was established, apparently rather suddenly, crowded into available space on the flank of the same hill. It seems just as abruptly to have gained control of long-distance exchange networks with Belize and even Seibal (Joyce 1986). Ceramic data suggest the site was founded about A.D. 830, which is shortly after the end of recorded dynastic rule at Copan. What is also intriguing is the fact that the layout (Joyce 1982:fig. 4) incorporates a northern eminence and open area, then a ball court, and farther south, what looks like a small residential area. There are no known precedents for this layout within the Sula valley; the largest known Classic site, now-destroyed Travesia, seems to have included no aspect of it. The "evidence," of course, is circumstantial, but the coincidence of the sudden founding of a site with Copanlike layout, close in the wake of Copan's collapse as a power center, and the rapid international involvements of the new site suggest the provocative hypothesis that CR-157 claimed at least partial inheritance of Copan's mantle. Wearing an architect's badge that proclaims you're the hot new kid on the block is not, in itself, enough to convince other folks you are—but such accouterments of authority don't hurt.

CONCLUDING COMMENTS

To repeat, site-planning templates offered but one of many media of communication, and constituted a medium that both required and proclaimed—in what had become a distinctly Maya manner—the wealth and power of its commissioners. In so asserting, I recognize that not all sites and rulers opted to use this expressive mode, even when they could afford it. Likewise, parts of the pattern under discussion can be found in other times and places, in Mesoamerica and beyond. At Teotihuacan, for example, a site which profoundly influenced site-planning principles in much of Early Classic Mesoamerica (e.g., Aveni, Hartung, and Buckingham 1978; Coggins 1980), the Pyramid of the Moon complex and Street of the Dead might superficially suggest some related underlying principles, but coupled there with a much stronger suggestion of cardinal world-quartering than evident in most Maya centers, plus the specific apparent importance of the cave underlying the Pyramid of the Sun (Heyden 1981), and of course other elements giving a completely non-Maya "flavor" to the whole.

It is naive to expect that any medium-to-large Mesoamerican centers, especially as these were usually occupied and rebuilt over long periods of time, would be reducible to a single or simple planning idea. Still, the template described was, I believe, a real one, and had a long history of development and use in the Maya area. To return to Cerros, the Str. 50 Group there (Scarborough et al. 1982:fig. 6) may be a small Late Preclassic example of the then-coalescing pattern, expressed in a way not cited heretofore—in a single group. In this group, the highest structure lies to the north, and there are a ball court in the middle and a lower structure beyond, on the south; the functions of the northern and southern structures are not well understood (Freidel, personal communication, 1982). And in the Maya highlands, Los Mangales, a small, elevated mortuary site on the north side of the Salamá valley, may be another Late Preclassic example of the pattern (Sharer and Sedat 1987).[11]

As research advances, we are ever more impressed with the complexity of Maya and Mesoamerican ideological systems and with the diversity of interrelated ways in which their constituent ideas were expressed. That the individual messages could in turn be as complex and multitiered as the native Precolumbian universe should not surprise us. As with epigraphy, decipherment of the messages in the multiple media is a challenge—but an exciting one, well under way and well worth further pursuit. This paper is offered as a small contribution toward—paraphrasing Vogt—unraveling the many but still tangled threads of evidence.

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[11] The Preclassic portion of Los Mangales is a three-sided group, open to the south, in which the northernmost structure is the highest and was found to house the most elaborate burials (Sharer and Sedat 1987).

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20

Star Warriors at Chichen Itza

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One of the most intriguing issues for Mesoamerican archaeologists and art historians alike has been the nature and extent of the relationship between central highland Mexican cultures and the Maya area. In the northern lowlands, it is Chichen Itza, of course, that best represents just how intense that relationship must have been; and at the same time, just how poorly understood it remains. Although most scholars believe that the city was for at least part of its history closely linked with, and even possibly occupied by, the Toltecs, the idea that the late art and architecture of Chichen Itza is simply a reflection of that of Tula has gradually been abandoned in the face of the archaeological and art historical evidence from both centers. Indeed, George Kubler's once-heretical idea that Chichen Itza preceded and influenced Tula has gained increasing acceptance (e.g., M. Miller 1985). Furthermore, "Mexicanized" Maya from the western fringes of Mayan-speaking territory may have occupied the site before the arrival of the Toltecs, creating a non-Classic, but still essentially northern Maya city. Debate continues, however, not only on the identity of the site's occupants but also on its dates (Kelley 1983; Lincoln 1986). As a result, the large corpus of undated sculpture, painting, and other media remains in chronological and cultural limbo. Nevertheless, recent art historical studies in addition to archaeological and ethnohistorical work have begun to clarify the complex and eclectic style and iconography of Chichen Itza's art. Much of it, for example, may prove to be Terminal Classic rather than Postclassic in date (Coggins 1984, in press/b; Kowalski, in press). In this paper,[1] the heterogeneity of the site's art is demonstrated once again by the analysis of a single motif that I have dubbed the "star warrior" and a new variant of the motif, the "star head."

During a recent inventory of sculpture at the site, many works were discovered or at least documented for the first time (Patterson 1984). Among these is a group of reliefs presently located on a mound in Group 3E, east by southeast of the Mercado, about 1/2 km south of *sacbe* number 6 (Fig. 20-1). According to our guide, Pedro Un Cen, who had also participated in the inventory, the stones were moved to their current location from another nearby mound. The inventory numbers on the sculptures indicate that they come from at least nine structures from within group E, but only two of those noted, 3E6 and 3E7, are discussed by Karl Ruppert (1952:86–87) and appear on the accompanying site map. As a result, their archaeological context can no longer be determined. Nevertheless, twenty-nine of the sculptures are so similar in form, iconography, and style that at one time they must have formed a cohesive group within a single structure or closely connected structures.[2]

Each of these reliefs depicts a human head enclosed in a large trilobal helmet or frame decorated with tri-

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[1] Field research for this paper was supported in 1983 by a grant from the American Philosophical Society and from the Campus Research Board, University of Illinois-Chicago, which also sponsored my 1987 trip to Chichen Itza. Further research and writing was sponsored by an Exxon Education Foundation Fellowship at the Newberry Library, Chicago, in 1985. A grant from the English-Speaking Union of Chicago allowed me to study and photograph the Adela Breton watercolors of the Upper Temple of the Jaguars, details of which are reproduced here. I would like to thank Charles E. Lincoln, of Harvard University, Director of the Chichen Itza Archaeological Project, for making it possible for me to inspect and photograph the sculpture of Group 3E in 1983 and 1986, and for recording inventory numbers and measurements in 1985. His assistance and encouragement in the preparation of this paper is gratefully acknowledged. I am also indebted to Mary E. Miller and Wendy Schonfeld who cheerfully accompanied me at Chichen Itza and aided in photography and other tasks at Group 3E and elsewhere.

[2] The heads, some in very poor condition, were examined and photographed by me in July 1983, August 1986, and February 1987. Other fragmentary relief sculptures were found among the heads. These include a small skeletal human figure in profile, a scorpion, and other insect or crustacean forms, and a possible roof ornament.

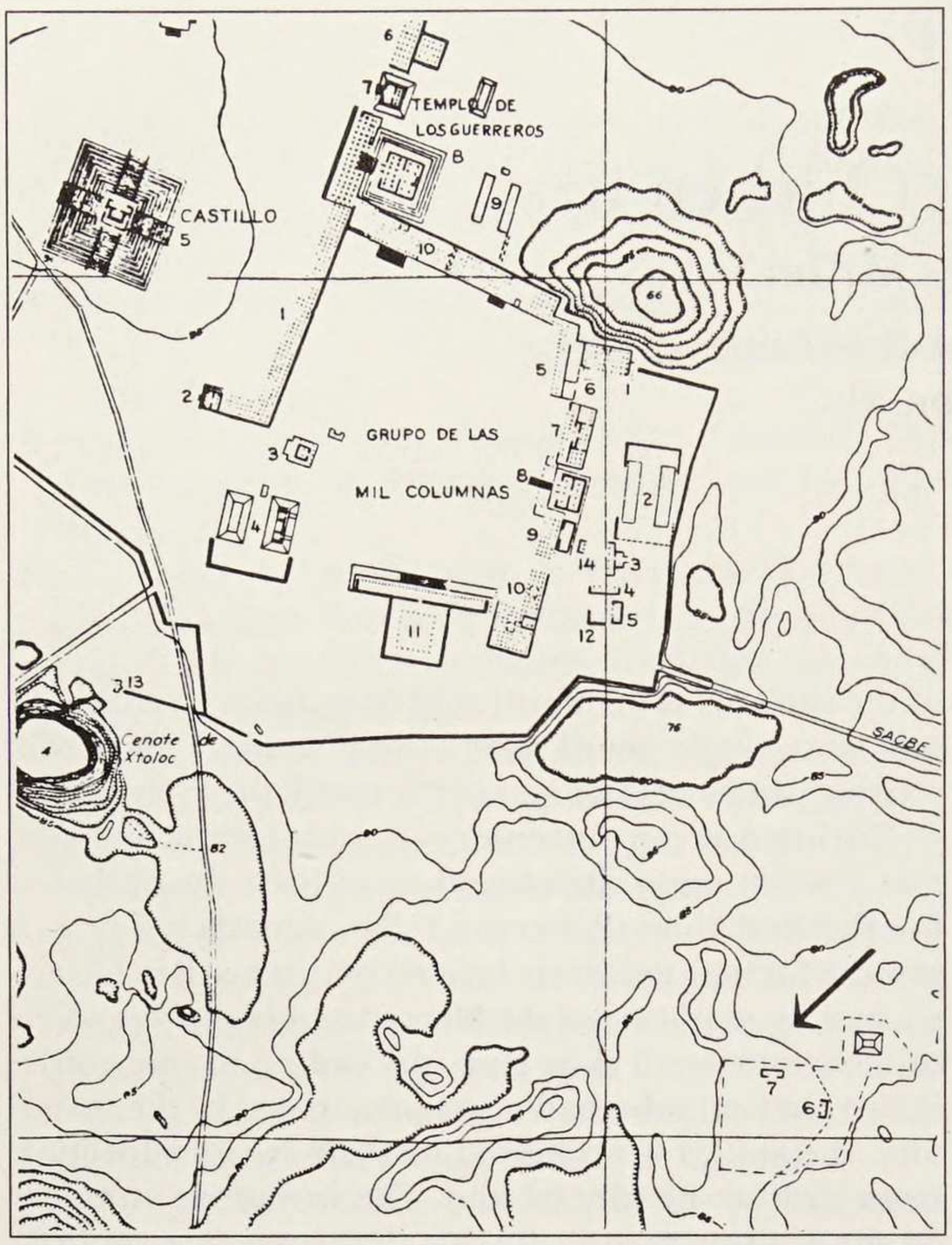

Figure 20-1. Map of Chichen Itza, detail showing Group 3E (arrow) (Ruppert 1952).



Figure 20-2. Chichen Itza, star head 3E6–5.

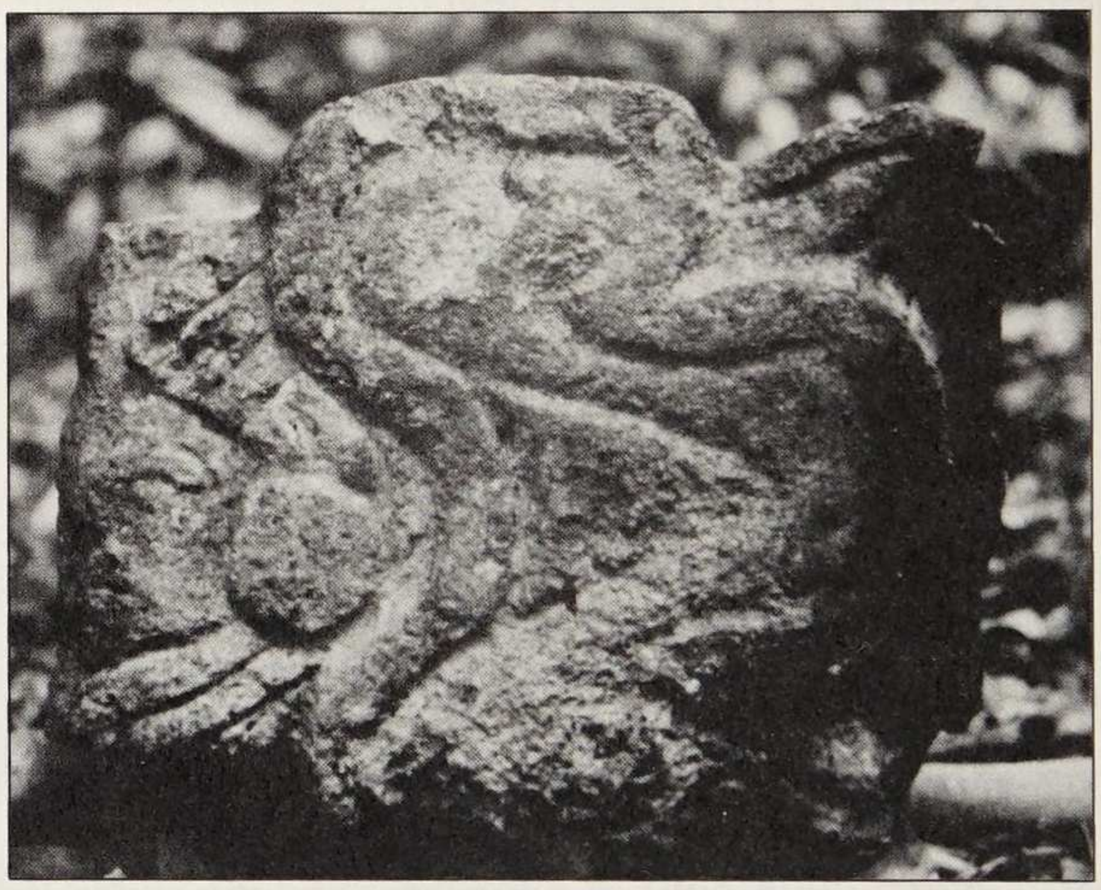

Figure 20-3. Chichen Itza, star head 3E6–9.

angular elements (Fig. 20-2). The blocks range in size from approximately 19 to 33 cm wide and 23 to 31 cm high, with tenons at the back between 25 and 38 cm long (Charles E. Lincoln, personal communication, 1985). Touches of red and blue appear on the reliefs, but too little color remains to reconstruct their original color scheme. Fifteen of the faces are in left profile; the remainder face to the right. With a few exceptions, the entire head is represented in silhouette. Otherwise, the stone block may be cut so that the face is in relief against the matrix (Fig. 20-3). In one example of this type, perhaps simply an undamaged version of the others, a striated rectangular block projects forward beyond the face (Fig. 20-4). Similar projections, which may represent feathers, emerge from behind the helmets of other heads (Fig. 20-5).

The faces are quite similar and obviously form a coherent group, but there are enough differences in shape, proportions, and facial features to suggest either individual portraiture or the work of more than one sculptor. The relatively small and straight noses of Figures 20-2 and -4, for example, can be contrasted with the larger noses of Figures 20-5 and -6. Figures 20-7 has unusual features: a flattened profile, deeply incised eye socket, fleshy nose, and large chin.

Few, if any, of the faces have a typical Classic Maya profile, but resemble instead those of the "foreigners" depicted throughout Chichen Itza and traditionally described as "Toltec" (Tozzer 1930, 1957:148–84). Ethnic identities, however, have proven to be particularly elusive at Chichen Itza, and these profile heads share some

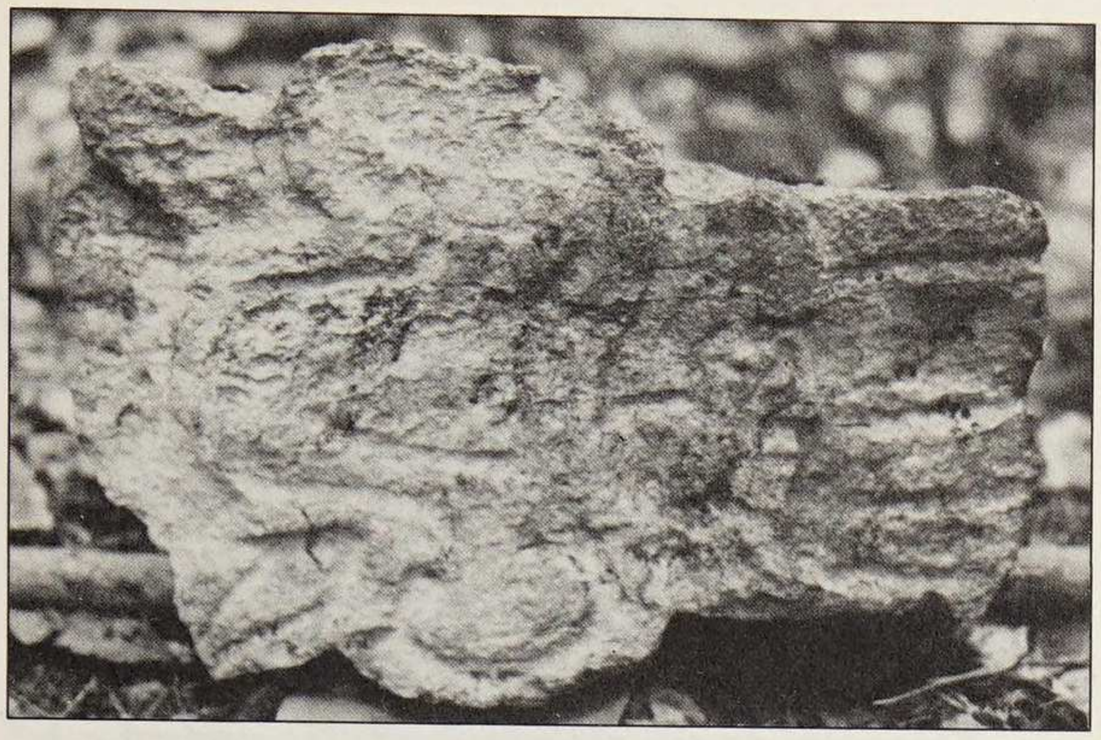

Figure 20-4. Chichen Itza, star head 3E6–14.

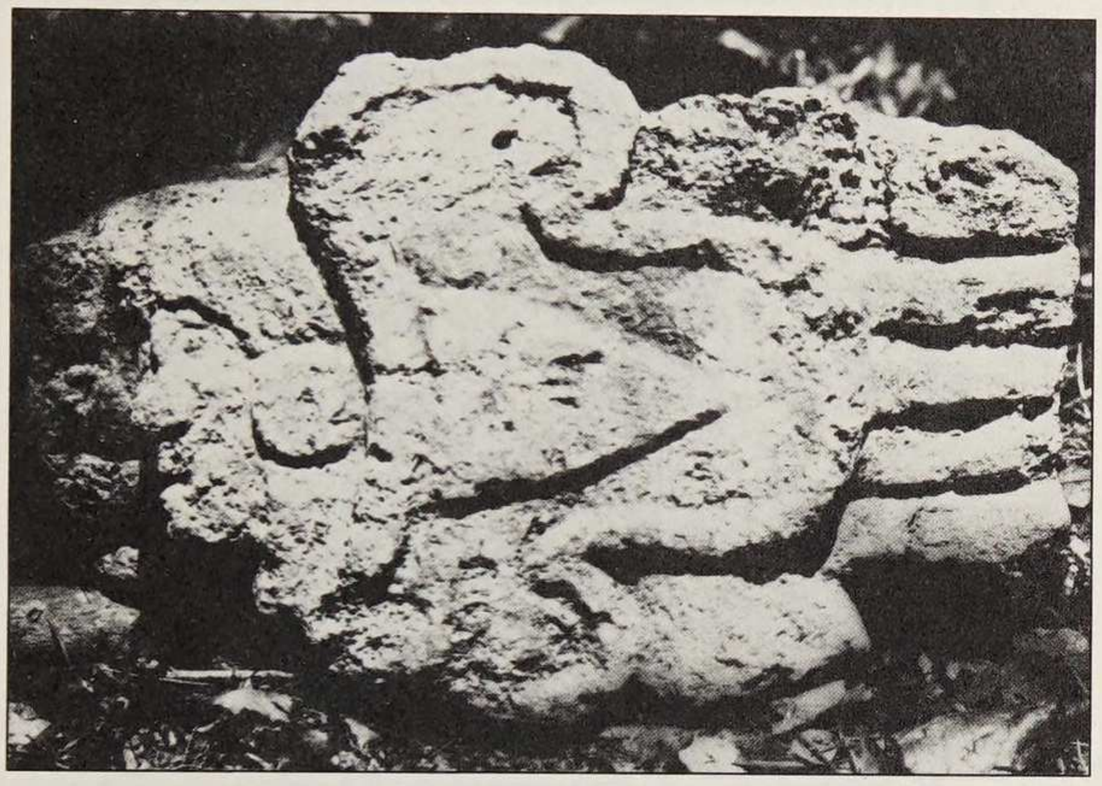

Figure 20-5. Chichen Itza, star head 3E6–44.



Figure 20-6. Chichen Itza, star head 3E6–7.

of the contradictory traits seen on whole figures represented elsewhere at the site. For example, a "pillbox" cap made of small mosaic squares may be worn on some of the heads, although erosion makes such details difficult to discern (cf. Fig. 20-4). Such caps have been viewed as diagnostic of non-Maya depicted at Chichen Itza (Fig. 20-8; Tozzer 1957:fig. 529), although a variant of the mosaic headdress occurs in the southern lowlands during the Late Classic.[3] Several heads, however, have the tubular nose ornaments that seem to characterize the ethnic Maya at Chichen Itza but *not* at Classic Maya sites (Proskouriakoff 1951:109; Tozzer 1957:figs. 611, 631) (Fig. 20-2). Most of the heads wear bluntly cut bangs and long hair over which a disk ear ornament is worn (Fig. 20-7). This hairstyle is common at Chichen Itza but also occurs occasionally at Classic Maya centers (Morris et al. 1931:pls. 34, 55; Tozzer 1957:fig. 527). On late Machaquilá stelae, for example, it is worn by figures who are otherwise Maya in appearance (Fig. 20-9).

The facial features, hair, and nose bars of the Group 3E faces are strikingly similar to those of the intrusive foreigners represented on late stelae at Seibal, whose sculpture and architecture diverge considerably from Classic Maya forms (Fig. 20-10; J. Graham 1973). Its history has recently been linked with that of Chichen Itza through epigraphical, stylistic, and iconographic analogies (A. Miller 1977:220–23; Kowalski, in press). Both centers, it has been argued, were at least partially contemporaneous and occupied by "Mexicanized Maya" by the mid-ninth century (Thompson 1970; A Miller 1977:221; Coggins, in press/b). These people—probably aggressive, cosmopolitan traders speaking Chontal Mayan and living on the Gulf Coast—appear to have moved south into the Pasión River area and north into Yucatan during the Terminal Classic. The Chichen faces clearly resemble the non-Classic Maya faction represented in both these areas, and usually called the Itzá in the north.

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[3] I am grateful to Ruth Krochock (personal communication, 1987) for reminding me of the existence of this earlier mosaic helmet and for citing examples of Piedras Negras (Lintel 2, Maler 1901–03:pl. 31) and Palenque (Temple of the Inscriptions text, at C6 and elsewhere, Robertson 1983:fig. 96).

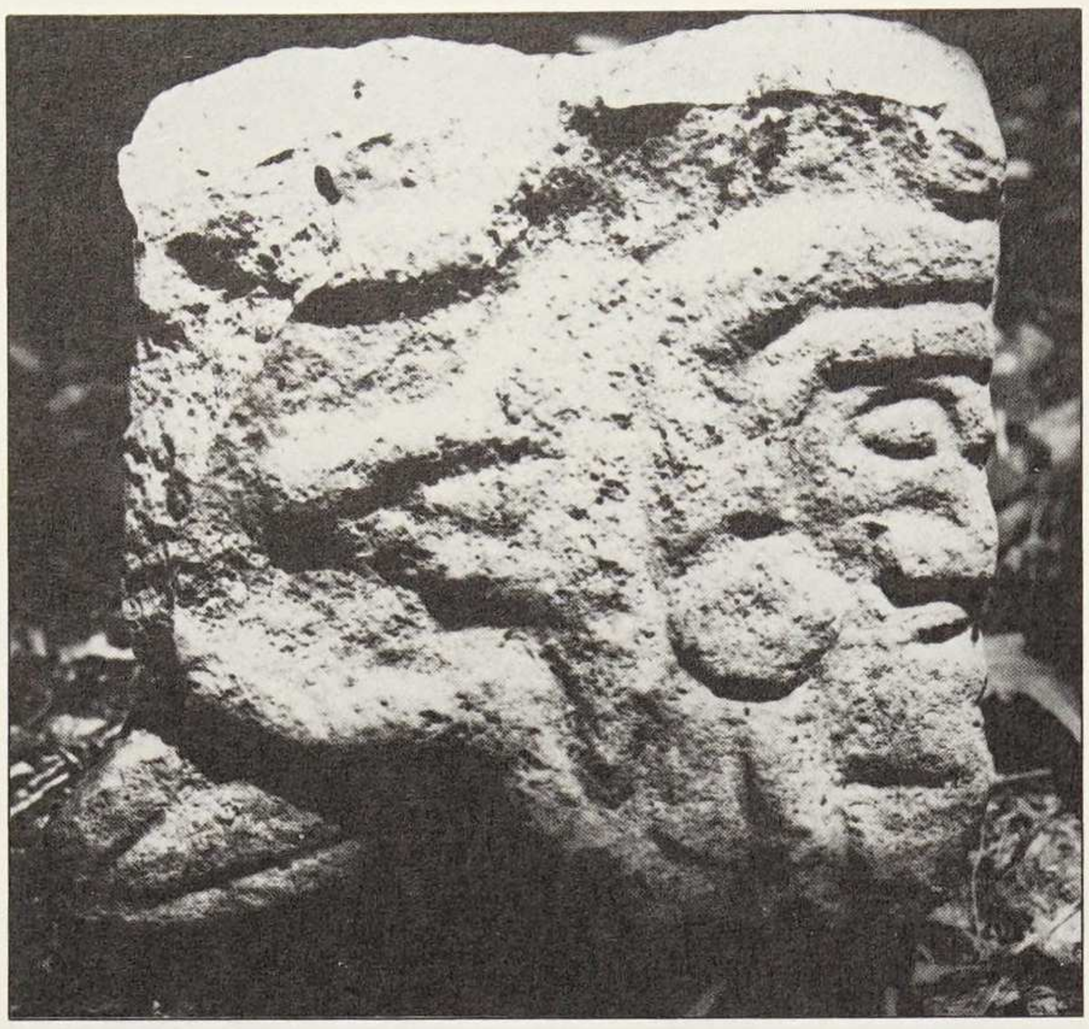

Figure 20-7. Chichen Itza, star head 3E13–7.

The heads are framed by helmets consisting of three lobes either of approximately equal size (Fig. 20-2) or with a larger or more elongated central lobe (Fig. 20-5). The helmets may have either a curving or an angular outline, emphasized by a thick border in relief. A triangular element or ray, which may also have an incised outline, is enclosed within the central lobe. Rays are also represented emerging from behind the inset corners. Since the helmet resembles no other headdress worn at Chichen Itza or at Classic Maya sites, we must look elsewhere for its derivation.

The angular version of the helmet looks somewhat like one-half of the Maya sign for completion (T173) and other Mesoamerican four-part symbols (Thompson 1950:figs. 25-26; Coggins 1980:fig. 2). Most of the helmets, however, with their rounded forms and projecting rays, can best be compared with another motif that is found almost exclusively at Chichen Itza, occurring at least seventeen times in paintings, monumental sculptures, and carved jade pieces. It appears as an independent symbol on the Platform of Venus in the main plaza of the site (Fig. 20-11) and in association with serpent borders on the benches or platforms typical of both Chichen Itza and Tula (Fig. 20-12). In the remaining examples it forms part of a skirt, tunic, or frame around the torso of a standing or seated figure (Fig. 20-13). Morris et al. (1931:460) described the costume as a scalloped skirt and suggested that it identified a variant of the standard "Toltec" warrior type represented throughout the site. Alfred Tozzer (1957:162, figs. 286-90, 572, 596) brought together and briefly discussed the known examples of the star warrior at both Chichen Itza and Tula. It was Eduard Seler, however, who first noted the resemblance of this skirt to the widespread Postclassic "eye-and-ray" motif thought to represent a celestial object (1909:234).



Figure 20-8. Chichen Itza, Upper Temple of the Jaguars, pilaster K4 (Tozzer 1957:fig. 526).

It has long been recognized that a lidded, circular eye framed by rays and lobes also containing eyes is almost certainly a star or planet and that it sometimes represents the planet Venus (Seler 1898, 1904a) (Fig. 20-14). It forms part of sky bands represented in codices of the Mixteca and of the Borgia Group as well as in the murals of Mitla in Oaxaca and of Tulum and Santa Rita (A. Miller 1982; Gann 1900) (Fig. 20-15). The eye-and-ray motif is often found in association with the

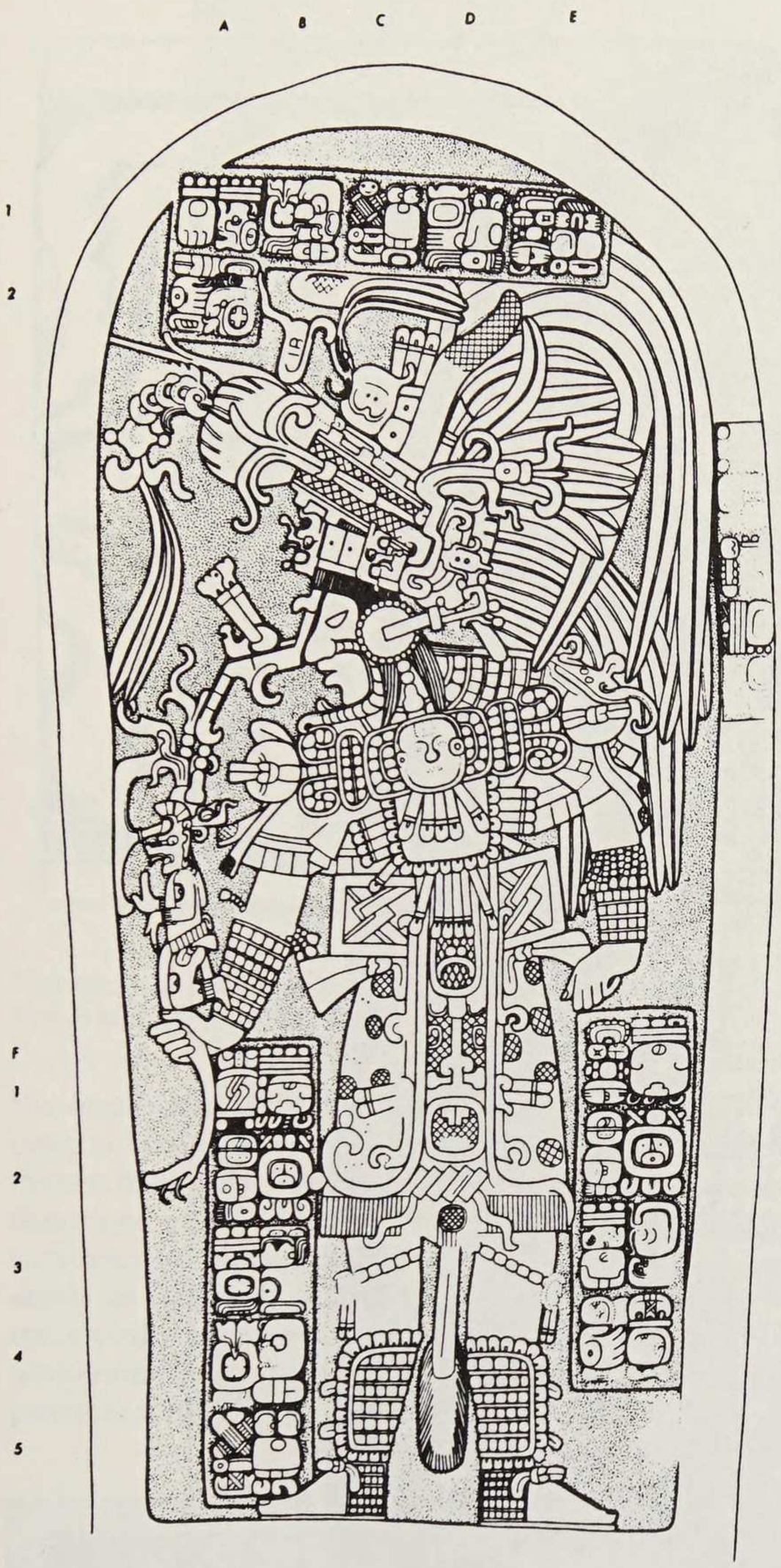

Figure 20-9. Machaquilá Stela 3 (I. Graham 1967:fig. 49).

sun disk, a motif that is also prominent at Chichen Itza. With the exception of the Late Postclassic murals on the east coast of the Yucatan peninsula, which have been shown to exhibit considerable non-Maya influence, all examples of this star symbol occur outside the Maya area. Sky bands displaying this motif, simple eyes also representing stars, and solar and lunar disks are considered to be diagnostic features of the so-called Mixteca-Puebla style (Nicholson 1977:115), a Late Postclassic phenomenon represented by widespread iconographic motifs and ceramic types rather than by an archetypal site. The symbol not only is prominent in wall paintings and in codices but also occurs on carved bone and shell objects from Monte Alban's Tomb 7. The cultural identification of the Mitla murals and the small carvings is still debated, but is probably Mixtec (Caso 1969:180; Marcus 1983:282–84; Kubler 1984:176–77; Paddock 1986).

The eye-and-ray motif in the Mitla wall paintings, in one example in the Vienna Codex, and on a carved bone from Monte Alban is particularly significant because, in addition to or in place of the central eye, a human face in profile is depicted (Figs. 20-16 and -17). The star faces of the Mitla wall paintings are also equipped with hands, which Kubler (1984:176) aptly described as "pushing down the darkness of the backgrounds." The substitution or addition of a human face may be explainable linguistically: in Mixtec, depending on variations in tone, *nuu* can have several meanings, including face, star, and eye (Smith 1973:59). The star identification is reinforced by the presence of the star motif in the place sign of the town of Tilantongo, Oaxaca, whose Mixtec name can be translated as 'black town, house of the sky' (Caso 1949:153; Smith 1973:55–56). Eye, face, and star are often merged in other Mesoamerican languages (Seler 1904b:311–12), including Mayan. Examples include *koch u pakat ek* 'broad-his-face star', *sasil u pakat ek* 'luminous-his-face-star', and *nohoch ich* 'great eye' for star (Barrera Vásquez et al. 1980:326; Lamb 1981:235, 243; Thompson 1950: 201).

Although there is ample evidence that the movements of Venus were carefully observed and recorded, the proof that the eye-and-ray motif represents that planet in particular is indirect. Seler (1904b:668–69) first argued that the faces appearing in the Mitla mural represented Venus as the morning star, but used Maya symbolism to explain central Mexican imagery. But he did make the connection between the eye-and-ray motif and Quetzalcoatl or the Feathered Serpent, a god known to be closely associated with the planet. In the Codex Vaticanus B, Quetzalcoatl (as Tlahuizcalpantecuhtli) appears as the morning star with a variant of the star symbol at his waist (Fig. 20-18), and in the Vienna Codex (as Ehecatl), he holds up a band of stars (Fig. 20-15).

It is at Chichen Itza, however, that the strongest confirmation is found that the eye-and-ray motif specifically represents Venus. On reliefs from the Platform of Venus it occurs next to what appears to be a central Mexican "year bundle" (of fifty-two years) and the numeral eight, which would be equal to 13 x 20 Venus periods of 584 days each (Seler 1909:236) (Fig. 20-11). The eye-and-ray motif is tied to a bar, possibly representing the Maya numeral five. If so, the motif could also stand for a smaller cycle of five Venus cycles, or



Figure 20-10. Seibal Stela 10 (Maler 1908:pl. 8).

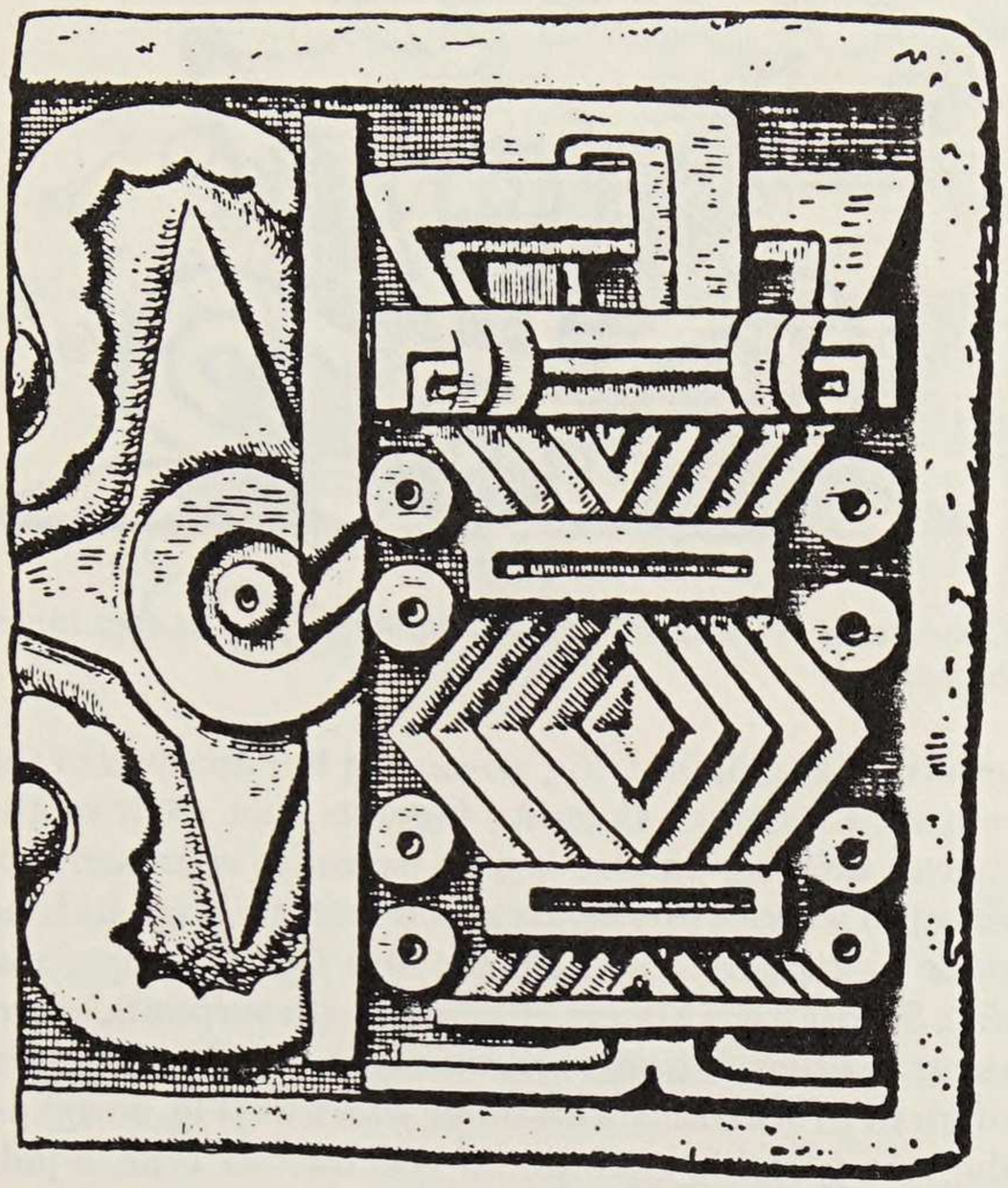

Figure 20-11. Chichen Itza, Platform of Venus, drawing of Venus sign (Seler 1909:pl. 116).

the equivalent of eight solar years, symbolized by the central Mexican year sign at the top of the year bundle (Susan Milbrath, personal communication, 1987). Furthermore, it has recently been demonstrated that the movement of Venus across the sky during its appearances as morning and evening stars follows five distinct paths over an extended period of time, a phenomenon surely observed by Maya astronomers and possibly noted here (Aveni 1987).

The behavior of Venus led both the Maya and the Mexica to deify and fear it.[4] The planet's rays were thought to be particularly dangerous at heliacal rising, when it reappears as the morning star after its eight-day disappearance in front of the sun. At this time it is the brightest object in the sky after the sun and moon. Sixteenth-century written sources compare its rays to darts and arrows bringing death, disease, and destruction to the earth below (Sahagún 1953, ch. 3, p. 11; Velázquez 1945:par. 51), and both central Mexican and Maya codices depict the planet as a deity hurling spears to the earth (Seler 1904a). Given the ominous and aggressive character of the planet, its symbol makes an appropriate addition to the iconography of warfare.

Indeed, it has recently been demonstrated that the Mayas' martial undertakings were governed by the movements of Venus (Lounsbury 1982). Battles and sacrificial events were timed to coincide with critical points in the cycle of the planet. The dates on which these activities occurred are often accompanied by a "star" event glyph that is almost certainly a verbal expression for war (Fig. 20-19). Furthermore, Maya lords may wear the Maya symbol for Venus as part of their costume, as seen in the headdress of Ah Cacau of Tikal (Fig. 20-20). The brief text of this stela does not refer to a battle or capture event, but the date falls close to the first appearance of Venus as morning star (Lounsbury 1982:156–57). In another context, a Venus glyph, with bird attached, ornaments the frame for a now-missing three-dimensional stucco portrait in the Palace at Palenque (Fig. 20-21). None of the other medallions in this royal portrait gallery has this motif, suggesting the person represented within was given a special status. The

[4] For a brief introduction to Venus and the Maya, see Aveni (1979). A more detailed discussion of the planet, including its importance to other Mesoamerican cultures, is found in Aveni (1980).

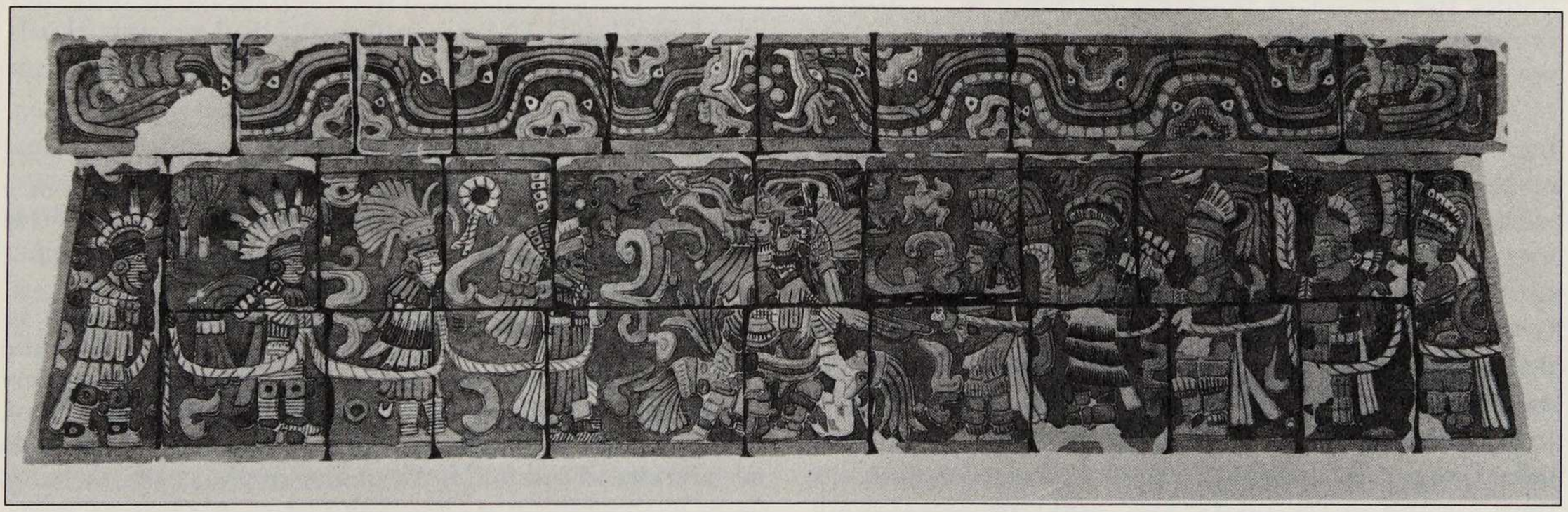

Figure 20-12. Chichen Itza, Mercado dais (Ruppert 1943:fig. 23).



Figure 20-13. Chichen Itza, Upper Temple of the Jaguars mural, southeast wall, detail star warrior (watercolor by Adela Breton, City Museum of Bristol, no. Ea 10979).

Maya star or Venus motif, then, can represent a star or planet, *or* serve as an adjectival costume motif, designating the wearer as perhaps "radiant" or "shining" or even "dangerous" or "warlike," if the reference is specifically to Venus.

At Chichen Itza, the figures wearing the central Mexican star skirt are invariably armed with spears, atlatls, or throwing sticks; and with one exception, a figure with Classic Maya features and profile (Morris et al. 1931:pl. 166 center), they all appear to be among the foreigners. In the Upper Temple of the Jaguars murals, the star-skirted figure is closely allied with the warrior dubbed "Captain Serpent" and believed by some to be the leader of the victorious Toltec over the Maya inhabitants of Chichen Itza (A. Miller 1977; Kelley 1983, 1984; Coggins 1984:158–65). In some scenes, Captain Serpent himself wears the star skirt and confronts his adversary, Captain Sun (Fig. 20-22).[5] In her analysis of the murals, Clemency Coggins suggests that each of the figures wearing the star skirt is meant to represent not simply a warrior but Venus as it travels through its long cycle in conjunction with the sun (1984:157, 159, 162, 165). Star-skirted figures entwined with serpents, sometimes feathered, occur elsewhere at the site, however, often in processions with other warriors (Fig. 20-23). In the sole portable example of this warrior type, a jade from the Sacred Cenote, the star-skirted figure actually rides a feathered serpent (Coggins 1984:fig. 20). It would seem likely, then, that the star-skirted figures hold a particular rank within the serpent faction of Chichen Itza, a rank perhaps obtained in Venus-sanctioned battles.

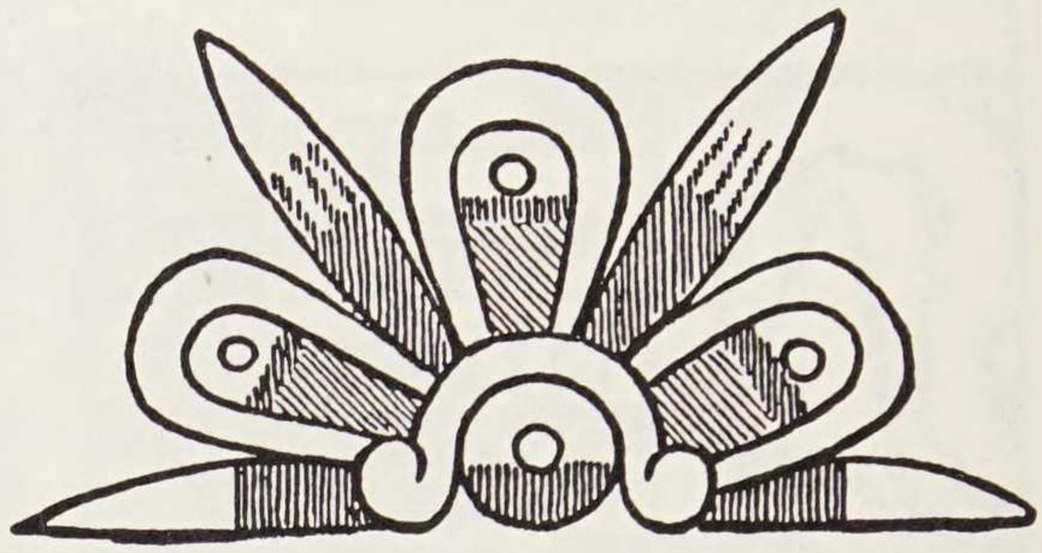

Figure 20-14. Vienna Codex, central Mexican star sign (Seler 1898:pl. 70).

The star warriors are frequently paired, however, which may refer to the dual role of Venus as morning and evening stars, or perhaps to the planet's period of visibility and invisibility. The two piers before the small dais to the south of the stairway up to the Temple of the Warriors are carved on their west sides with star warriors, for example (Figs. 20-24 and -25). A skull face or mask is worn by one of the star-skirted figures, and the same feature occurs on the south figure on the other pier.[6] In Classic Maya iconography and writing, skulls may be combined with or substitute for the Venus sign

[5] Kelley (1983:168, 205; 1984) argues that two serpent leaders are represented, Mixcoatl and Quetzalcoatl, and that they are two known Toltec emperors or their predecessors. He also equates Captain Sun Disk with a local Maya ruler he has dubbed "Kakupacal."

[6] There are sixty-one piers, each carved on four sides, in the Northwest colonnade (Morris et al. 1931:fig. 41). Only the two figures described here have star skirts, although as many as five, plus one pier figure in the Temple of the Chacmool, may have skull mask; stylistic variation and erosion preclude certain identification (Morris et al. 1931:pls. 32 3W, 88 S, 105 N, 111 W, in addition to Figs. 20-24 and -25 here).

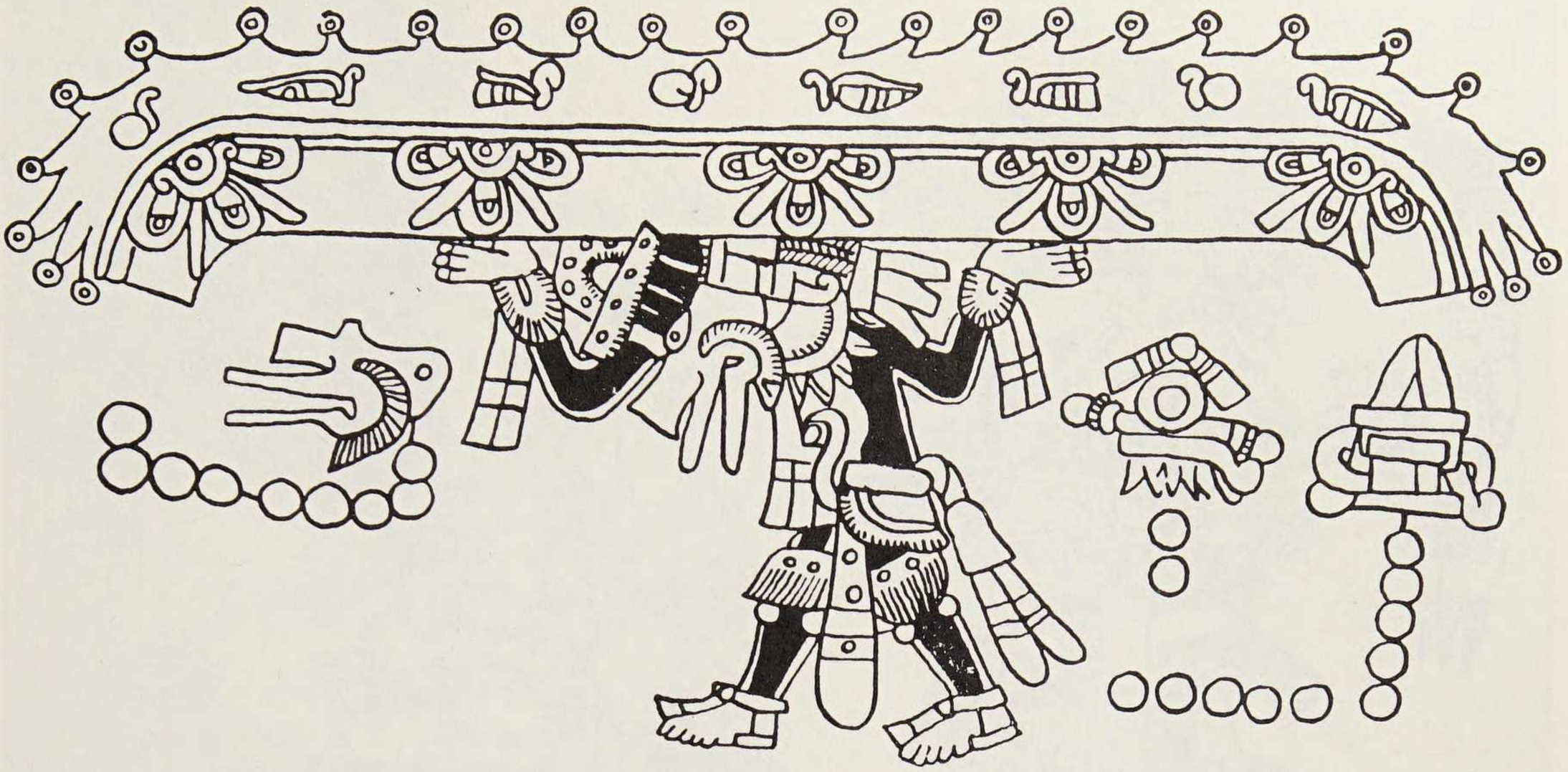

Figure 20-15. Vienna Codex, detail Ehecatl holding up sky band (Seler 1904b:fig. 72).

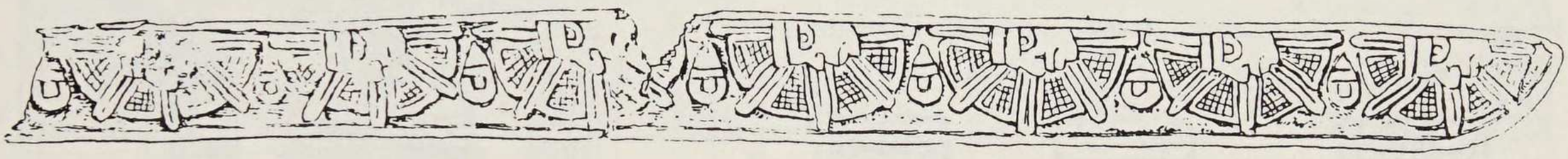

Figure 20-16. Monte Alban, carved bone, Tomb 7 (Caso 1969:fig. 193).

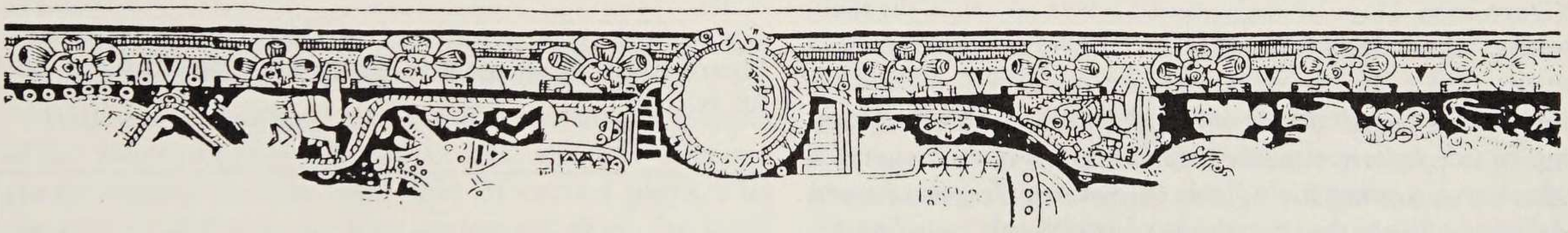

Figure 20-17. Mitla murals, Arroyo Group (Seler 1904b:pl. 37).

(Lounsbury 1982:156). Furthermore, John Carlson (1983: 50) has recently demonstrated that the sequence of three skull-faced deities in the Grolier Codex corresponds to the first appearance of the evening star and, following Seler (1904a:361–62), that at least one central Mexican image of Tlahuizcalpantecuhtli wears a skull headdress which transforms him into the evening star.[7] Susan Milbrath (n.d/b:14–15), however, identifies the skeletal variants of the deity in the Codex Borgia as Venus as the morning star, passing through the Underworld during superior conjunction. Whichever version proves correct, the association of Venus and skulls is firmly established in both central Mexican and Maya iconography.

Two other star warriors appear on a single carved pier among the twenty standing within the Temple of the Warriors itself (Fig. 20-26). One figure wears a star with sharp points, whereas the other's skirt has rounded

[7] It is of interest that both the Venus sign from House A at Palenque (Fig. 20-21) and the skeletal head of Grolier 10/11 (Carlson 1983:43) have a small, long-beaked bird affixed to them. Further study of skull imagery and Venus glyphs might indicate whether they occur together in other contexts and what their conjunction might mean.



Figure 20-18. Codex Vaticanus B, Tlahuizcalpantecuhtli (Seler 1898:pl. 69).

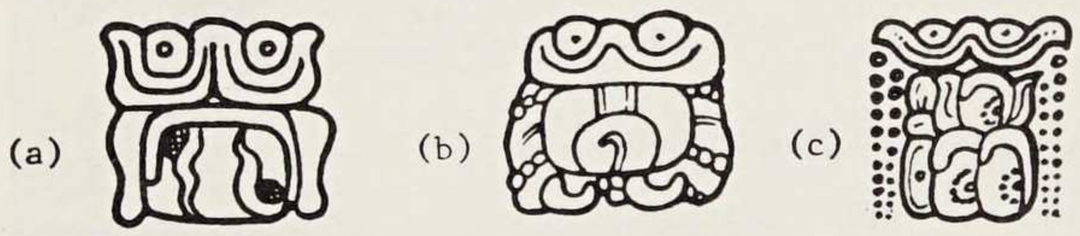

Figure 20-19. Maya hieroglyphs: star over (a) earth, (b) shell, and (c) Seibal (Lounsbury 1982:fig. 2).

edges and "rays" at the waist and hem. No skeletal imagery is present, however. Other paired star warriors also occur among the figures represented on the carved daises in both the Northwest and North colonnades adjacent to the Temple of the Warriors (Figs. 20-23 and -27). In both cases, they take the third from last and penultimate positions in the procession, suggesting that there is a preordained order for the figures depicted. Indeed, a close examination of the two daises indicates that many of the personages occur in the same relative positions on each (cf. Morris et al. 1931:335–40).

The first of the star warriors wears black face paint and a white and yellow skirt, and the second has no face paint and a red and yellow skirt (Morris et al. 1931:fig. 255, pl. 125). Like the figures on the Temple of the Warriors pier, those on the North colonnade wear pointed and rounded star-skirts (the difference between the skirts of the Northwest platform figures is less pronounced). Again, the paired figures in different skirts may impersonate two aspects of the planet Venus. How-

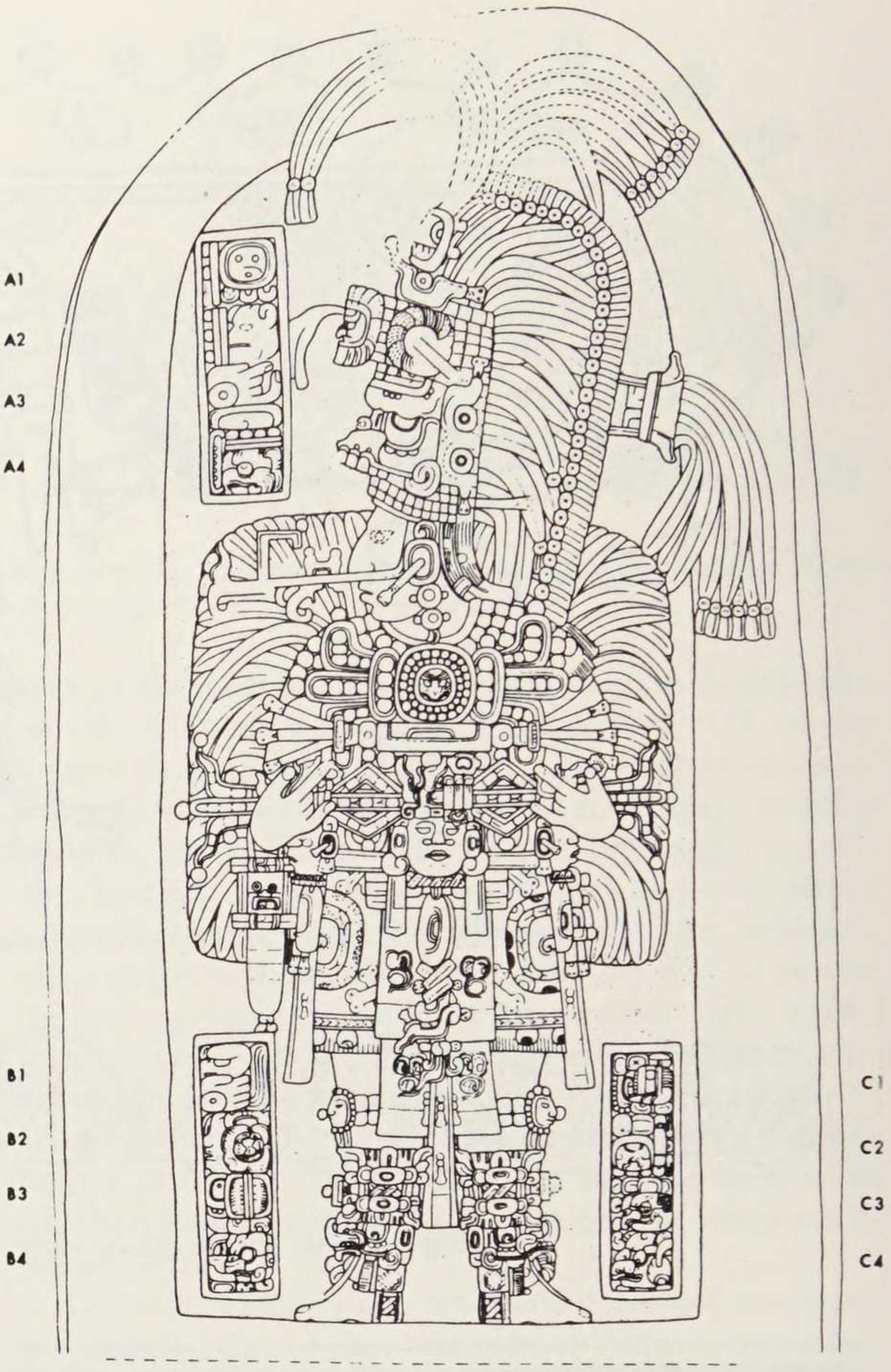

Figure 20-20. Tikal Stela 16 (Jones and Satterthwaite 1982: fig. 22).

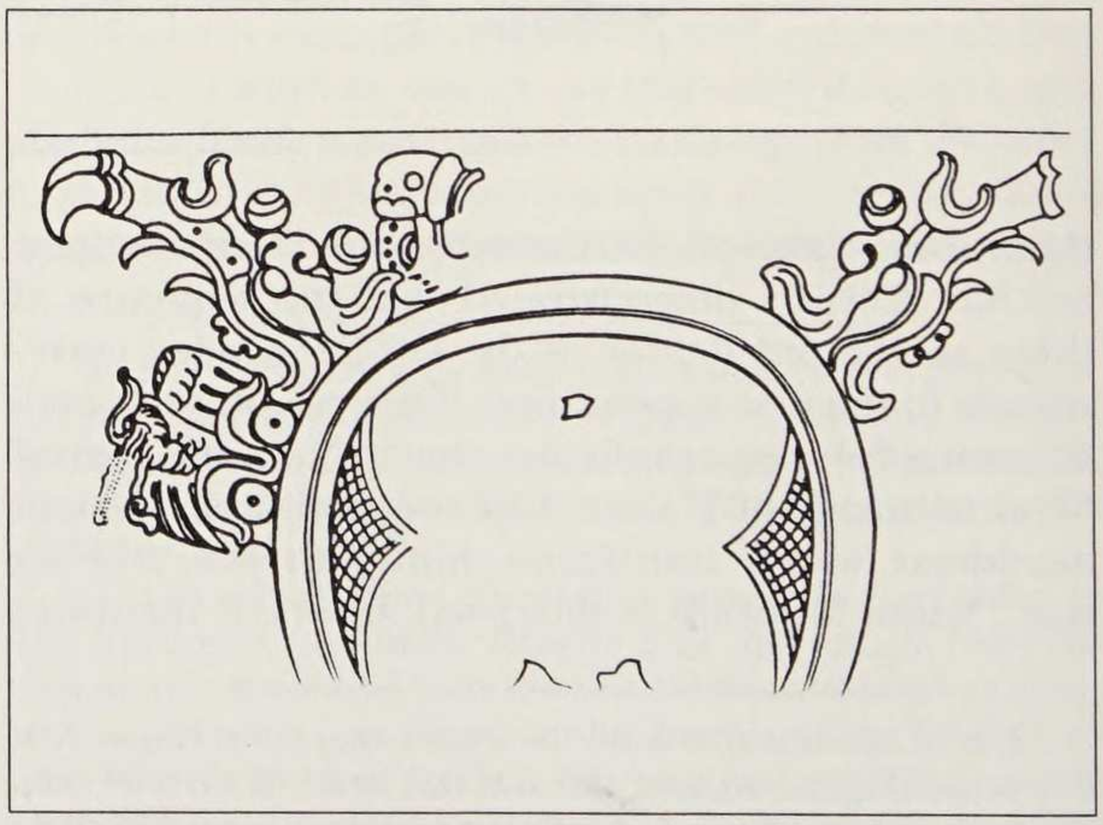

Figure 20-21. Palenque, House A, Medallion 3 (Robertson 1985:fig. 119a).



Figure 20-22. Chichen Itza, Upper Temple of the Jaguars mural, northwest wall, detail, Captain Serpent and Captain Sun (watercolor by Adela Breton, City Museum of Bristol, no. Ea 8487).

ever, the star warriors represented in murals at the site are always shown in skirts with rounded edges.

With one exception, the second figure on the Temple of the Warriors pier (Fig. 20-26, left), the star warriors always appear on the west side of carved piers. The direction itself may be less important than the position of the figures in relation to the space surrounding the structures. Whereas the star warriors on the North colonnade dais are on the south side of the platform, it is that side which faces the exterior of the colonnade and the Court of the Thousand Columns beyond. Their counterparts on the Northwest colonnade dais, like the figures on the piers, face west toward the main plaza.

Significantly, the only other warriors wearing the eye-and-ray motif as a skirt occur at Tula and Cacaxtla.[8] At Tula, two reclining figures, possibly from a roof frieze, were found in the Burnt Palace (Fig. 20-28), and a standing warrior wearing the skirt appears on a pier of Temple B (Fig. 20-29). Although reclining figures are represented on the *tableros* of the Temple of the Warriors and other structures at Chichen Itza, none are star-skirted. The skirts of the Tula figures all have the "rays" contained within the skirt rather than projecting beyond its hem; at Chichen Itza, both types of rays occur, sometimes on the same skirt.

The discovery of the murals of Cacaxtla, with their eclectic mixture of Maya style and motifs from all over Mesoamerica, has forced a reconsideration of the Late Classic relationship between central Mexico and the Maya region. As McVicker (1985:98–99) has suggested, the creators of Cacaxtla were "Mayanized" after the fall of Teotihuacan, a process that continued into the Toltec era. The murals include a battle scene that overshadows that of Bonampak in its ferociousness. Standing in the middle of the carnage is a defeated warrior who either wears a star-studded robe or stands before a painted stela (Fig. 20-30). Although the date of the battle scene and the identity of the antagonists are still uncertain, the presence of the early variant of the cen-

[8] A relief from one of the ball courts at Tula depicts a star symbol (Acosta 1944:fig. 2a). Acosta, who excavated the site, illustrates two other possible star motifs, but does not provide their media or provenience (1956–57:fig. 23, nos. 3, 4).

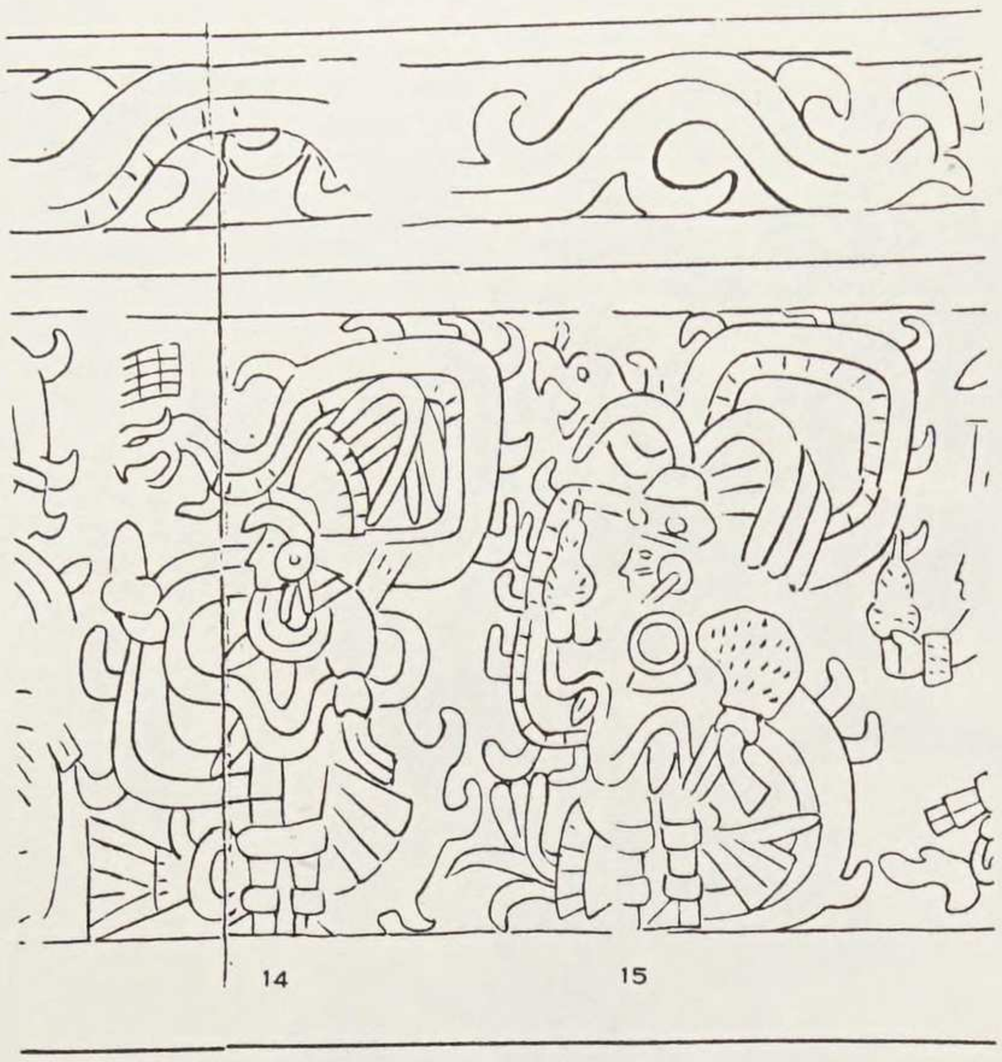

Figure 20-23. Chichen Itza, Northwest colonnade dais, west side, detail (Morris et al. 1931:pl. 124).



Figure 20-25. Chichen Itza, Northwest colonnade, column 44 (Morris et al. 1931:pl. 110).



Figure 20-24. Chichen Itza, Northwest colonnade, column 40 (Morris et al. 1931:pl. 106).

tral Mexican star sign seems to confirm its war association (Baird, in press). Two recently discovered murals at Cacaxtla depict single standing figures also framed by half-stars (Matos Moctezuma 1987:128–29). Both figures wear large versions of the eye-and-ray motif over their jaguar-skin loincloths: the eye is at the waist, with five lobes (lacking the usual pointed rays between them) forming the skirt.[9]

Although the simple eye form of the star may ornament clothing represented in central Mexican Postclassic codices, no other skirts consisting entirely of the more complex star motif occur in Mesoamerican art. In the Codex Borgia, however, various goddesses appear with their bodies or skirts marked with the star symbol. At least some of these figures may represent the Aztec deity Citlalicue, or Star Skirt, who is identified as the mother of Quetzalcoatl and associated with the Milky Way (Milbrath n.d/a:16–17, figs. 8, 9). And just

[9] One of the figures has a large scorpion's tail curling up behind it. A sculptural fragment among the heads at Group 3E at Chichen Itza depicts a scorpion, and one is also represented in the exterior frescoes on the north side of the Temple of the Warriors among skeletal figures bearing decapitated heads (Morris et al. 1931:pl. 164). The significance of the scorpion in these contexts is not known.



Figure 20-26. Chichen Itza, Temple of the Warriors, column 9 (Morris et al. 1931:pl. 49).

as a Maya lord may wear the Maya version of the star sign, a Mixtec king, One Crocodile Venus Lord, wears the central Mexican star motif at his waist (Codex Nuttall 1902:20; John Pohl, personal communication, 1988).

A star motif does occur along the non-Maya Gulf Coast, an area through which central Mexican motifs were transmitted to the Maya and vice versa, a process that apparently begins in the Early Classic, long before the founding of Chichen Itza. An undated Classic or Postclassic relief from that area displays a profile head with the star-sign attached at the back (Fig. 20-31). A fragmentary clay head in the delicate style of El Zapotal, Veracruz (ca. A.D. 600–900) wears an earlier and more realistic version of the motif over its forehead (Fig. 20-32). This type of star is particularly prevalent at Teotihuacan, where it may have originated. Variants of this star are also occasionally represented in Classic Maya art, as on the talud Structure 5D-34 at Tikal (Baird, in press:10–12) and on the serpent's body on the upper facade of the Palace of the Stuccoes at Acanceh (V. Miller, in press:36–37, pl. 22). Ellen Baird (in press) has recently suggested that this star motif, originally having aquatic and terrestrial associations at Teotihuacan, gradually acquired a death, war, and sacrificial significance both at that site and, after its collapse, elsewhere.

Given the various forms that the star motif may take, and the existence of a variant with a face replacing the eye, the presence of a star helmet in Mesoamerican iconography is not surprising. In the Chichen Itza reliefs from Group 3E, the symbolism inherent in the star skirt was transferred from body to head. Because they are unique, the identity of the men represented remains unknown. Although there is a strong tradition of ruler portraiture in Maya art, it is weaker in the northern lowlands, particularly during the Postclassic. Furthermore, despite some individuality in the faces, they have the same depersonalized, repetitive quality of most human images at Chichen Itza. Fallen warriors, or decapitated sacrificial victims, might be represented. There is no precedent for the former at Chichen Itza, however, and the heads lack the identifying features of captives at this site and elsewhere. They could, of course, simply personify Venus or the stars, but like the other star warriors at the site, they are almost certainly human actors transformed into myth.

The original placement of these stones, if known, might help to explain their meaning. One possibility is that they may once have formed a unique architectural sky band comparable to the lintel paintings of Mitla. The dimensions of the blocks as well as their tenons (Fig. 20-33) suggest that the star heads were part of a decorative molding or facade sculpture typical of many Puuc-style buildings. While such elements are normally geometric, naturalistic motifs may also occur (Fig. 20-34). Perhaps a sun disk also figured in the program: fragmentary stone disks have been found elsewhere at the site (Fig. 20-35). This kind of sky band is usually considered to be non-Maya in origin, but descending figures and down-peering heads are part of an indigenous tradition in Maya monumental art that spans the Early Classic to the late Postclassic. Although the idea of an anthropomorphized sky band is intriguing, the way the tenons were carved seems to favor a horizontal rather than a vertical placement for the blocks, however (Fig. 20-33).

Although interior spaces are more likely to be left undecorated in the northern lowlands than in the southern area where murals and stucco reliefs are common, Chichen Itza's surviving chambers include both painted and carved surfaces. The star heads may have been placed around the spring course of a room, with the faces in profile rather than looking down. A glyph band occupies this position in the outer chamber of the Red House at Chichen Itza, for example (Fig. 20-36). Structure 3E6, with which at least half of the sculptured

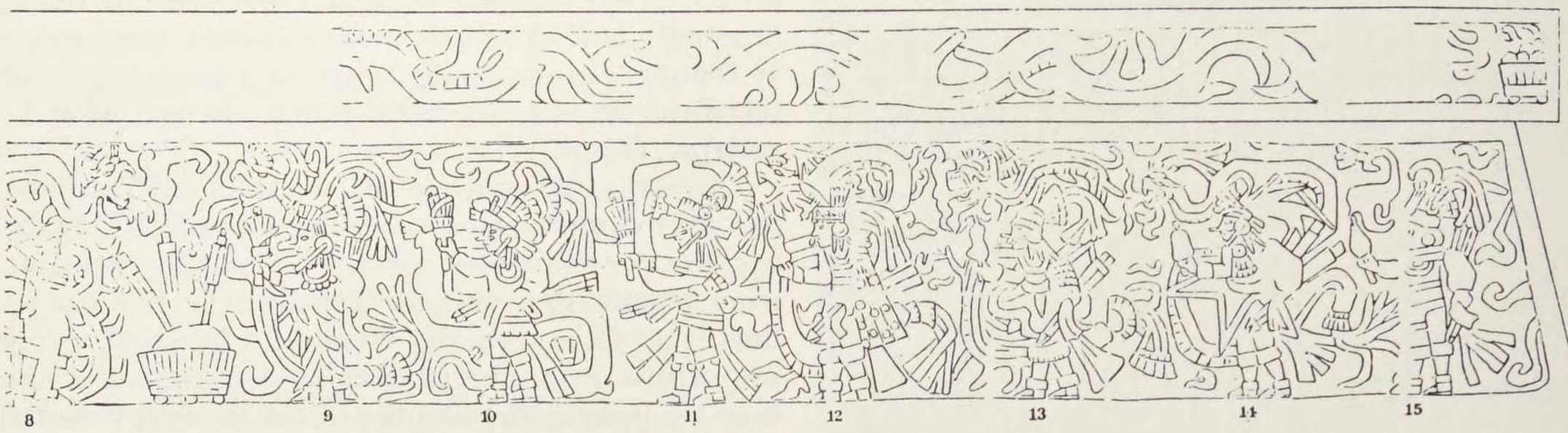

Figure 20-27. Chichen Itza, North colonnade dais, south side (east part) (Morris et al. 1931:fig. 257).



Figure 20-28. Tula, reclining star warrior from Burnt Palace, Room 1 (Acosta 1954;pl. 39).

heads supposedly were associated, had veneer vault stones in situ when examined by Ruppert (1952:86), but the star heads were not in evidence. Without more certain archaeological context, then, the original placement of the heads remains unknown.

But other questions remain regarding these and the other star warriors at the site. One, of course, is the question of dating the star warrior motif. Theoretically, the eye-and-ray symbol is not supposed to occur before the Postclassic (and possibly the late Postclassic) anywhere in Mesoamerica, although an earlier version is extant at Teotihuacan and elsewhere. But elements of the Mixteca-Puebla style, generally associated with the late Postclassic, are known from as early as the ninth century, by which time Chichen Itza was certainly occupied (Nicholson 1982; Smith and Heath-Smith 1980). In fact, defining the nature, extent, and dates of the Mixteca-Puebla style has proven to be as controversial as it has been for Chichen Itza. Even if Chichen Itza and the Mixteca-Puebla style could be proven to be contemporaneous, why would the former adopt and adapt the eye-and-ray motif in place of the long-lived Maya star symbol? The very late east-coast murals of Yucatan, much more foreign in appearance than anything at Chichen Itza, include sky bands, but not star warriors, which are unique to Chichen Itza and Tula.

And what of Tula? The superior quality of the art and architecture of Chichen Itza, the supposed loser

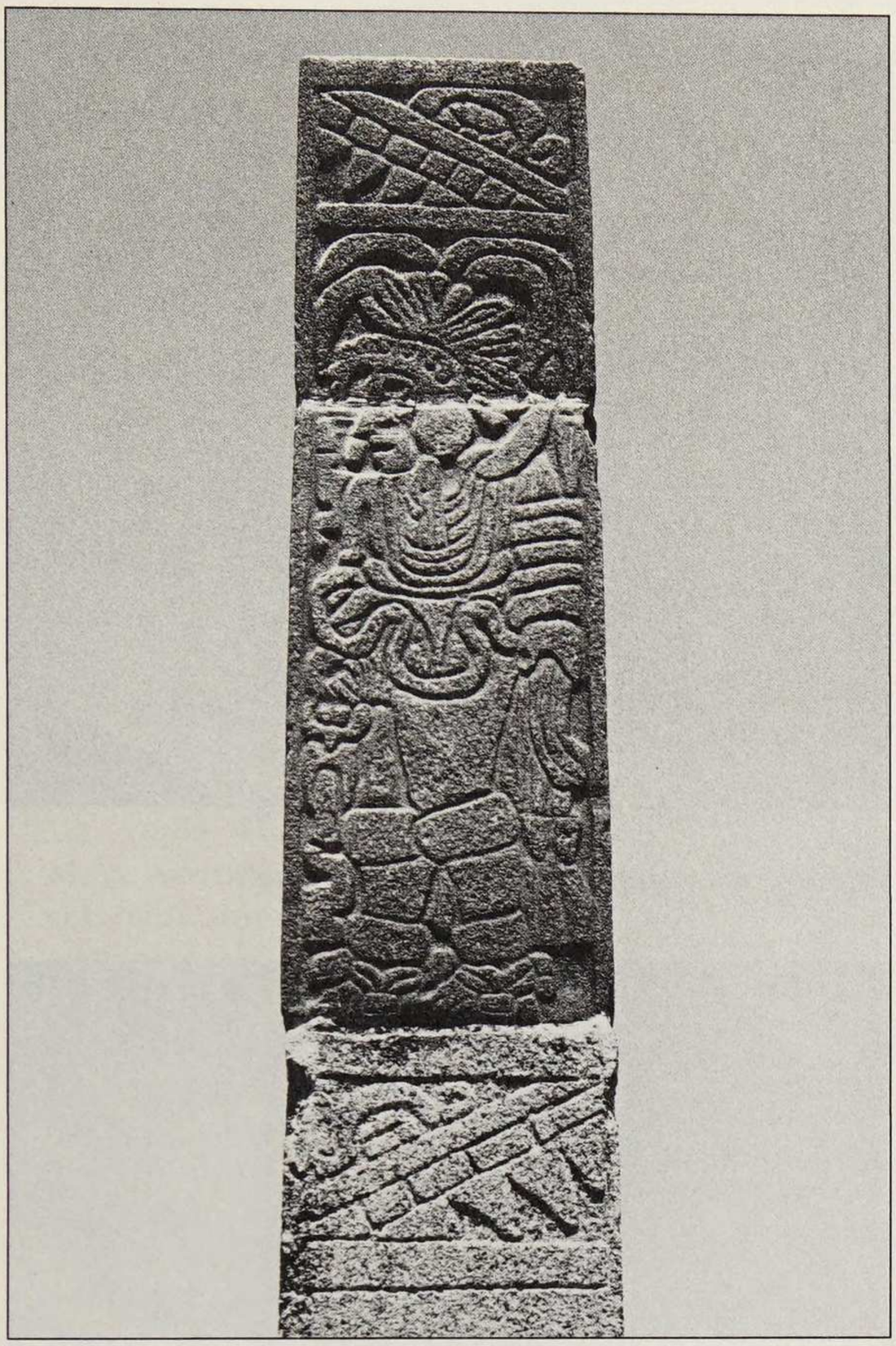

Figure 20-29. Tula, Structure B, pilaster 8 (Acosta 1941:fig. 4).



Figure 20-30. Cacaxtla, Structure B substructure, west talud, detail (McVicker 1985:fig. 5).

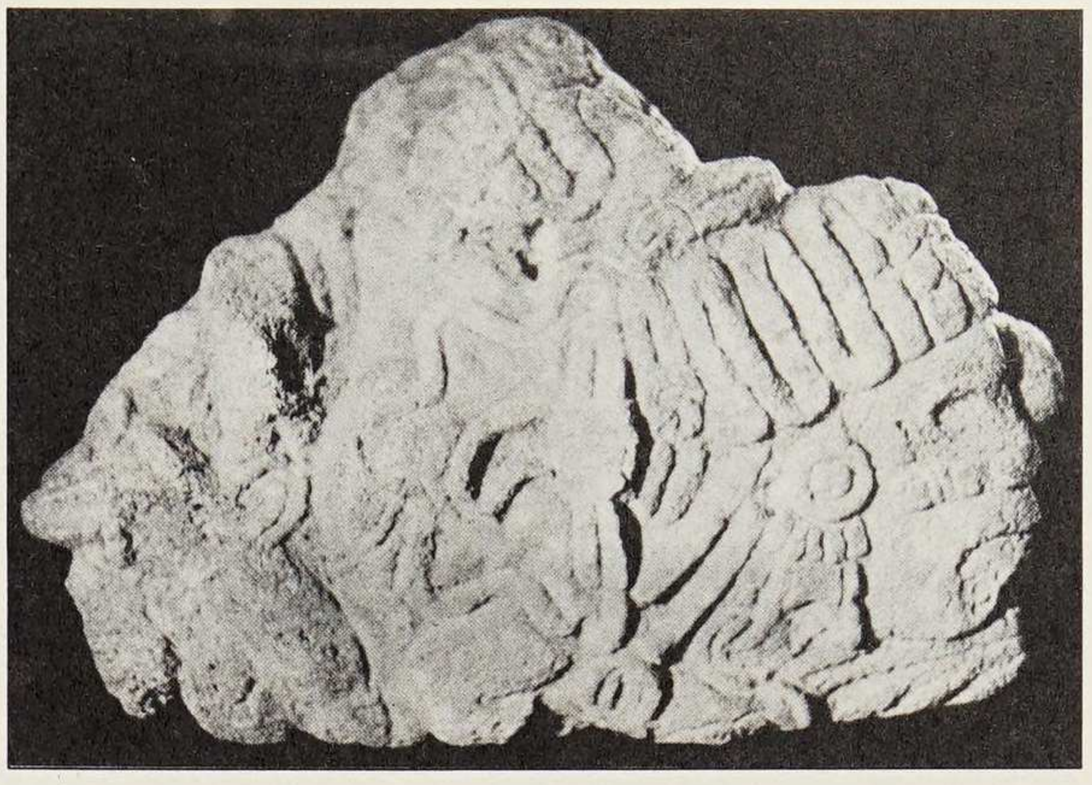

Figure 20-31. Gulf of Mexico, head in serpent jaws, relief (Labbé 1982:cat. no. 92).



Figure 20-32. El Zapotal, Veracruz, monumental earthenware head (Graulich et al. 1985:pl. 91).

in a clash with the Toltecs, has long puzzled scholars, and art historians in particular. The presence of so many examples of the star motif at Chichen Itza, particularly as a scalloped skirt, and of only three such skirts at Tula lends credence to the idea first proposed by Kubler (1961) that the influence went from Yucatan to central Mexico and not in the reverse direction. At the very least, it suggests a much more complex scenario involving the simultaneous development of both centers and the creation of a shared cosmopolitan artistic style.

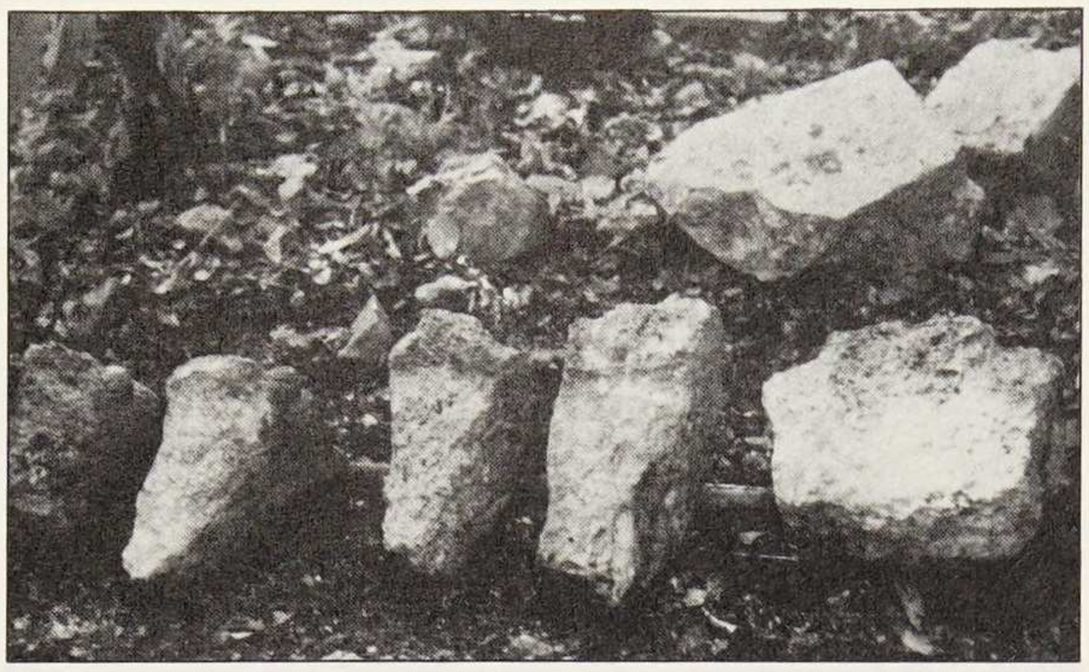

Figure 20-33. Chichen Itza, Group 3E, rear view of star heads.

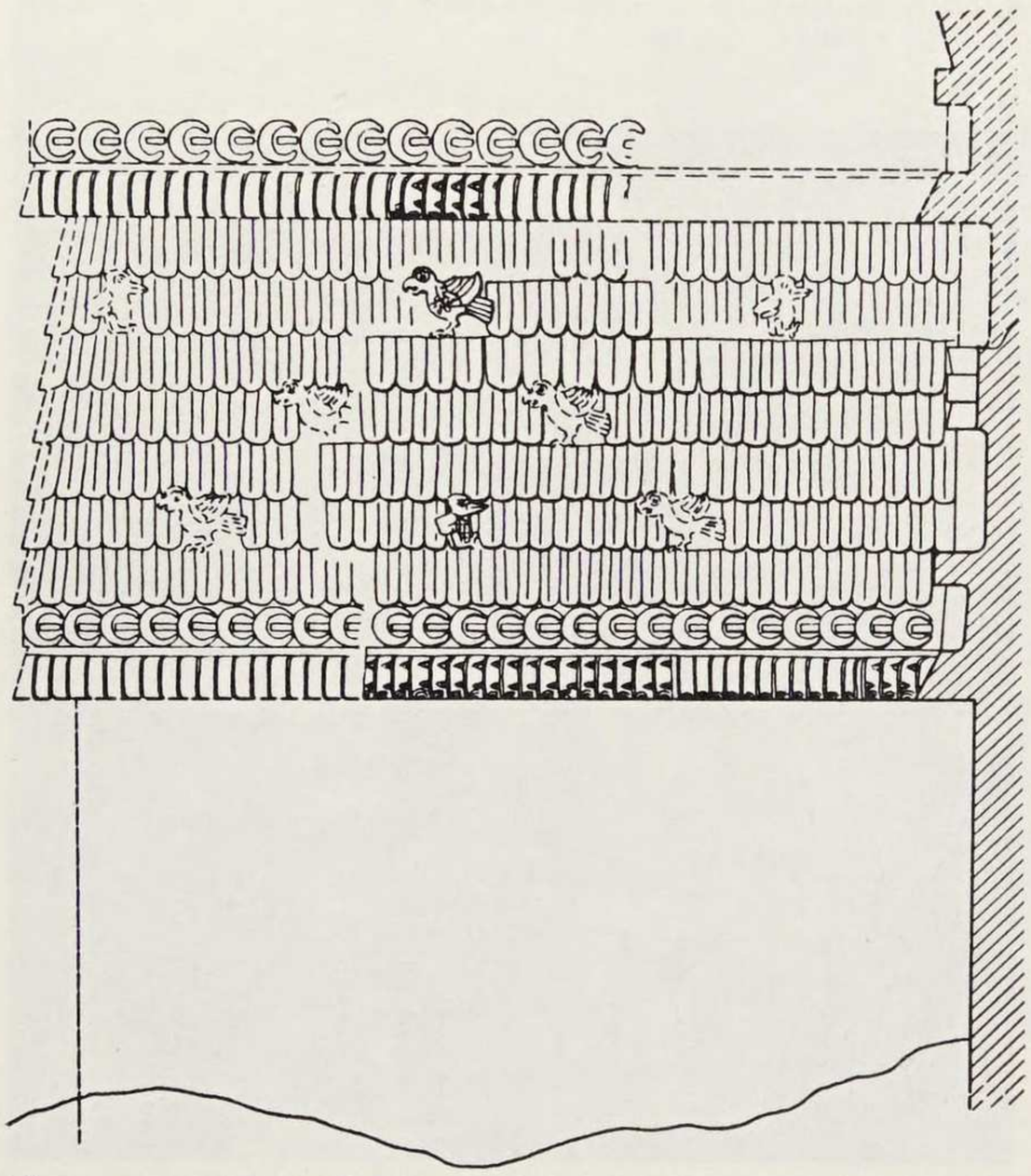

Figure 20-34. Uxmal, House of the Birds, restored elevation of north facade outside room 7 (Pollock 1980:fig. 420).



Figure 20-35. Chichen Itza, Sun disk, 4G1–146.



Figure 20-36. Chichen Itza, Red House, outer chamber, detail showing glyphic spring course.

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21

Reptiles and Rulership: A Stylistic Analysis of Peten Postclassic Pottery

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This paper presents an interpretation of the reptilian and associated imagery appearing on small but distinctive quantities of Postclassic Maya pottery from Peten, Guatemala. As discussed elsewhere and reviewed below, the reptiles on this pottery are thought to signify elite status, falling within a system of elite symbolism that is widespread throughout Postclassic Mesoamerica (P. Rice 1983). In addition, the reptilian motifs are interpretable within the context of rainfall and agricultural fertility symbolism (P. Rice 1986b). My intent here is to use these ideas about reptiles and related themes on the pottery as a basis for attempting a broader perspective on the nature of rulership in the Postclassic period in Peten.

BACKGROUND: MAYA HISTORY AND COSMOLOGY

The pottery of interest here was recovered primarily during the course of excavations by the Central Peten Historical Ecology Project (CPHEP) around six lakes in the central and northeastern part of the Department of El Peten, Guatemala (Fig. 21-1). Between approximately A.D. 300 and 830, central Peten constituted the heartland of the "Classic" Maya civilization, well known for its ceramic and sculptural art and monumental architecture. Many of the motifs, symbols, and themes of the "high" or political art of the Late Classic Maya establish the legitimacy of divine or semidivine rulers, and the responsibilities of that office.

During the ninth and tenth centuries, Peten Maya elites suffered an erosion of their power bases, and the society experienced a breakdown in its hierarchical social and settlement organization. These strains, evidenced by a decline in building construction, monument carving, and polychrome pottery production, are referred to by Maya archaeologists as the "collapse" of that civilization. Traditional reconstructions of the "collapse" postulate a depopulation of central Peten, and the area was thought to have been virtually deserted until the mid-fifteenth century or so. At that time, according to native legends, Itzá Maya populations fleeing the collapse of Mayapan, lying to the north in Yucatan, moved southward to settle in what is now Peten.

CPHEP excavations in the lakes area have forced a reevaluation of this scenario, however. The lakes region seems to have been a focus of settlement continuity and sociopolitical reorganization in the centuries both during and after the "collapse." During the Terminal Classic period (A.D. 830–950), the population decline in the basins was less severe than in areas closer to the centers, and these lacustrine settlements subsequently served as nuclei for the development of Postclassic societies in Peten. Postclassic sites in this area are notable for their dense settlement and construction on the islands and peninsulas in the lakes (D. Rice 1986).

In comparison to Postclassic and early Historic period Maya societies to the north in Yucatan, little information is available on the nature of Postclassic societies in Peten, either through native histories or early Spanish documents (cf. Hellmuth 1971, 1977; Thompson 1951). What we do know from ethnohistoric observations is that the sixteenth-century inhabitants of the Peten lakes region were called "Itzá," they were apparently organized into several mutually hostile communities or regions, and they participated in the extensive trading activity around and over the Yucatan peninsula between Mexico, southern Mesoamerica, and beyond (Jones 1983). Other social and political details have been summarized from the original sources by Thompson (1951; see also Hellmuth 1971), who mentions the existence of dual chieftainship (i.e., a head chief together with a high priest). In addition, four barrio-based subchiefs had subordinate roles under the chiefs. The distribution of multiple structures or complexes of presumed elite and/or civic ceremonial function at Postclassic sites in the lakes region reflects this type of organization (D. Rice 1986). It is of interest that a similar political organization of dual chiefs and four subchiefs is reported among the Postclassic Quiché (Fox 1981:334) and Cakchiquel (Guillemin 1977:246) Maya

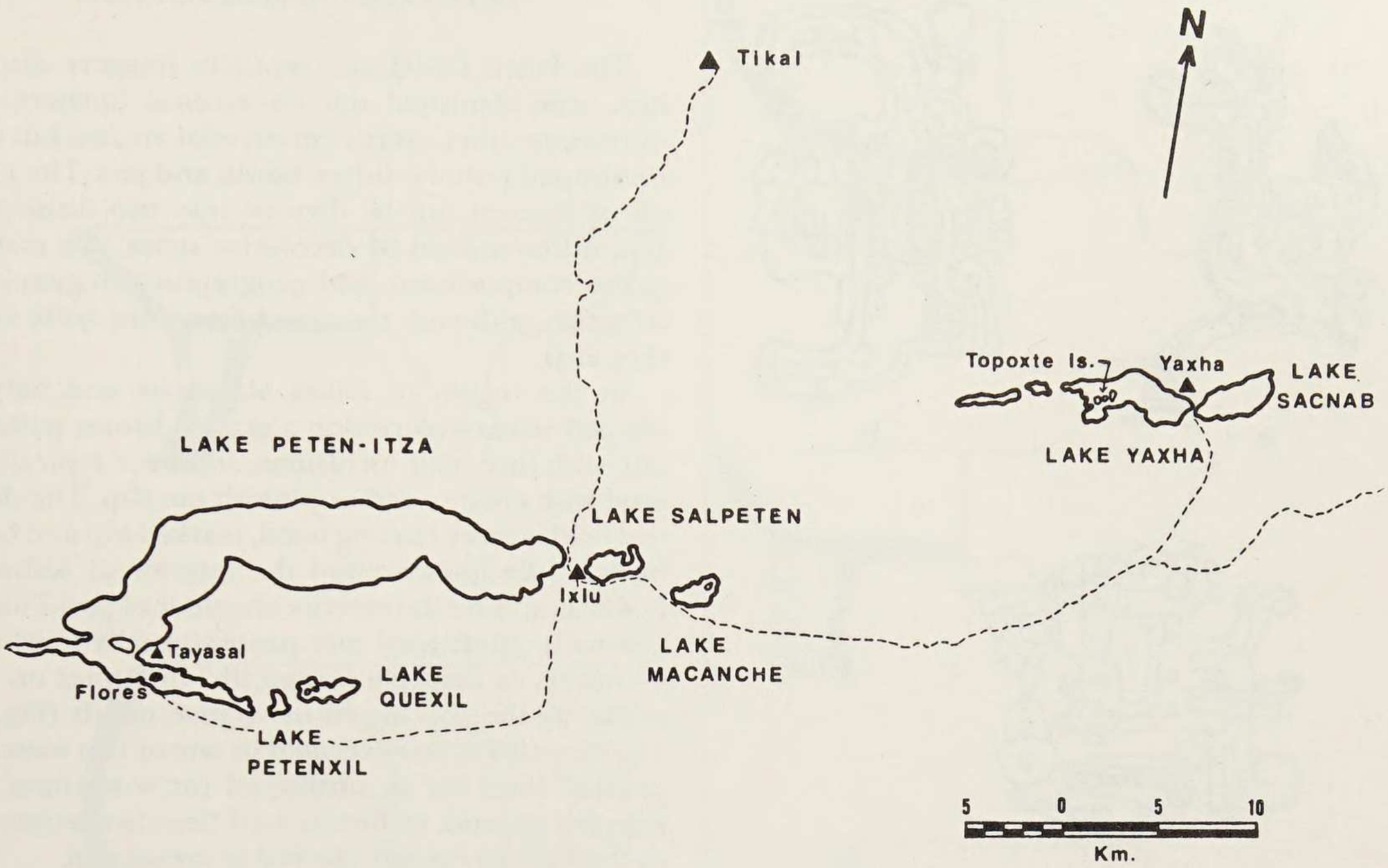


Figure 21-1. The lakes of central and northeastern Peten, Guatemala.

in the Guatemalan Highlands and is also visible archaeologically through architectural complexes.

The rich and complex iconography of the Classic and Postclassic periods among the Lowland Maya reveals that serpent and reptilian themes played a prominent role, being visible on architectural embellishments, mural paintings, stela sculpture, and painted, carved, and modeled pottery (Fig. 21-2). The interpretation of these themes derives not only from their artistic context and associations but also from parallels in myth and cosmology as described in native chronicles and ethnohistoric accounts of both Lowland and Highland Maya.

At the core of Maya cosmology—functioning as "key elaborating symbols" or "root metaphors" (Ortner 1973)—are several reptilian (ophidian and saurian) entities. For example, earth and sky are represented by reptilian "monsters" (Schele and Miller 1986:45–46). The Cauac Monster is associated with agricultural fertility, earth, soils, and recipient of rain and is usually shown as a caimanlike frontal head, often depicted with a tree or corn plant sprouting from its mouth or forehead. Terrestrial reptiles are also associated with the Underworld and death; serpents and serpent symbolism are prominent in sculptural scenes of Classic funerary ritual and on the exquisitely painted mortuary pottery in royal tombs (Coe 1973, 1975; Quirarte 1979; Adams 1977). The Celestial Monster or Bicephalic Monster has two snouted heads and a crocodilian body, with opposed Venus and sun signs suggesting a representation of the sun's journey through the sky and the Underworld. Associated with the heavens, sky, sun, Venus, and rain, the Celestial Monster sometimes has a body formed of a sky band, composed of planetary symbols. These may also form the border designs for scenes for royal personages, the "serpent bar" held by lords portrayed on stelae, and the "celestial bands" above the figures' heads. All assert the divine status of Classic Maya rulers.

The sociopolitical and demographic upheavals of the Classic-to-Postclassic transition and the later Spanish Conquest might seem to have been sufficient to create major disjunctions in the form and meaning of traditional cosmological structures, myths, and rituals as well as their material paraphernalia and symbols. This does not appear to have been the case, however: reptilian deities and themes continued to be prominent among the Postclassic and contemporary Maya of both highland and lowland regions (see Joralemon 1976: 58–59). For example, one of the principal gods of the Itzá Maya in both Yucatan and central Peten in the early seventeenth century was Itzamna Kauil, or "Boun-

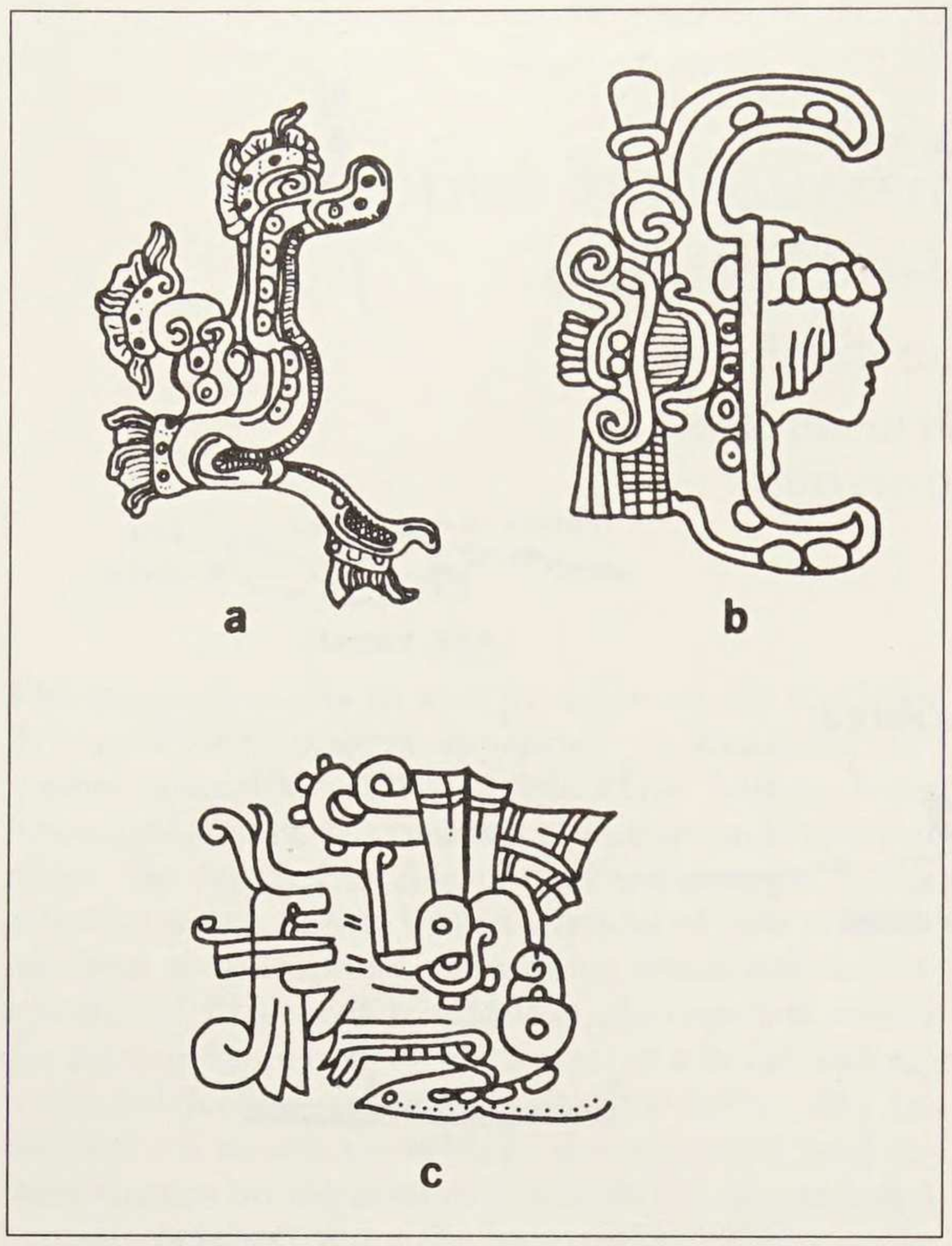


Figure 21-2. Examples of serpent and reptilian themes in Maya art and archaeology. (a) Lintel 25 from Yaxchilan, showing jaws of the "vision serpent" (human head missing); (b) facade ornament from Uxmal, showing human head in snake jaws; (c) God K head on the body of a snake, from Codex Madrid, 31.

tiful Harvest Lizard" (Thompson 1951:199), and an idol representing this deity was noted at the Itzá capital of Tayasal in Lake Peten-Itza (Roys 1933:153, n5, citing an unpublished translation of Avendaño). Crocodilian creatures appear in the headdresses of gods and priests represented in the Postclassic effigy censers found all over the lowlands, and a crocodile mask of clay has been found at Lamanai (Pendergast 1981).

Considerable continuities are evident between the Classic and Postclassic periods in the occurrence and significance of reptilian creatures. Thompson (1970:210) has suggested that these continuities are most apparent with respect to rain-related reptilian associations. Whether or not this is true, it can be seen that for the Classic and Postclassic Maya alike, reptilian and serpent creatures were symbols of supernatural, natural, and social order, the latter being specifically associated with the guardians of that order, Maya rulers and priests.

REPTILE REPRESENTATIONS ON PETEN POSTCLASSIC POTTERY

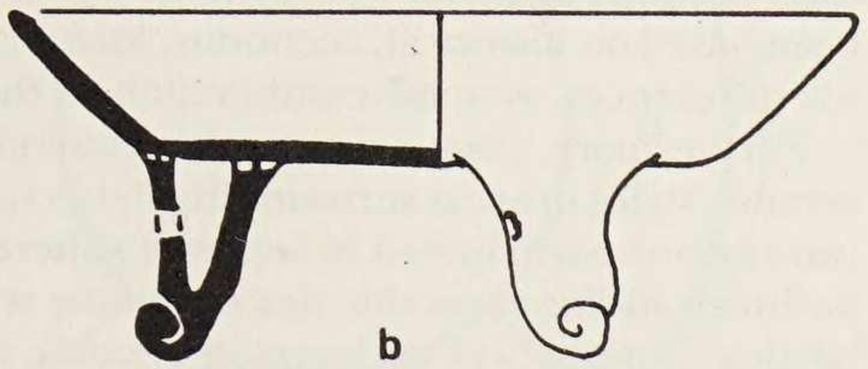
The Peten Postclassic reptilian imagery discussed here was identified not on incense burners, headdresses, or other overtly ceremonial arcana, but rather on slipped pottery dishes, bowls, and jars. The materials of interest can be divided into two distinct data sets, differentiated by decorative styles, raw materials (paste composition), and geographical region of distribution, although the vessel forms are quite similar (Fig. 21-3).

In the region of Lakes Macanche and Salpeten, slipped wares occurred in a grayish brown paste, usually with tiny snail inclusions, and were typically covered with either a red or pinkish tan slip. The decorative field is an encircling band, marked top and bottom by multiple lines around the interior of dishes and bowls or around the exterior shoulder of jars. This field is usually subdivided into panels (usually four) either by means of multiple formal dividing lines or, informally, by the spacing of decorative motifs (Fig. 21-4). The decoration was executed in one of two ways: black painted lines on an unslipped (or sometimes white slipped) ground, or fine-incised lines (sometimes with excised areas) cut into the red or cream slip.

Of the few clearly identifiable motifs in these panels, the most striking is a reptilian creature occurring in three variants (see also P. Rice 1983): a "naturalistic" profiled reptilian head (Fig. 21-5a), a frontal or quasi-"split-representational" (perhaps open-mouthed) form (Fig. 21-5b), and a stylized plume and eye (Fig. 21-5c) that is directly comparable to the well-known "reptile eye" or RE glyph (von Winning 1961). Occasionally the reptiles were coupled with mat or braid motifs (Fig. 21-5a and b), which are themselves sometimes seen as reptilian symbols (e.g., scale markings or intertwined snake bodies; see Robicsek 1975). In such combinations, the reptile is almost always the primary motif. Although the mat sometimes alternates with the reptile in panels, more often the mat or twist is a secondary motif, placed as a divider between reptilian panels or as a narrow circumferential band above the main paneled field.

These incised and polychrome painted vessels are the common styles in the central area around Lakes Macanche and Salpeten and westward to Lake Peten-Itza. It may be significant that there is some basis for tentatively identifying the former region with the ethnohistoric Yalain or Alain, translated as "alligator

Figure 21-3. Peten Postclassic slipped vessel forms. (a) Tripod bowl with bulbous feet; (b) tripod dish with scroll feet; (c) tripod dish with cylindrical feet; (d) restricted orifice bowl; (e) bowl; (f, h) collared bowl; (g) jar with vertical neck.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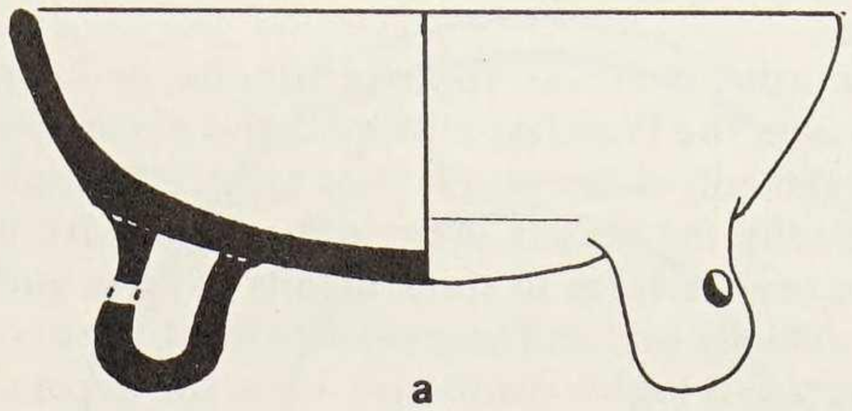
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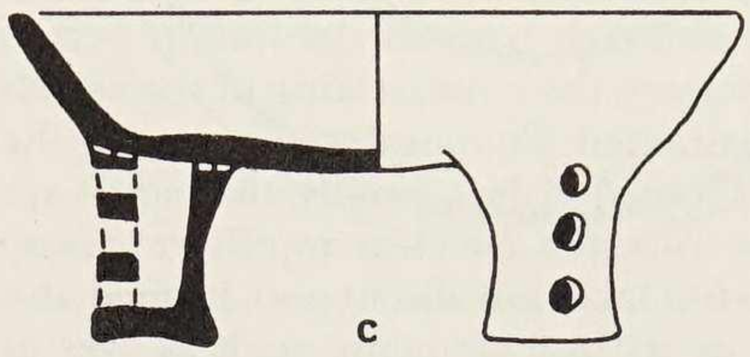
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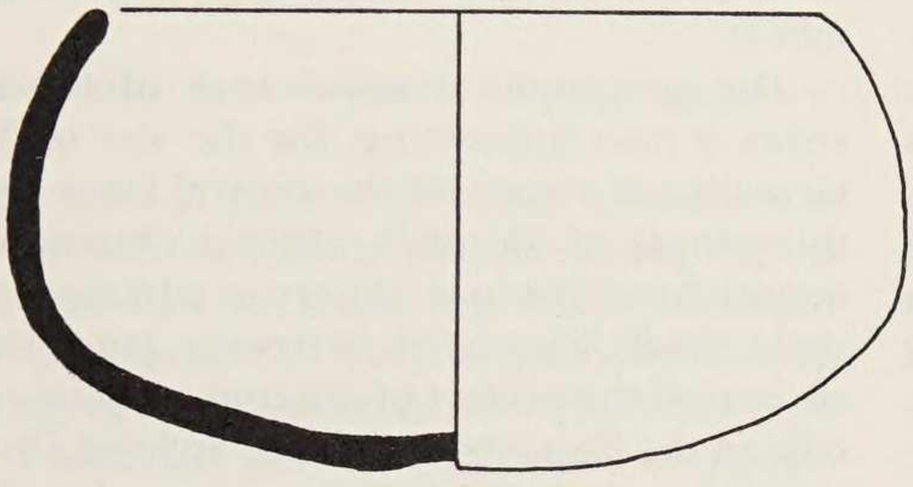
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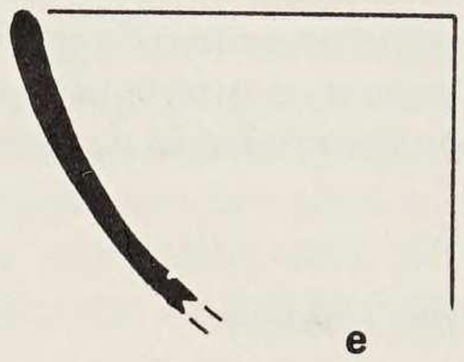
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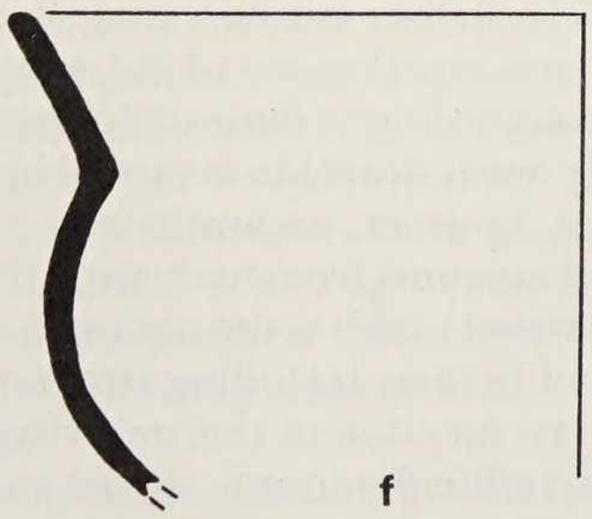
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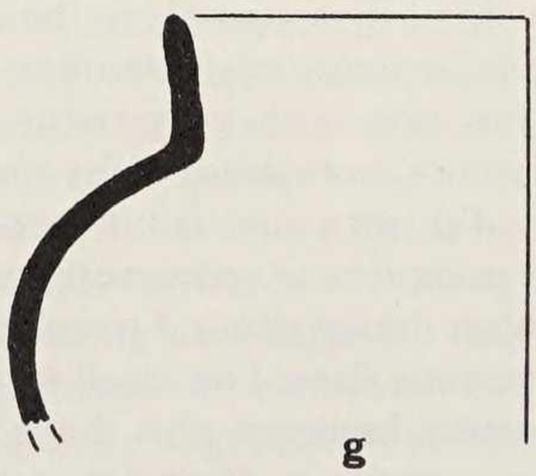
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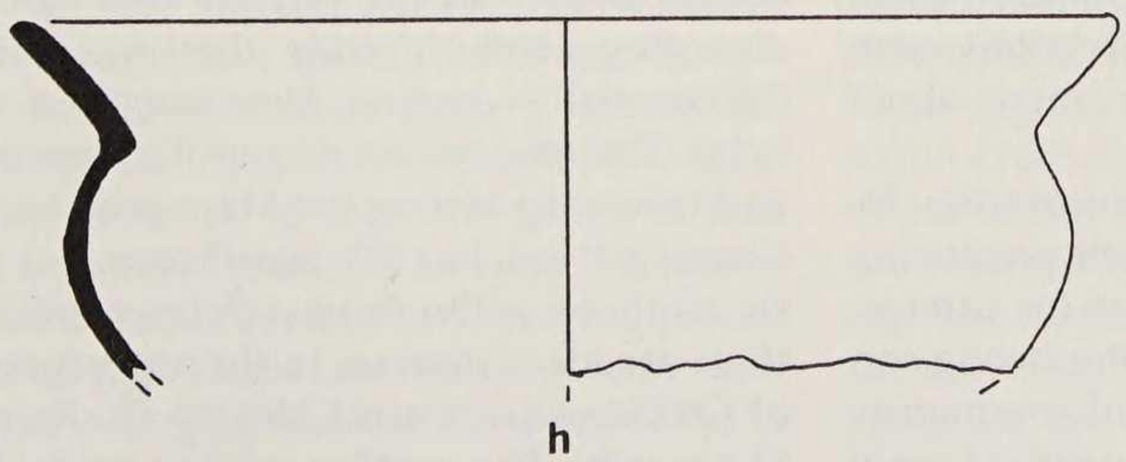
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skin" or "son of the alligator" (Jones, personal communication).

To the northeast at the Topoxte Islands, in Lake Yaxha, however, the Postclassic slipped and decorated pottery is markedly different (P. Rice 1979). Although morphologically the vessels differ only slightly from those of the central lakes in some details of form and proportion (chiefly wall and base orientations), the decorative program is highly distinctive. First, the decorative technique of most of the Topoxte pottery is unusual, emphasizing dark red paint on a cream colored (the unslipped paste) ground; polychromy and incising are rare, and tan slips are not present. Second, Topoxte pottery is also distinctive by virtue of its decorative structure: although banded decoration occurs on some of the pottery, the most striking of the vessels feature a nonpartitioned, sinuous design covering the entire interior of footed dishes. Finally, the motifs are quite different at Topoxte: the clear reptile representations of the central lakes are absent and, instead, dislocated abstract or stylized elements, such as eyes or feathers (circles, dots, swirls, J-shaped elements, combs), are typically identifiable. One vessel (Fig. 21-6) depicts a strange creature that is virtually impossible to identify, but it shows the closest parallels to the "crested dragon" (Fig. 21-7) on a gold ornament from Sitio Conte in Panama. In addition, mat or twist motifs are not as frequent on the Topoxte material as in the pottery from the central lakes.

DISCUSSION

The distinctive decorative styles and motifs on the two categories of Postclassic pottery in Peten prompted further inquiry into the role of these vessels in the society. The vessels could not be definitely identified as ritual or ceremonial in function, either by virtue of their forms (e.g., they were not *incensarios*) or by their context of recovery (they did not come from caches, burials, or temples). The pottery was recovered from construction fill and midden debris around primarily residential structures of various sizes. The small quantities of this decorated pottery, however, plus the critical role of reptile and mat motifs in Maya iconography, suggested that there was something important about how these vessels were used and who used them that bore further investigation. Four directions were pursued, leading to the following observations about Peten Postclassic history.

Although early studies of ceramic decoration focused on the sharing of elements between producing (residence-cum-learning) units as a focus for interactions, more recent studies have stressed the strong correlation between decorative structure and community identifications (e.g., Friedrich 1970; Hardin 1984; Arnold 1984). Thus, the two distinct decorative structures or styles of Peten Postclassic pottery and their geographical distributions (Macanche/Salpeten versus Topoxte) indicate at least two separate "ceramic identities" in the region during the Postclassic. Ethnohistoric reports of mutual hostility among Peten communities in the sixteenth century may be a late expression of such distinct patterns of social interactions, which could have been based on historical, economic, ideological, or ethnic differences, or some combination of these factors.

Furthermore, comparisons with contemporaneous ceramic styles in areas surrounding Peten suggest these two regions participated in separate spheres of social, political, and/or economic ties. Given the stylistic similarities, Topoxte was exchanging ceramic ideas or interacting at some levels with the highlands (see Fig. 21-8) and with the east coast of Yucatan; whereas the ceramic ties of central Peten appear to have been directed more immediately toward the north, to Yucatan, if decorative structures are any indication (P. Rice 1983, 1986a).

The geographical occurrence of the two pottery styles is also interesting, for the site of Topoxte has virtually no pottery of the central lakes style, whereas the people of Macanche Island obtained significant quantities of Topoxte pottery in addition to their local products (P. Rice 1987). Moreover, late in the Postclassic period the potters of the central lakes seem to have copied the Topoxte unbanded style of allover decoration using dark red paint on some of their local gray paste wares (P. Rice 1987:133–35). Topoxte potters, however, did not copy the conspicuous reptile and mat motifs of their neighbors to the west. It is also worthy of note that the Postclassic slipped pottery of Tipu, in western Belize, was executed according to the decorative structural canons of the central Peten lakes rather than according to those of Topoxte, which is geographically much closer. As for actual imports of pottery from Peten, however, excavations at Tipu yielded roughly equal amounts from both areas (P. Rice 1985).

Related to this is the notion that styles (broadly construed here as including structures, motifs, and technology) function to transmit visual information about group affiliation (rank, status) and boundaries (Wobst 1977). Thus, the serpent/reptilian imagery on Peten Postclassic pottery in the central area can be seen as an emerging semiotic code that was shared—perhaps differentially—among Mesoamerican elites (P. Rice 1983). The association of reptilian symbols with elites and rulership among the Maya goes back well into the Classic period, but it is significant that in the Postclassic all three of the central Peten reptilian representations are also common in the art (especially ceramics) of Oaxaca and central Mexico (P. Rice 1983; see also Sharp 1981). The reptiles evident on the Postclassic pot-

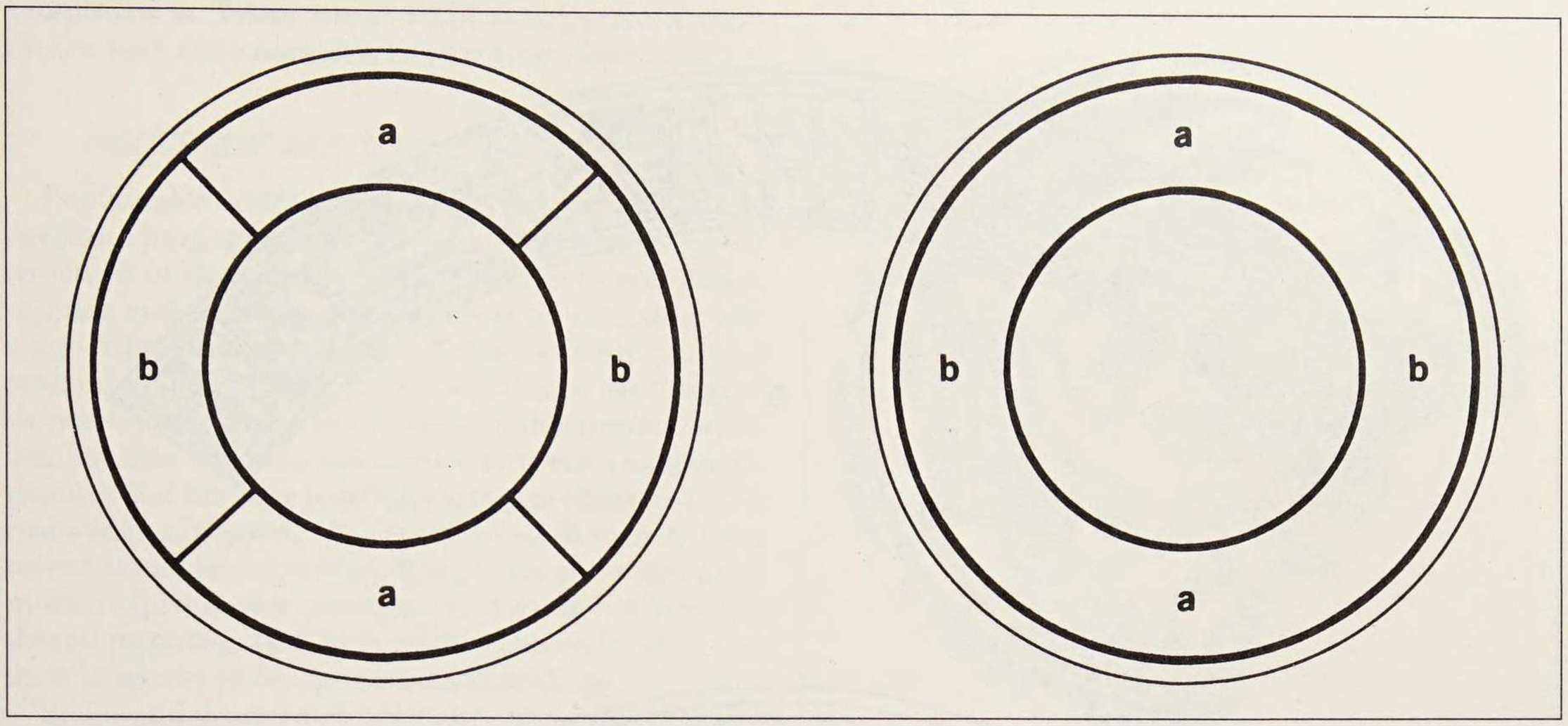


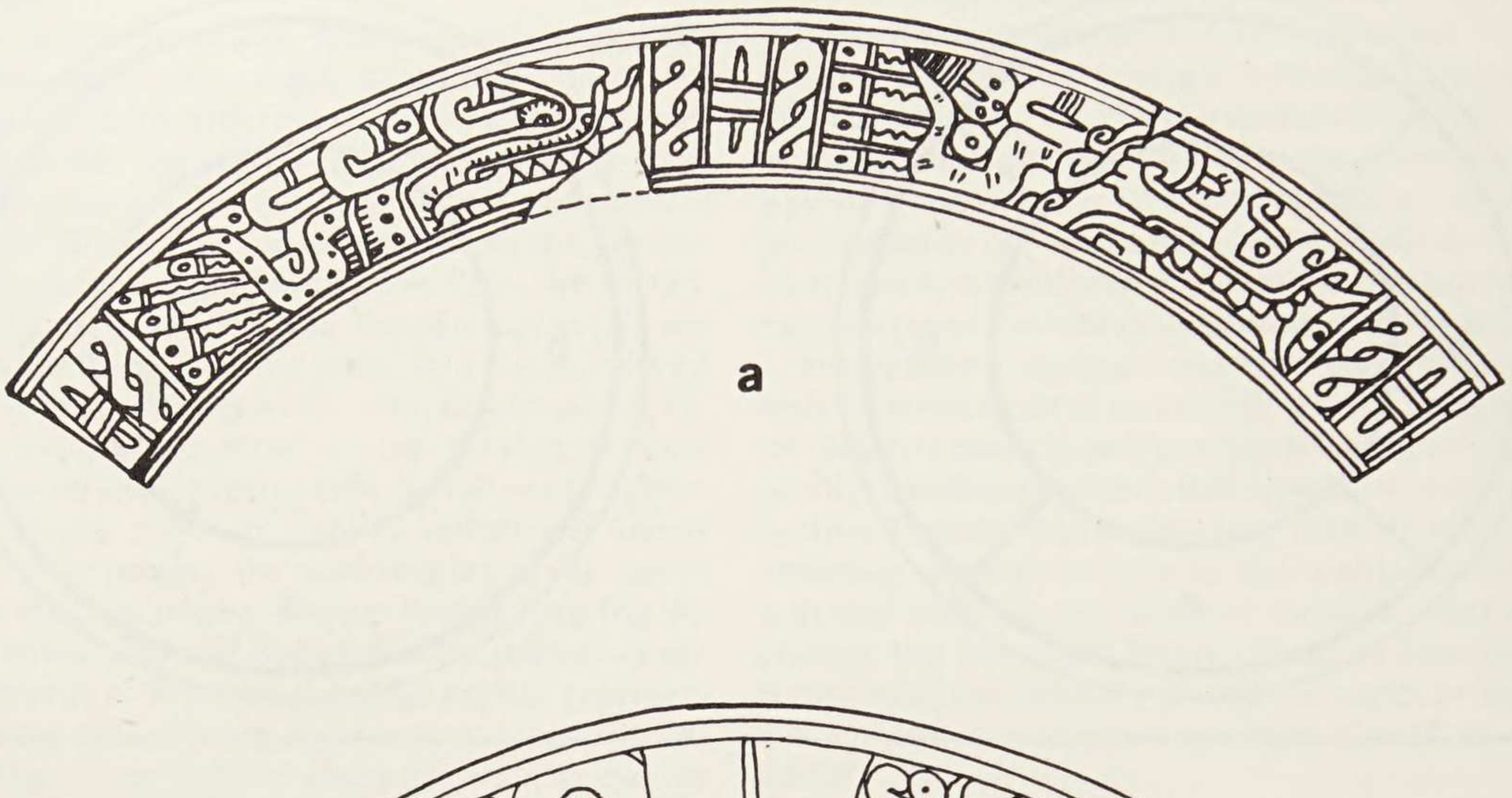
Figure 21-4. The design field of tripod dishes showing placement of alternating motifs (a and b) within the band.

tery from the central lakes may reflect some sort of syncretism between traditional Classic deities, such as Itzamna (and related entities), and later "Mexican" feathered-serpent deities. A similar process of ideological and iconographic fusion occurred in the Maya highlands in the Postclassic period (Fox, personal communication).

Because of the complex polymorphic character of reptilian creatures in Maya cosmology and iconography, it is difficult to tie these representations on the Postclassic pottery to any individual deity. For that reason it may be better to treat them as part of a "thematic cluster" of related deities (Kubler 1967). In the Postclassic pottery of Macanche and Salpeten, this particular reptile "cluster"—and by extension the functions of the pottery vessels themselves—can probably be associated with calendrical and/or agricultural ceremony, and perhaps more precisely with rainfall ritual (P. Rice 1986b). The following observations are important in this regard.

Postclassic Maya serpents/reptiles have broad iconographic ties (e.g., via their eyes and long snout) to rain gods found all over Mesoamerica that exist in multiples (usually four) and have specific color associations with the four cardinal directions. Pottery jars are depicted in Mesoamerican codices as being held by these rain gods and are inverted to show the giving of rain (Fig. 21-9). Also, a pottery "plate of the katun" is associated with the calendrical ceremonies involving priests and/or rulers at 20-year katun intervals and with their confessions to the rain god (Edmonson 1982:86, 87). A recent study has suggested that during the Late Classic, Maya scribes used interchangeably the signs for four, snake, serpent body, sky, and the katun head (Houston 1984:800). In addition, the colors used in the Postclassic vessels—principally red and cream with black outlining—are those associated with rain and fertility in Maya directional/color symbolic codes: both "red rains" and "white rains" (from the east and north, respectively) are said to be "good" rains (Thompson 1970:263).

Finally, the appearance of "mat" (also braid or "twist") motifs in the polychrome and incised pottery of the central lakes provides further evidence of continuity of ideas concerning rulership. The mat is a traditional Maya symbol of rulership and authority—the "seat of power"—in both Classic (Thompson 1960: 326) and Postclassic (Roys 1933:66, 111) periods. Elaboration of symbols of authority on pottery from Lakes Macanche and Salpeten, but not at Topoxte, may be significant because these two lakes lie closer to Taiza (Tayasal), which is said to have become the "cycle seat" or "holy city" of the Lowland Maya after A.D. 1461 (Edmonson 1982:225, 227). Mats or twists on the pottery call further attention to calendrical ritual because the mat symbol, *pop*, is the first of twenty months of the Maya 365-day solar calendar. In addition, the 20-year katun cycles are referred to in the chronicles by means of mat imagery: rituals beginning or ending the katun are referred to metaphorically as rolling up or counting "the mat of the *katun*" (Roys 1933:165). Furthermore, the use of mat or twist motifs as dividers of the design space on the Postclassic pottery has a parallel on the sides of sculptured altars in Late Classic twin-pyramid



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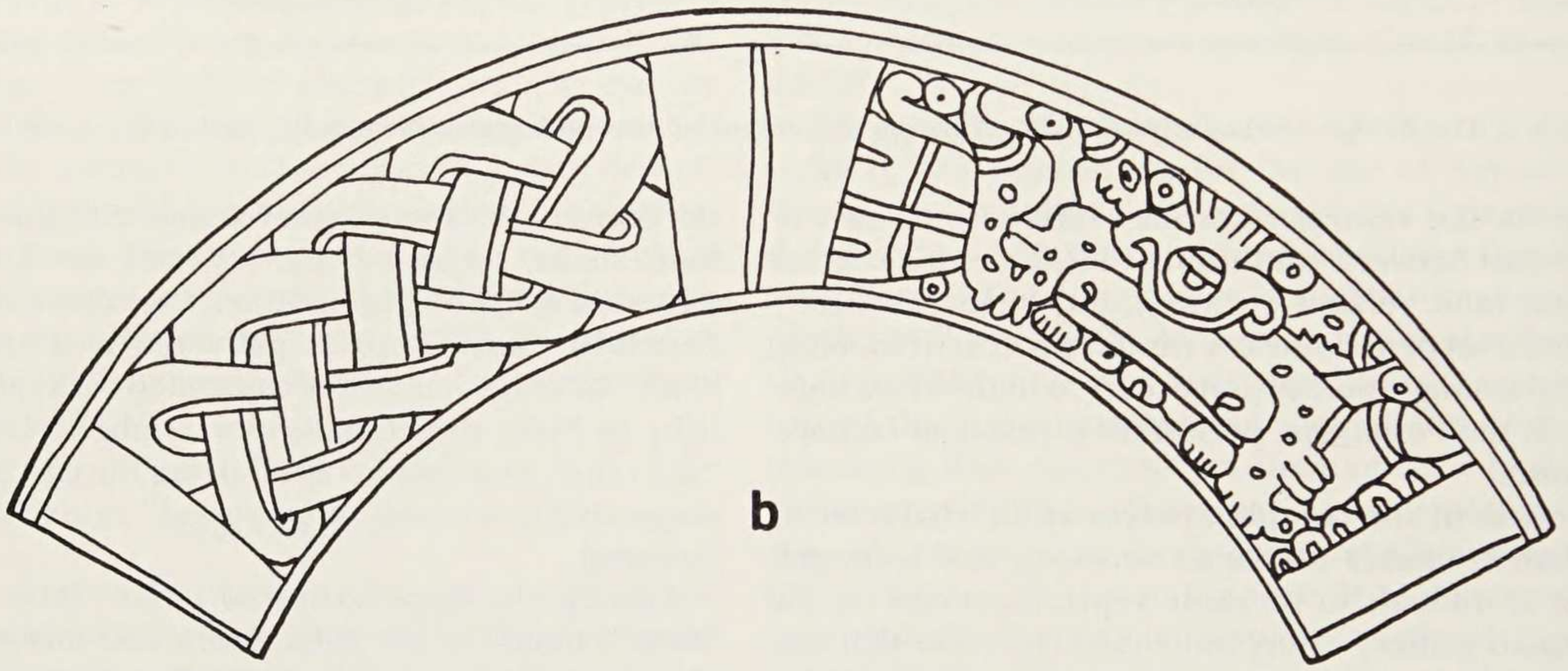

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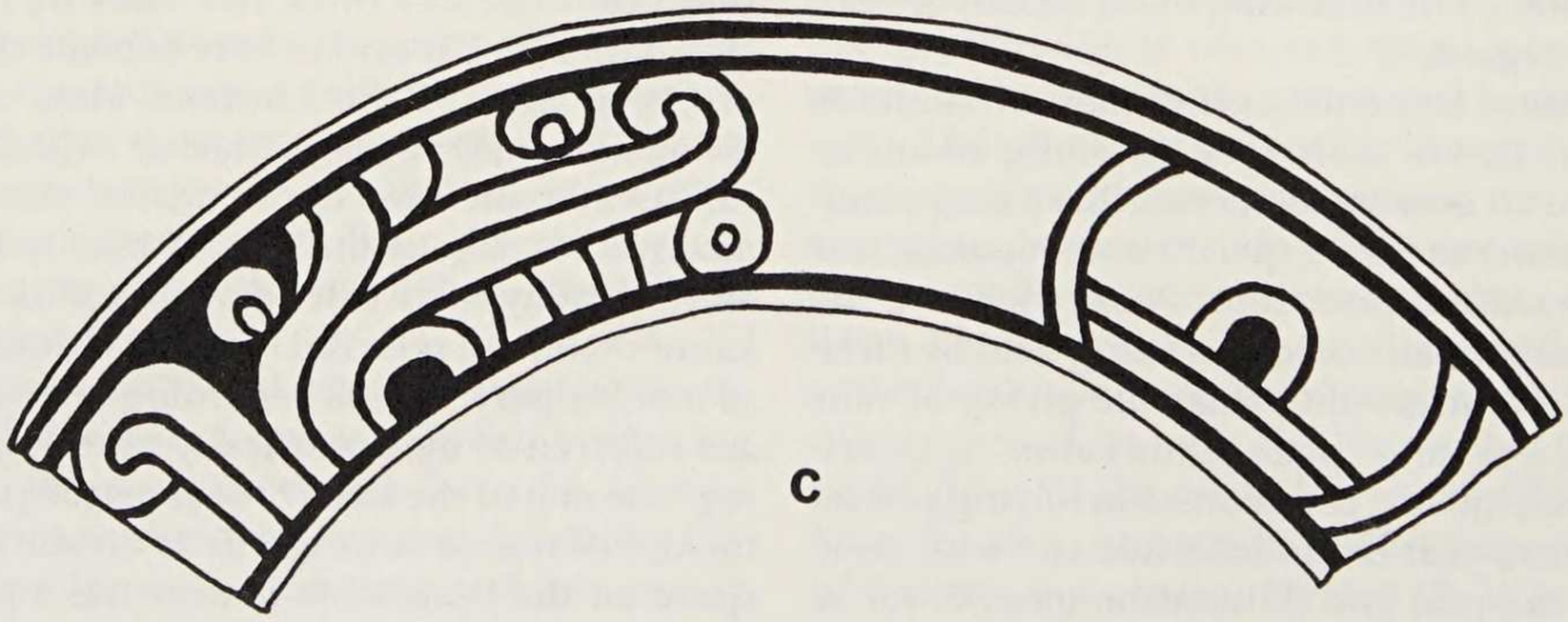

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complexes at Tikal; these Tikal twin-pyramid complexes were constructed at 20-year katun intervals.

DISCUSSION: REPTILES AND RULERSHIP

Reptilian/crocodilian/ophidian creatures clearly have deep and long-standing significance in the conceptual structure of the Lowland Maya. For the Classic Maya, reptiles and serpents were symbols of rulership and kingly ritual that were highly visible on sculpture and costuming. The presence of the reptiles on the Postclassic pottery suggests a continuation of this former meaning, but also reveals a syncretism between indigenous symbols and broader pan-Maya and pan-Mesoamerican cosmological themes. The reptilian motifs seem to have served as emblems for identifying elites and ritual practitioners (priests, for example), and these symbols had shared meanings that were widely known by virtue of their longevity in Mesoamerican cosmology.

Styles and design arrangements, particularly in the use of oppositions or contrasts, can be viewed as ordering experience by reproducing cosmological principles or structures (Munn 1966:946). Thus, apart from the relatively rare co-occurrence of mat and reptile motifs on Peten Postclassic pottery, the design structure, and the colors employed in the larger mass of decorated material can together be read as an iconographic statement about the principles of sociopolitical and cosmological structuring inherent in Postclassic rulership and ritual in Peten (Fig. 21-10). Design structures, techniques, and colors exhibit a shared pattern in which a pair of opposites can be set against a third element or, alternatively, one member is itself composed of a dyad.

With respect to design structure, for example, the decoration may be banded or unbanded; banded decoration may be further classed as paneled or unpaneled. Colors and technique are another illustration. All decorated vessels are slipped either red or "cream"/tan, but each of these color classes may be decorated by one of two techniques: painting or incising. Painted decoration is then further categorized as having red-on-cream painting, or black-on-"cream" painting. As can be seen from the graphic representation of these alternatives, there are different and nearly mutually exclusive combinations of the structure/technique/color alternatives.

Significantly, these alternative combinations are largely geographically dichotomous in Peten. The distinctive Topoxte pottery is unbanded, unpaneled, and



Figure 21-6. Chompoxte Red-on-cream: Chompoxte Variety tripod dish with bulbous feet. I must acknowledge that this vessel was not brought to light by legitimate archaeological excavation; instead, I saw it in an antiquities shop in Antigua. The owners reported that it had been broken in the 1976 earthquake. I illustrate it here with mixed feelings. I fully oppose the looting of archaeological sites and the trafficking in antiquities, but this vessel represents the only entire specimen of this type that I have seen. By virtue of form, paste, slip characteristics, and decoration, it is clearly of the distinctive "white" paste Clemencia Cream Paste Ware pottery (P. Rice 1979) which is nearly the exclusive Postclassic decorated ware found at the Topoxte Islands and which occurs in smaller quantities elsewhere at Postclassic sites in Peten and at Tipu. After seeing the dish in the shop in Antigua, I notified authorities in the Guatemalan Instituto de Antropología e Historia, and they subsequently acquired it for their museum collections.



Figure 21-7. The "crested dragon" motif of Sitio Conte, Panama (redrawn from Helms 1979:100, fig. 16).

Figure 21-5. Variants of the reptilian motif that appears on Peten Postclassic pottery. (a) Profiled head, with braids as panel separators; (b) quasi-"split-representational" form, with opposed mat motif; (c) stylized plume and eye similar to the "RE glyph."



Figure 21-8. A white on red vessel, showing a reptile head in profile in the interior. From collections in the Guatemalan museum, said to be from Zacualpa.

red-on-cream painted (although small amounts of banded, paneled, red-on-cream and black-on-cream painting also occur; P. Rice 1979). The typical Macanche/Salpeten pottery, however, is banded and paneled, with either black-on-cream or incised decoration. A parallel to this dichotomous geographical distribution of Peten decorative styles exists in the Postclassic pottery of the Maya highlands. Incised wares are found at sites in river valleys, and have apparent ties to Yucatan, whereas painted styles are found at upland Quiché and Cakchiquel sites (Utatlán, Iximché, Zaculeu), and are interpreted as "provincial copies" (Fox, personal communication). Dichotomous distributions of decorative styles in the Postclassic are also seen in central and southern Mexico in the occurrence of polychrome versus red-on-cream painted styles. Indeed, this may be true of the broader region of Mesoamerica encompassed by the so-called Postclassic "international style" (Robertson 1970). Given the prominence of legends of migrations in Mesoamerica in the Early Postclassic period, it would be tempting to try to correlate these various stylistic dichotomies with indigenous versus intrusive groups on a region-by-region basis.

In the case of the painted (as opposed to incised) pottery, the symbolic role of the color itself can be considered. The red, cream (or "white"), and black colors used in this pottery are interesting not solely in terms of Maya directional and rainfall symbolism (mentioned above) but also in the broader context of the cross-cultural significance of this color triad (Turner 1970;



Figure 21-9. A Chac, or rain god, standing on the head of a serpent, holding an inverted jar to show the giving of rain. Codex Madrid, 30.

Sahlins 1976). The Topoxte pottery features red-on-cream decoration, whereas the polychrome pottery of the central lakes has black paint on a "cream" or "natural" background to outline the decorative bands and the motifs contained therein. In this latter class of pottery, then, black is placed in opposition to both cream (white) and to red. Sahlins (1976:15) discusses semantic oppositions of red to either of the complementary colors, yellow or blue. Among the Maya, red and blue seem to be placed together in opposition to yellow rather than the other way around (see also Schele 1985). Red is the color of "good" rains, as well as blood, and blue (or blue-green) is the color of water, vegetation, gods, jade, feathers, and sacred elements in general. In light of the suggested functions of the Peten

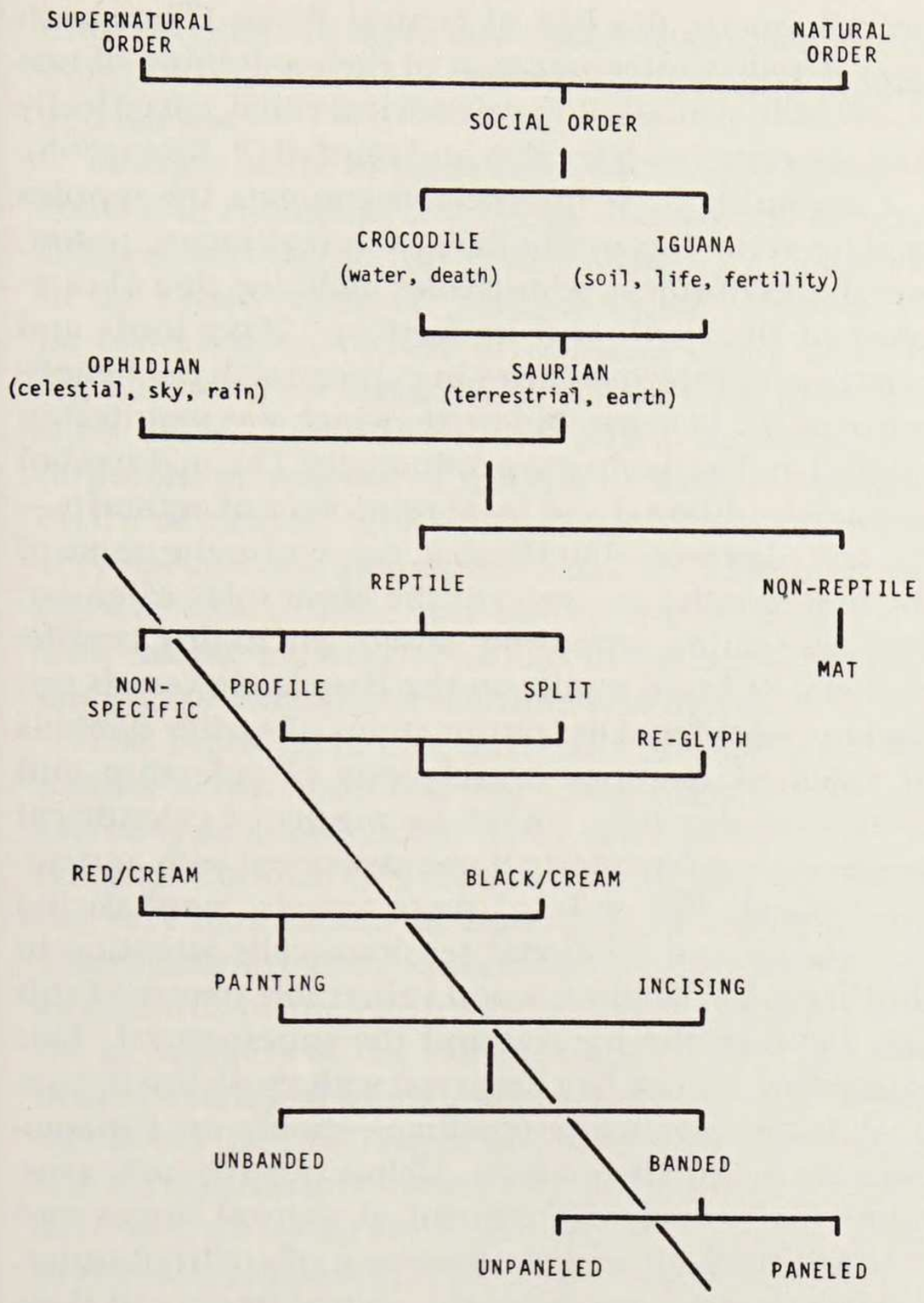

Figure 21-10. Diagram showing oppositions in reptilian imagery and symbolism (upper half), and alternative choices in decorating Peten Postclassic pottery (lower half). Choices of technique, structure, and color appearing to the right of the diagonal line are associated with specific reptile images; choices to the left are not.

pottery discussed here, it is significant that some of the red-and-cream pottery from Topoxte was apparently originally painted with a postfire blue pigment ("Maya blue"). Yellow, by contrast, was for the Maya the color of the west, of death and misfortune: "the Yellow Itzam of the south . . . sends rains of such little value that drought will ensue" (Thompson 1970:216). Jaguar skins or parts were also usually colored yellow, jaguars being lords of the Underworld.

These colors, combined with the contrasts in arrangement and technique of the decoration, give rise to speculation on how the decoration may be interpreted structurally. The red-on-cream nonbanded Topoxte materials seem to place emphasis on the colors themselves and on internal content or essential qualities of the symbols/creatures that are portrayed in a busy, sinuous style. The red color and the frequency of dots in the decoration suggest an emphasis on blood or other liquid, and the abstracted, apparently reptilian elements seem underplayed. By contrast, the incised and/or black-outlined motifs of Macanche/Salpeten stress ordered, bounded spaces, focusing attention on the margins or boundaries of the decoration. The style emphasizes the contrasts between decoration and nondecoration (or symbol and context) and suggests tensions in the relationships between the symbolized categories.

Further comparisons can be made by taking into consideration the specific motifs themselves. Of interest here are reptilian as occasionally opposed to non-reptilian (mat or braid) motifs. In the total body of Peten pottery the reptiles occur in four forms: the three described for Macanche/Salpeten, plus the generalized reptilian elements (e.g., plumes) or overall "distributive" style in which a reptilian creature (?) appears in Topoxte nonbanded designs. Although I have eschewed attempts to identify individual Maya reptilian deities in these ceramic representations, the reptile in Maya mythology does oppose ophidian and saurian (the latter consisting of lizard/iguana versus crocodilian) attributes as well as life and death, soil and water, and earth and sky associations, to name a few. The arrangements, styles, techniques, colors, and forms of these motifs on this Peten Postclassic pottery could potentially be combined into a large number of permutations, but although there are sizable quantities of decorated pottery, the present sample of reptile motifs is far too small to establish definitive correlations among all of them. (Even more regrettable is the inability to correlate particular portrayals of the reptile with vessel forms, which is a significant aspect of any stylistic analysis because structures and motifs frequently vary with vessel form and function.) It can be suggested, however, that in this sample the "RE glyph" version of the serpent/reptile (Fig. 21-5c) is distinct from the other two central-lakes forms by not occurring in formal panels, in incising, or in association with the mat/braid motif. The mat itself seems to be more commonly associated with incised decoration rather than painting.

Besides the reptiles, the mat is an important example of continuity in decorative symbols among the Maya. In his treatise on the mat symbol, Robicsek (1975) notes that this motif commonly appears as an item of adornment (symbolizing power) on the clothing, headdress, throne, or ceremonial accouterments of Maya lords and deities as they are portrayed in sculpture, murals, or ceramic art. But the mat or rope motif has a second typical mode of occurrence on ceramics (primarily of the Classic period, but also in Postclassic murals) and that is as a divider or boundary

> [in] a separated, often paneled form. It appears on bowls and vases which carry the figures of gods, dignitaries or mythological animals. In such instances one side of the bowl may be decorated with a mythological figure or a

> ceremonial scene, the other with a mat-symbol. It can also happen that there are two figures on the bowl, divided by mat-symbols. (Robicsek 1975:250)

Both these instances appear in the Postclassic pottery from the Macanche/Salpeten area. In the former usage, either the mat has the property of substitutability for the mythological figure or it constitutes a structural opposition to it, stylistically and cosmologically. In the latter usage as a divider and also in its occurrence as a circumferential band around pottery vessels or as a framing mechanism on murals, the mat or twist may be considered to function as a "mediational" device, literally as well as figuratively establishing boundaries and/or structural oppositions between the divine and powerful versus the secular or profane.

In the Topoxte pottery these opposing and bounding functions of mats are notable by virtue of their absence, but the significance of this lack cannot be explained at present. If the arguments with respect to the nature of rulership at the other lakes is to be pursued with respect to Topoxte, however, the absence of both clear reptile motifs and mat symbols suggests an idiosyncratic approach to the symbolics of rulership within the pan-Mesoamerican Postclassic system or a lack of parallels between the ritual functions of the Topoxte ceramic vessels and those of the other lakes.

Before moving to broader interpretations of the pottery decoration and its implications for Peten history and rulership, I should reiterate that the area is insufciently known archaeologically and historically in the Postclassic for the following ideas to be anything more than speculations. Neither specific deities, nor specific ritual functions, nor specific relationships between the peoples of Macanche/Salpeten and Topoxte, who made and used this pottery, can be proposed. At present the salient point to make in comparing the two regions is that most of the reptile/mat motifs represent the late part of the Postclassic period (i.e., after ca. A.D. 1200). During this time, and especially after about A.D. 1450, the demographic and political influence of central Peten (Taiza and its environs) appears to have been increasing, while that of Topoxte was waning, and this latter site may actually have been abandoned at the end of this period (P. Rice 1986a:296).

Different but related levels of meaning can be read in the mat and reptile symbols. As discussed above, one interpretation is in terms of symbols of rulership and authority. The combination of mats and reptiles on the Postclassic pottery in Peten could be interpreted as suggesting stronger efforts to tie status positions to local precedents by invoking traditional symbols of authority used in the Classic period. In addition, there could be a parallel between these dual signifiers of authority and the structure of dual chieftainship said to prevail among the Itzá of central Peten (Thompson 1951). Another interpretation of the conjoining of mat and reptile symbols is in calendrical ritual, specifically that associated with fertility and rainfall (P. Rice 1986b).

Combining these interpretive contexts, the reptiles may be viewed as symbolizing the legitimacy, power, and duties of rulers, whose roles included that of caretaker of the earth and its fertility.[1] Maya lords and priests were intermediaries in calling forth the beneficence of the heavens and earth, which was manifest in rainfall and agricultural productivity. The mat symbol acts as a traditional and local reinforcer of authority—the seat of power—but the mat, *pop*, is also the name of the first month (the seat?) of the Maya solar calendar. The alternating, opposing, and/or encircling reptile-plus-mat or braid motifs on the Postclassic vessels can thus be considered as continuations of earlier symbols of essential qualities or relations of rulership and earthly productivity, linked by means of calendrical ceremonies, particularly those associated with agricultural ritual. The style of these vessels, emphasizing boundaries and relational tensions, calls attention to the "sacred," dangerous, and vulnerable nature of this role between the natural and the supernatural. This interpretation can be compared with those linking animal—and specifically reptilian—motifs on Panamanian art to chiefly qualities. Helms (1979:97–108) associates the iguana with control of natural forces and mystical strength and maintenance of civilized order. Linares (1977:70) associates the animal forms and their accentuated features with qualities of aggression and intelligence ("sensing") among warriors or chiefs, which would be valued in competitive trading activities.

The underlying dynamic, both cosmologically and agriculturally for the Maya, seems to be cyclicity. The Maya concept of time was one of units or historical cycles of time—such as the 20-year katun or the 52-year calendar round—which unfolded in accordance with predictable patterns foretold in the sacred prophecies known to the priests (e.g., as told in the *Chilam Balam*; Roys 1933). History was cyclical, marked by the progression of the katuns, but shorter cycles of agricul-

[1] It is interesting to compare this interpretation with Sharp's (1981) study of Chac motifs and shared architectural elements (T-shapes, step-frets) that appear in Epiclassic Yucatan and the Oaxaca area. By the end of the Classic, Sharp notes, the long-nosed heads or gods are "either emblems that assert the religious, social, and political status of high chiefs and their families, or they are badges of divine legitimacy for individual monarchs" (1981:14). Furthermore, like the Oaxacan Cocijos, "Chacs imply a great deal more than rain. The Chac concept provided both an explanatory device for, and a systematic way of, ordering the good and bad events that befall man, especially in his dominant role as maize farmer" (Sharp 1981:15).

tural productivity were also noted: the annual alternation of rainy and dry seasons that heralded planting and harvest.

Interpretation of these reptilian images within the context of rulership, cosmology, and historical cycling suggests that the pottery vessels could have functioned in the broad realm of "renewal ritual." Renewal can be conceived in secular or political terms, as in the legitimization (or installation) of rulers and priests and their offices. Renewal also has a clear agricultural interpretation: renewal of fertility by means of seasonal cycles of rainfall and productivity. These are linked very specifically among the Maya by means of their cyclical view of time and history and their obsession with calendrics, in celebrations of the beginnings and endings of annual and multiple-year cycles.

The reptilian motifs, and their juxtaposition with mats or twists, in central Peten Postclassic pottery thus can be read as reflections of the seasonal cycles underlying agricultural success and the calendrical cycles at the very foundations of Maya history and worldview. They symbolize the responsibility of rulers and priests as stewards of the earth and its yearly cycles of fertility, as bringers of the rains, and as custodians of the deeper cycling of human events, histories, and cosmology. It was thus the responsibility of the rulers to maintain an equilibrium between the natural, the supernatural, and the social orders through the proper display of symbols and celebration of renewal ritual.

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22

The Painted Walls of Xibalba: Maya Cave Painting as Evidence of Cave Ritual

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Caves in the Maya area—from Yucatan to Highland Guatemala—present archaeologists with a wealth of pre-Hispanic remains. Masonry walls, plastered floors, heaps of smashed pottery, and human bones, often of sacrificial victims, speak of important rituals that went on in the secluded confines of caves. In spite of this abundance of archaeological material, however, the reconstruction of specific ceremonies in Maya caves proceeds at a slow pace. One important source of information previously overlooked is the wealth of pictorial "artifacts" that the Maya deigned to paint or carve on cave walls.

Maya cave paintings offer particularly valuable evidence of cave ceremony. Many of these paintings reflect the conventional art style which we associate with the rise of complex society in the Maya area. This tradition of symbols, images, and hieroglyphs, synonymous with Maya art and writing, reached its zenith in the Classic period (ca. A.D. 250–900) and endured in faint echoes in Colonial manuscript illustration. For convenience, I will refer to this pictorial/iconographic system in its chronological totality as "Greater Classic." As the focus of a long tradition of scholarly study, images within the Greater Classic tradition yield well to hermeneutic and chronological analysis. Few cave petroglyphs fall within the Greater Classic tradition, but many cave paintings do.

Maya cave painting has not been well studied in the past due to a perception of a poorly represented corpus (J. E. S. Thompson 1975:xxxvi). With the discovery of Naj Tunich, Guatemala, in 1980 (Stuart 1981; Stone 1982; Brady and Stone 1986) and recent finds in caves of Yucatan (Stone 1987), a considerable body of Greater Classic cave painting is now accessible to scholars. I will begin this study with a review of known Greater Classic cave painting sites and attempt to place the paintings in a chronological framework. The reader should keep in mind that there are many more Maya caves with paintings that fall outside of the purview of the Greater Classic tradition and for this reason are difficult to date and interpret. Those will be dealt with in a future study.

THE PROTOCLASSIC (ca. 50B.C.–A.D. 250)

A search for the earliest cave paintings in the Maya area leads to Loltun Cave in the Oxkutzcab region of Yucatan. Loltun was the first Maya cave to be described in any kind of published, systematic way (E. H. Thompson 1987), and is one of the most important in terms of cave art. A group of four Protoclassic paintings is found in Room 5 (see map in Zavala R. 1978) on a composite calcite column (Fig. 22-1). The paintings are relatively large, the smallest measuring 38 cm in height and the largest, approximately 84 cm. Late Classic paintings at Loltun, which will be discussed later, are also exceptionally large, measuring around a meter in height. Thus, the Greater Classic paintings at Loltun share large size as a common stylistic feature. In this respect they contrast with non-Classic paintings, such as the stick-figure style studied by Strecker (1976).

The Protoclassic date assignment for the four paintings is based on early stylistic traits and, most important, the stylistic similarity of one painting to the famous relief on the Hunacab entrance to Loltun (Fig. 22-2). The relief shows a richly attired figure holding implements that look like weapons of war, thus, prompting his nickname, *El Guerrero*. In terms of specific motifs, such as the curving device held in the left hand, and the treatment of form, the Loltun relief has been compared by Proskouriakoff (1950:103) and others (Andrews 1981) to monuments from Kaminaljuyu and Izapa. Accordingly, Andrews places the relief quite early, ca. 353 B.C.–A.D. 41. Parsons (1986:78) assigns it to his Protoclassic phase (A.D. 50–200). Although these differences of opinion cannot be resolved without better archaeological control, it seems safe to say that the Loltun relief dates no later than the Protoclassic (ca. 50 B.C.-A.D. 250).



Figure 22-1. Composite column with four paintings, Loltun Cave.

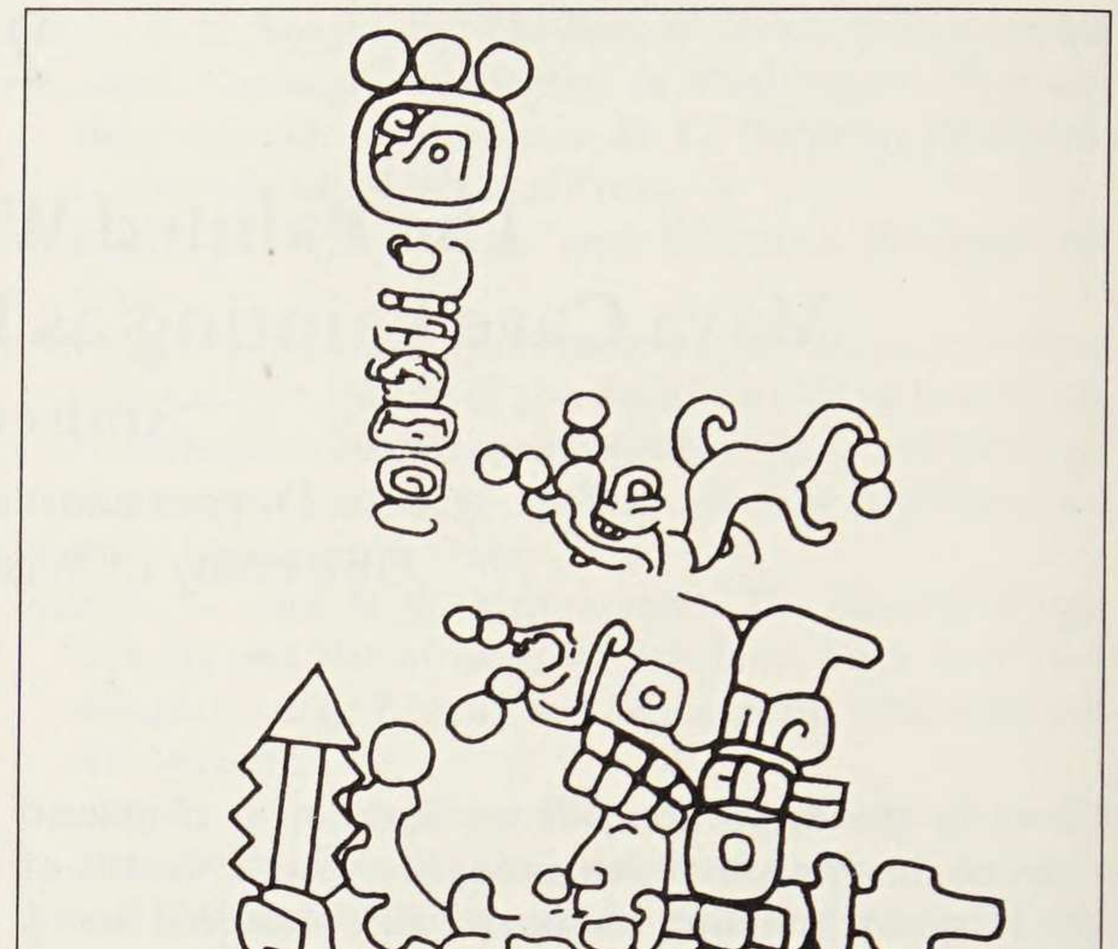

Figure 22-2. Hunacab relief, Loltun Cave (after Andrews 1981:fig. 1).

The cave painting to which it compares represents a much simpler figure lacking both a head and costume (Fig. 22-3). The figure is positioned so that the right arm swings forward and the left arm back. Similarly, the right leg strides forward, and the legs do not overlap at the level of the knee. The latter trait is early according to Proskouriakoff (1950:19). The striding posture is common in early Maya art and allows a full display of the chest, shoulders, and limbs so that symbolic regalia achieves maximum visibility. The posture accomplishes nothing of this sort for the nude cave figure, but the artist is following the figural conventions of his times. The same configuration of body parts in the Hunacab relief figure is quite successful in creating an armature for the display of costume (Fig. 22-2). The two figures are also similar in their sensitivity to line, which has a gentle, undulating quality and describes anatomical detail in general shapes, lending the figures a rubbery look. This figural style is a hallmark of Late Preclassic and Protoclassic relief sculpture in the Highland and Lowland Maya area. Based on these stylistic similarities, then, I propose that the cave painting dates from about the same period as the relief, most likely between 50 B.C. to A.D. 250.

Three of the four cave paintings on this column share a similar line quality: the line is broad and describes strong, simple shapes (Fig. 22-1). Style, then, provides some evidence that the group of paintings is roughly contemporaneous. One of these paintings has an iconographic element which also suggests it to be quite early. Furthermore, since the painting illustrates a hieroglyph, it is extremely important considering the Protoclassic date.

This painting (Fig. 22-4) employs the number eight superfixed over a symbol within a cartouche, a standard way of writing a *tzolkin* date, a position within the 260-day calendar. The placement of the coefficient above the day sign is the general rule on most early texts in the Maya area (Justeson et al. 1985:40). The lack of a pedestal and circular shape of the cartouche

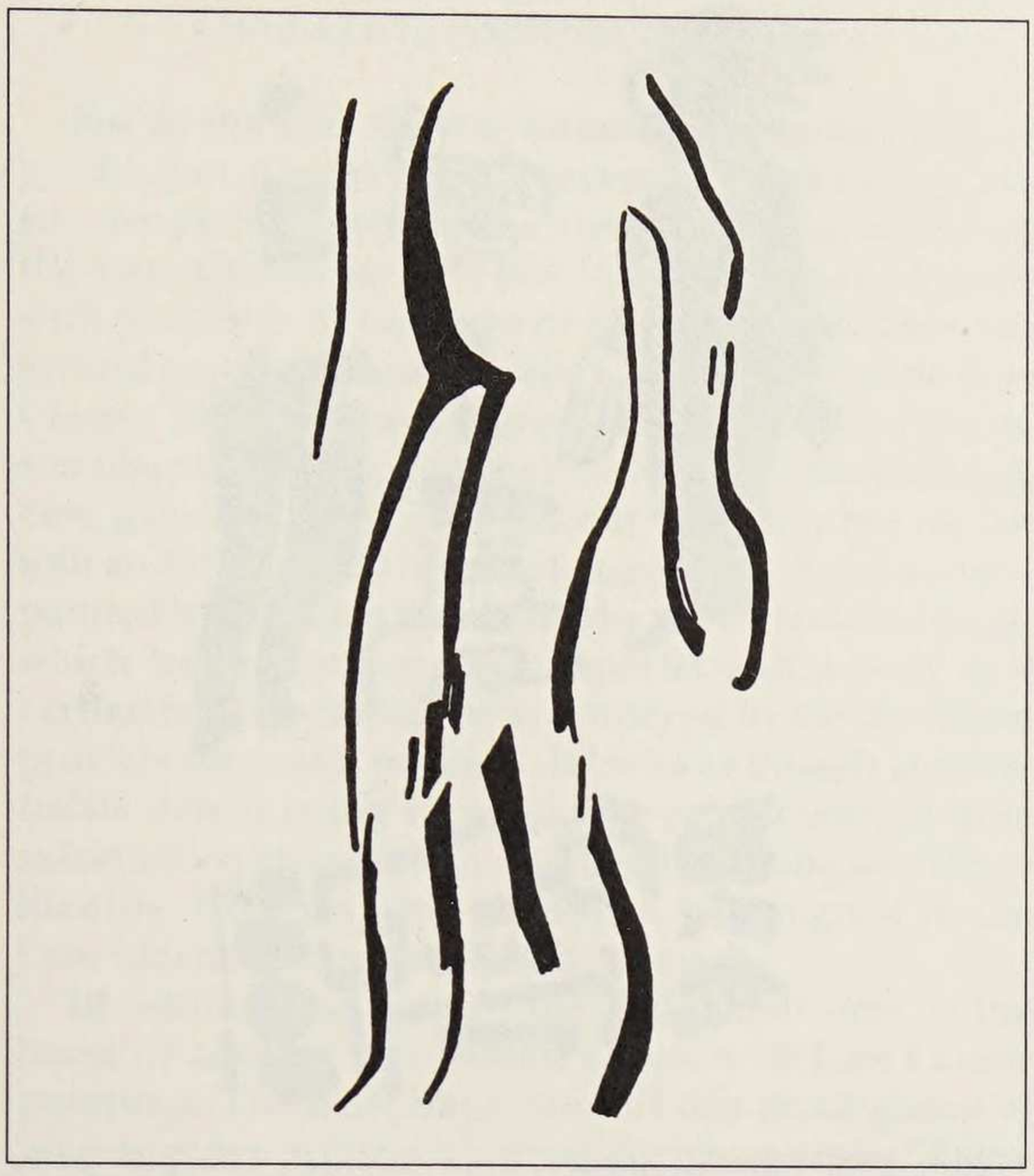

Figure 22-3. Figure from column, Loltun Cave.

is common in painted texts, such as the long *tzolkin* count in Uaxactun Structure B-XIII (Smith 1950:fig. 47) and in the Maya codices. These traits are also seen in the first glyph of the Hunacab relief (Fig. 22-2). Coe (1976:118) interprets the Hunacab relief glyph as the *tzolkin* position 3 Chuen, but asserts, for reasons unspecified, that it is probably the figure's calendrical name. However, considering its position, leading off the text and exaggerated size, it could just as easily be a *tzolkin* date. Indeed, enlargement of calendrical glyphs when they initiate texts is a common Maya practice that occurs as early as Cycle 7 (Justeson et al. 1985:40). In the cave painting, the day sign is the so-called "u-element" which was in widespread use in Preclassic Mesoamerica and endured in Maya art into the Early Classic. The u-element as a day sign at Loltun presents some problems in interpretation in that two identifications are feasible.

The u-element has a strong association with early depictions of the Ahau glyph. Peter Mathews (Demarest 1984:91) has noted the use of an early glyphic form for Ahau which is incised on a Middle Preclassic sherd from El Mirador (Fig. 22-5a). This glyph has a composite double-hump silhouette and an interior cartouche containing a u-element surmounted by two squares. Foliate scrolls spring out at the sides. This glyph appears in several early Maya texts (e.g., Schele and Miller 1986:pl. 90). A later version of the Ahau with u-element,



Figure 22-4. Glyph from column, Loltun Cave.

dating to 9.0.0.0.0, occurs on an incised celt (Fig. 22-5b). A comparison of this glyph, which is unquestionably Ahau, with the El Mirador sherd shows the rationale behind Mathews's identification. The last phase of this u-element/Ahau conversion is in early Cycle 9 when it is common to see the u-element as the mouth of the Ahau face.

Situations also exist in which Ahau alternates in the same context with a u-element. For example, on an Early Classic vase (Éditions Arts 135 1985:fig. 329), a u-element appears in the center of one rosette and an Ahau in the center of another. Such alternations in like contexts are often indicative of equivalence. Can we infer from this and the appearance of a u-element in early Ahau glyphs that a u-element in the Loltun cartouche indicates Ahau?

The use of the u-element in the Loltun glyph does not seem to warrant its identification as Ahau. First, the u-element has a wide variety of uses in Proto- and Early Classic Maya art, and the position that it is always equivalent to Ahau is untenable. Furthermore, when the u-element appears with the day sign Ahau in these early inscriptions, it is always contained within the double-humped configuration described above. We might recall that the Loltun glyph is a circular cartouche.

There is another way of looking at the u-element: that is, where it alternates with a simple circle. Numerous instances of this occur on costume elements and in glyphic texts. For example, in the lower corner of the "grasping hand" (T713a), early versions have a u-element where later we see a circle. The u-element forms the center of disks, probably representing jade jewelry, that adorn stela figures. These jade disks later have a circle at their center. The u-element and circle also appear in the same composition in precisely similar contexts (see the earflares of deity heads in plate 9 of Schele and Miller [1986]). Thus, a second way of interpreting the calendrical glyph at Loltun is that the u-element represents a simple circle; and that glyph could be read as the day sign Muluc, with the date 8 Muluc. It might be noted that Coe (1976:fig. 12h) has identified a glyph on the Tuxtla Statuette (8.6.2.4.17) as 8 Muluc.

Because of the association of early Ahau day signs with the double-humped form, I would have to favor Muluc as the identification of the Loltun glyph. The date 8 Muluc is noteworthy in that it could be a Year Bearer in what has been termed Puuc-style dating



Figure 22-5. Early forms of Ahau. (a) Design on El Mirador sherd (after Demarest 1984:fig. 47); (b) Ahau from incised celt (after Éditions Arts 135 1985:fig. 331).

(Proskouriakoff and Thompson 1947). In this style, the coefficient of the 20-day "month" in the 365-day year falls behind by a factor of one. Thus, a date like 4 Ahau 8 Cumku would appear as 4 Ahau 7 Cumku in the Puuc style. This results from the use of a different Year Bearer set than that used at most Lowland Maya sites. The Puuc style utilizes the Kan, Ix, Muluc, and Cauac Year Bearers, also in vogue in sixteenth-century Yucatan, whereas the standard Classic system uses Akbal, Lamat, Ben, and Etznab.

At another major cave painting site, Naj Tunich, I have identified a lone *tzolkin* date, 8 Lamat, as a probable Year Bearer (see later discussion). This fact strengthens the supposition that the Loltun *tzolkin* may be a Year Bearer as well. Thus, the Loltun glyph raises the possibility of a great antiquity for Puuc-style dating in the western Yucatan peninsula. The antiquity of the system is placed as early as 9.12.0.0.0 by Proskouriakoff and Thompson (1947:149) based on Stela 18 at Edznah. It is not known earlier precisely because of a lack of earlier inscriptions from this area.

THE EARLY CLASSIC (ca. A.D. 250–600)

Cave art datable to the Early Classic is sparse according to present knowledge. J. E. S. Thompson (1975:xxxvi) mentions a cave, now known as Joloniel (*Mexicon* 1981), as dating stylistically to around A.D. 300 (Fig. 22-6). The celebration of a katun 9 Ahau is clearly the main thrust of these paintings. Two possible katun-ending reconstructions are 8.13.0.0.0 and 9.6.0.0.0. Thus, Thompson was identifying the former (A.D. 297) as the correct date, although stylistic evidence is not clear on this point. The black-figure silhouette style recalls the murals from Uaxactun Structure B-XIII, Room 7 (Smith 1950:fig. 45). These paintings are located in an architectural context which Thompson places in the early part of Cycle 9, but the paintings, themselves, are given the general date of Early Classic (Smith 1950:58). In my estimation, the Joloniel paintings look earlier than the Uaxactun paintings. Given the lack of firm evidence, however, I will refrain from assigning the Joloniel paintings to a specific date in the Early Classic.



Figure 22-6. Painted scenes from Joloniel, Chiapas (after *Mexicon* 1981 and original photographs by Gertrude Duby Blom). (a) Upper scene showing two figures standing over a 9 Ahau altar; (b) lower scene with 9 Ahau-Cauac Monster altar.

There are also petroglyphs stylistically datable to the Early Classic known from a cave, Caa Actun ("two caves"), near Canakam, Yucatan (south of San Pedro Yaxcaba). One petroglyph is the head of the so-called Principal Bird Deity and the other a human head with leafy sprouts emerging from his crown. These petroglyphs appear to date as early as late Cycle 8 (ca. A.D. 300–400). Clearly datable Maya cave petroglyphs, such as these, are extremely rare. The Caa Actun petroglyphs are also important as images dating from the incipient Classic period in a region which has revealed a paucity of art prior to the Late to Terminal Classic. It is interesting to note that the site of Yaxuna, which lies just a few kilometers from Caa Actun, has a Late Preclassic and Early Classic ceramic component (Brainerd 1958:11), and has produced one of the few examples of Early Classic art in this region of central Yucatan (Brainerd 1958:fig. A).

THE LATE CLASSIC (ca. A.D. 600–900)

Just as the Late Classic witnessed increased artistic production at many Maya ceremonial centers, Late Classic cave painting achieved its own florescence. During the Late Classic we find the largest number of caves with paintings in the Greater Classic style. Loltun has several painted colossal heads which appear to be Late Classic. The two heads reproduced by Edward Thompson (1897:figs. 17, 18) are the earliest illustrations of Maya cave painting. They are adjacent to each other on the wall and stylistically identical, suggesting that they were painted by the same hand. Nearby is a calendrical glyph which has a number seven superfix and a head in a cartouche. The cartouche is bordered by scrolls which possibly serve as a pedestal. It looks as though another *tzolkin* date is being mentioned here, but with so little information provided by the head, it is impossible to identify. However, this glyph can be assigned to the Late Classic period on stylistic grounds.

In addition to Loltun, the Oxkutzcab area is the home of another cave, Actun Ch'on, with Late Classic paintings. The most impressive of this small group of paintings is a scene with three figures: a seated dignitary; a bound, nude captive; and a kneeling secondary figure, the latter two facing the seated lord (Fig. 22-7). The scale of this painting is also relatively large, measuring over a meter in length. Charcoal and earthen pigments, probably from the cave floor, provide three colors for the painting: black, orange, and dark reddish brown. This is the most elaborate painting in the Maya area in terms of color. The technique of applying pigment in broad areas, the monumental simplicity of form, and large scale relate this painting stylistically to Proto- and Late Classic paintings from Loltun.

Two other Late Classic cave painting sites are known in the Maya area. J. E. S. Thompson (1975:xxxvii) mentions a cave near Bachajon, Chiapas, containing a seated figure of "a maize god" and a row of glyphs. Apparently, the paintings in this cave, Golonton, have been destroyed. From the published photograph (J. E. S. Thompson 1975:fig. 4), the painting reflects a more graceful style than anything known from Yucatecan cave painting. In this respect and in the complexity of pose, the Golonton figure compares well with the figural style of Palenque and the Usumacinta area.

The other major example of a Late Classic cave painting site, Naj Tunich, is located at the opposite geographic extreme in the Maya area from Golonton. Naj Tunich, an outstanding cave-painting site by any standards, is situated in the southeastern Peten, close to the border of Belize (Stone 1982; Brady and Stone 1986). The majority of paintings here are Late Classic. The style of the Naj Tunich paintings approximates the delicacy and calligraphic virtuosity of pottery painting (see Fig. 22-15). The paintings are also more descriptive and generally convey more narrative information than paintings of other sites.



Figure 22-7. Painted scene from Actun Ch'on, Yucatan.

THE POSTCLASSIC (ca. A.D. 900–1520)

One Yucatecan cave, Dzibih Actun, has paintings which can be securely placed in the Postclassic period. I was fortunate to discover this cave, located about 30 km southeast of Tizimin, in the summer of 1986. Both George Veni and Karl Taube accompanied me in mapping and recording this impressive collection of cave art. The paintings are, perhaps, better labeled as drawings, since they were applied by dragging a carbonized stick over the wall. The charcoal drawings cluster on the rear wall of the cave to the right of a small pool of water. Most of the images within this group appear to be pre-Hispanic. Assigning them to a more precise period relies on visual inspection only because the cave's ceramics have not yet been studied. Some of the paintings correspond closely to the style of the Madrid Codex.

One figure from the cave compares especially well with the Madrid. This is a crouching deity in profile with a long snout and squared-off lower jaw (Fig. 22-8). The figure has few costume elements: a thin wristband and a circular earflare which has an upper and lower component. The leg of the figure is divided by a wavy line of unknown meaning. The figure has only a thumb and three fingers, a convention frequently adopted in the Madrid (Fig. 22-9). The configuration of the foot also compares well with the Madrid both in the exaggerated toe section, but, more important, in the fact that the cave figure's foot has a large hump *behind* the ankle. This is a trait specific to the Madrid and figures in that style (Miller 1982:pl. 8). Another point of comparison is the use of the three-part earflare consisting of a circular disk and an upper and lower section. This



Figure 22-8. Drawing 7, Dzibih Actun, Yucatan, possibly portraying Chac.

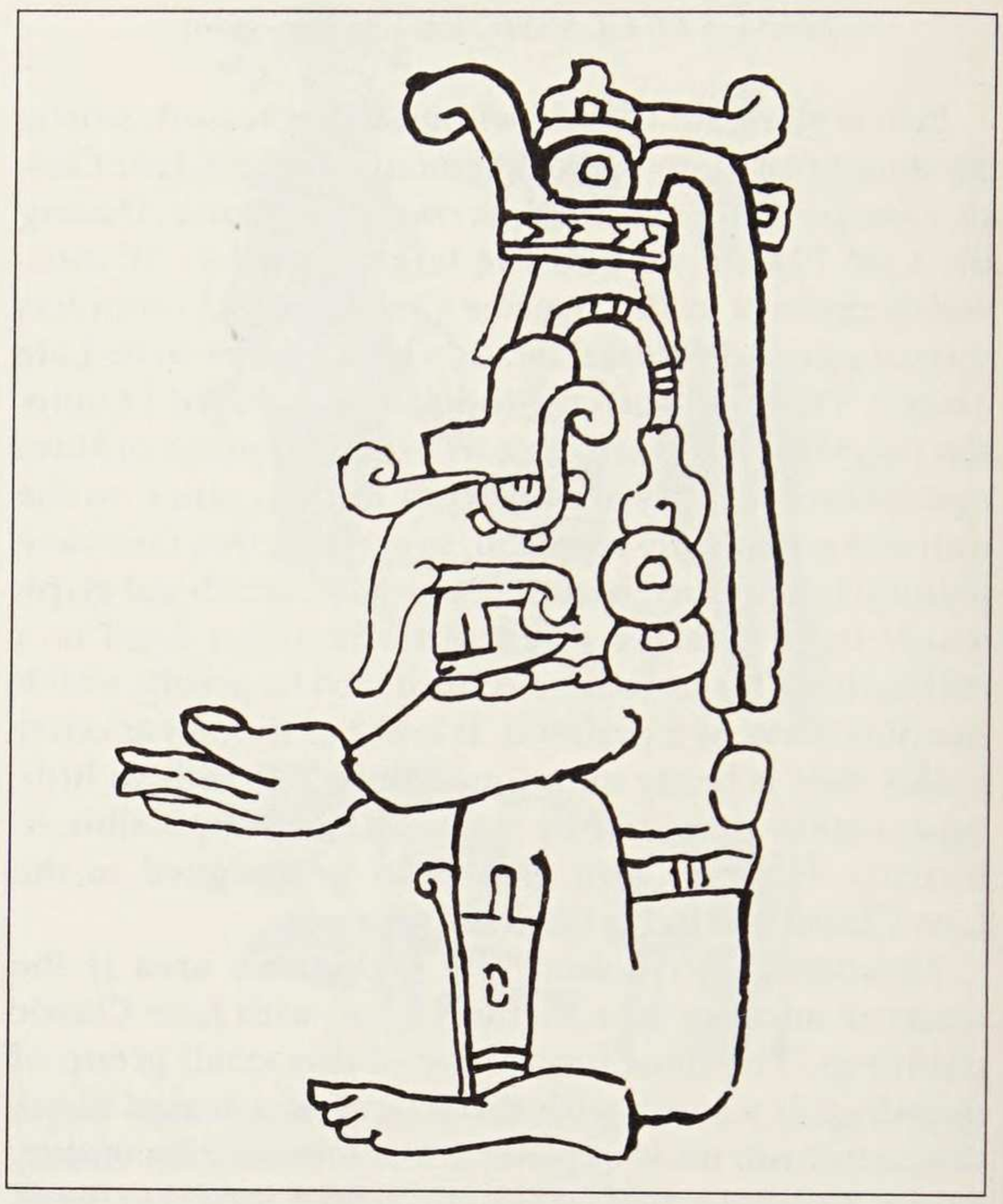

Figure 22-9. Madrid Codex 72a.

is the standard type of ear adornment found in the Madrid Codex.

Another cave figure which compares favorably with the Madrid Codex style consists of a long, undulating serpent. The body of the serpent is formed from two rows of connecting semicircles which are staggered, resulting in a wriggling sausagelike serpent (Fig. 22-10a). This same technique is employed at least once in the Madrid (Fig. 22-10b). The markings on bodies of serpents at Dzibih Actun also compare well with the Madrid. The body markings on one of the serpents from Dzibih Actun (Drawing 13) consist of semicircular disks alternating on either side of the body. This style also appears on Madrid 9.

Two figures from Dzibih Actun show diving felines (Fig. 22-11). A diving feline is found on a building at Xelha, which Miller (1982:51) dates to the Terminal Classic/Early Postclassic. Although the Xelha feline possesses some similarities with those from the cave, such as the tail swinging off to one side and the frontal view of the face, other features compare well with the Madrid Codex. The loose drawing style of the cave felines creates an elongated, swelling body and rubbery limbs, a style which compares well with the Madrid Codex (Madrid 9). In addition, the convention for showing pelt—short parallel strokes—is also found in the Madrid (e.g., Madrid 39 and 49), as with the diving figures from the cave.

J. E. S. Thompson (1950:26) has suggested that the Madrid Codex "can be dated as quite late, perhaps as late as the middle of the fifteenth century." His argument points to the vessel types in the Madrid (storage vessels on tripod supports) and the stylistic tie to the murals of late temples from Tulum. Miller (1982:54) dates Structure 44 and its murals to the Middle Postclassic, ca. A.D. 1350, based on associated ceramic and architectural style, and he would assign the Madrid to the same period. Thus, many of the Dzibih Actun drawings date from the Middle to Late Postclassic period, ca. A.D. 1350–1500.

THE COLONIAL PERIOD (ca. 1520–1820)

Dzibih Actun also houses cave paintings that date from the Colonial period. This is the first time that cave art of unequivocal Colonial date has been reported in the Maya area. The paintings appear directly above the Postclassic paintings, rather high on the wall, about 3 to 4 m. Without doubt, a wooden ladder or other like device was needed to reach such a height. One of the paintings portrays a double-headed bird with wings and clawed feet (Fig. 22-12). This is, no doubt, a Colonial version of the Hapsburg double-headed eagle, the emblem of imperial Spain widely disseminated in Colo-

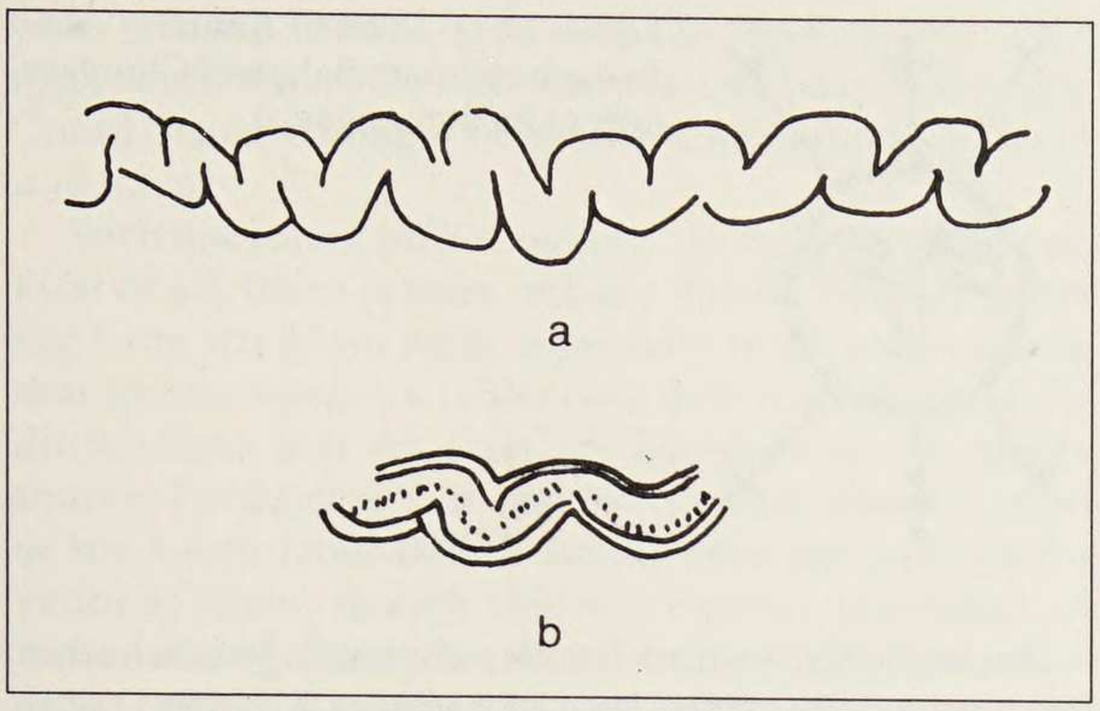

Figure 22-10. (a) Drawing 19, Dzibih Actun, Yucatan, detail of serpent's body; (b) Madrid 5b, detail of serpent's body.

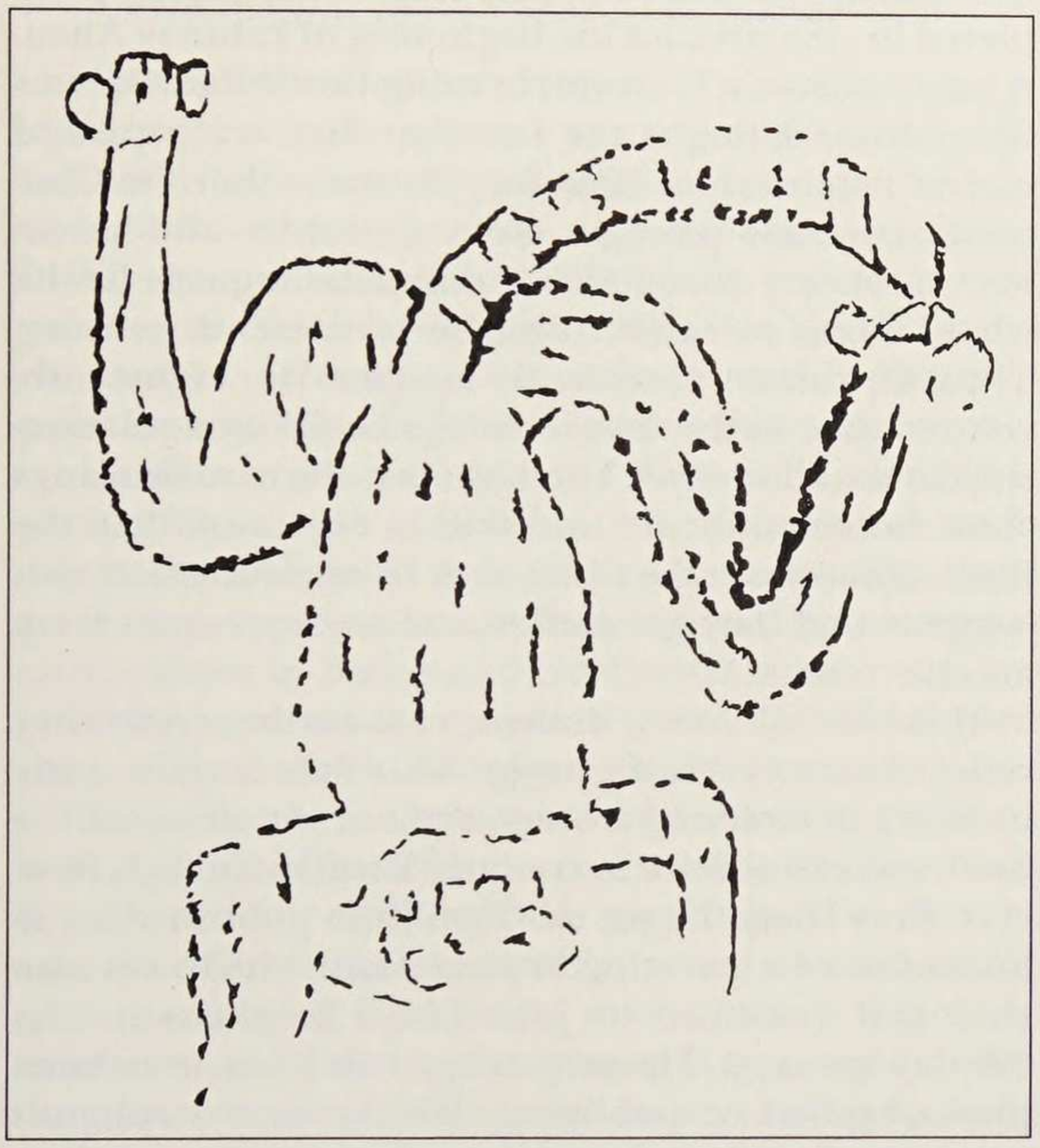

Figure 22-11. Drawing 12, Dzibih Actun, Yucatan, of a diving jaguar.



Figure 22-12. Drawing 37, Dzibih Actun, Yucatan, illustrating a Hapsburg eagle.

be seen that the cave figure stands on a scroll device which usually provides a space for an inscription. Such scrolls also appear as figure pedestals in Colonial Yucatecan manuscript illustrations (Morley 1920:fig. 73), and they are usually found as a base for the eagle emblem.

To the left of this figure are circles with simple linear elements representing the eyes and nose (Fig. 22-13). One face is surrounded by short lines that look like rays. Longer lines project from the top and bottom of this face and have asterisk patterns at the end. This image has a direct correspondence to illustrations in the Chilam Balam of Chumayel (Fig. 22-14). Indeed, it seems certain that the simple circular faces on the walls of Dzibih Actun refer to the katun cycle.

In Colonial Chilam Balams, stylized Ahau glyphs or human portraits representing kings are emblematic of each of the thirteen katuns in the katun round. Since Ahau means 'lord' in Yucatec, it is understandable how a human face was adopted as a katun emblem. The Ahau glyph itself recalls a stylized face and may have been the original model for the Colonial version. In addition, the world for 'face' in Yucatec, *ich*, also means

nial America, where it appeared most often in manuscript illustration and textile design (Schevill 1985). The strange triangular garment of the cave figure is probably a garbled interpretation of the shield which usually forms the body of the Hapsburg eagle. This cave drawing can be compared with an illustration from the Lords of Totonicapan (Carmack and Mondlich 1983:40), a Quichean manuscript written in 1554, but the present copy dating to 1650–1725 (Carmack and Mondlich 1983:11). From the Quichean version, it can



Figure 22-13. Drawing 35, Dzibih Actun, Yucatan, illustrating the lord of Katun 13 Ahau.



Figure 22-14. Lord of Katun 13 Ahau from the Chilam Balam of Chumayel (after Gordon 1913:100).

'aspect' or 'character', and is employed in the Chilam Balams to refer to the augury of a katun (William Hanks, personal communication 1986). Similarly, "its face" refers to the character of time periods in the Quiche area (Tedlock 1982:2).

In the Colonial period the Ahau/lord/aspect concept was transformed into a stylized face influenced by European models. Often they are presented as a portrait bust, or wear a western crown. These human heads, each emblematic of a katun, were called by Roys (1933) "Lords of the Katun." The simple circular faces from Dzibih Actun resemble the lords of the katun from the Chilam Balam of Chumayel as well as faces emblematic of Year Bearers on a Year Bearer wheel from the Chilam Balam of Ixil (Bowditch 1910:fig. 62). At Dzibih Actun there are at least five of these circular faces, and this multiplicity recalls the groupings of katun lords seen in katun wheels and other diagrams (Roys 1933: fig. 29).

In the Chilam Balam of Chumayel the lord of katun 13 Ahau is clearly distinguished from the other katun lords. This is seen twice: in their individual "portraits" (Fig. 22-14) and in a rectangular chart of the thirteen lords (Roys 1933:fig. 29). Katun 13 Ahau is properly given preeminence because it completes the katun cycle. The lord of katun 13 Ahau from the Chumayel is nearly identical to the most prominent of the circular faces at Dzibih Actun. Both are bordered by short rays, and sport longer projecting elements with a cross or asterisk at the ends (Figs. 22-13 and -14).

An important point for our chronology is whether the appearance of the lord of katun 13 Ahau at Dzibih Actun indicates when the Colonial cave drawings were executed. In the Colonial period, katun 13 Ahau occurred in 1539 and 1796. The copy of the Chilam Balam of Chumayel with which we are all familiar was completed in 1782, around the beginning of katun 13 Ahau. A major obstacle, however, in using the Chilam Balams for stylistic dating is the fact that they are copies of earlier manuscripts. Roys (1933:6) states that the Chumayel contains passages from sixteenth- and seventeenth-century documents and that its language on the whole seems to come from the seventeenth century. Thus, we cannot confidently assign a late eighteenth-century date to the cave drawings based on a relationship to the Chumayel. Furthermore, the cave drawings show more confidence and skill in execution than the illustrations from the Chumayel. In my estimation, this suggests that they are earlier and are not copies from another source.

If the Dzibih Actun drawings are earlier, could they reflect katun 13 Ahau of 1539? This date is quite early in terms of Colonial history, right at the onset of the final, successful drive to conquer Yucatan. In 1656, however, Fray Diego Lopez de Cogolludo published an illustration of a painting kept at Mani which was also seen and described by John Lloyd Stephens in 1841 (Morley 1920:473). The original painting has never been photographed or published. We do have Stephens's description of the original, however, and this matches Cogolludo's illustration (Morley 1920:472–73). The date 1536 is said by Cogolludo to be inscribed on the original, and Morley (1920:473) claims that this date confirms the date of the murder of a Xiu ambassador which is thought to be the subject of the painting. Stephens (Morley 1920:473) states, "This painting has evidently been executed by an Indian, and probably very near the time of the occurrence which it was intended to commemorate."

The point here is that the painting kept at Mani, as described by Stephens, is Europeanized (though surely more Europeanized by the Cogolludo copyist) and may have been painted by a native soon after 1536. If Euro-

pean artistic influence arrived in Mani shortly after 1536, could it have arrived southeast of Tizimin by 1539? Could the cave images be celebrating katun 13 Ahau of 11.16.0.0.0?

Such questions, unfortunately, are difficult to answer. First of all, there is little reliably dated Colonial painting from the Maya area, especially from native towns, that we can compare to the cave drawings. Many of the illustrations that do exist are copies from an earlier source. Furthermore, it may be the case that the lords of the katun from Dzibih Actun were not painted for katun 13 Ahau, though this is a distinct possibility. A more refined dating for the cave drawings, then, must await comparative illustrations from the Colonial period which accurately reflect the style of a specific period.

CEREMONIALISM IN MAYA CAVE PAINTING

It can now be seen that Maya cave painting which is stylistically datable appears as early as the Protoclassic, and is represented in the Early, Late, and Middle to Late Postclassic periods of pre-Hispanic culture. Dzibih Actun witnesses symbolically complex cave painting in the Colonial period. Yucatan has the greatest number of time periods represented in the cave painting tradition. Indeed, outside of Yucatan we only see datable cave painting in the Early and Late Classic period. This is not surprising since Yucatan has many caves accessible both to local populations which have great time depth and to archaeologists. The enormous cave systems in Belize and Guatemala, conversely, are generally near more sporadically and sparsely settled areas and are much more formidable to explore.

The collection of cave paintings surveyed presents both direct and indirect documentation of Maya ceremonial activity. Although the glyphs help to lock in specific calendrical events which acted as catalysts for such ceremonies, figures and scenes offer a singularly intimate view of their participants. In terms of a chronological overview, the interest in portraying humans and their activities begins quietly in the Protoclassic (the Loltun figure discussed earlier) and reaches a crescendo in the Late Classic at Naj Tunich. The Postclassic and Colonial cave paintings lack this humanist point of view and seem to rely more on symbolic and emblematic references.

The cave paintings that deal with human action have an intensely personal and individualized sense about them. This is no better illustrated than at Naj Tunich. A good portion of the cave paintings portray a single figure (Fig. 22-15). Consistently, these figures are dressed modestly by standards of figures portrayed in monumental art and decorated portable objects, such as polychrome ceramics. The figures at Naj Tunich generally wear a loincloth, a headdress formed of folded cloth, or their hair is simply pulled up in a ponytail. Their jewelry is modest—an earflare and a large bead strung around the neck. The cave figures lack costume insignia or glyphic qualifying elements, such as body cartouches. The events and figures are stripped down to a level of realistic portrayal that avoids complex iconography so typical of the Maya. Indeed, the subject of these paintings seems to be the individual in the cave.

From the evidence of the Naj Tunich paintings, it appears that the cave artist clues in the viewer whether or not to consider the events as happening in the cave. The inclusion of architecture, for example, may indicate some other location. The very lack of any architectonic or locational determinants, I believe, is a signal that the events are happening in the cave itself. All scenes in Maya cave painting known today lack frames, yet other artistic environments and media in which the Maya worked show their preference for framing scenes. This is significant in that the unframed scene visually unites with its surroundings, and so the cave sets the stage for events portrayed in the paintings.

The cave, as an environment for the painting, provides a context for understanding events that mitigates the need for symbolism. We often see a Cauac Monster as a basal pedestal or framing device in monumental sculpture and polychrome vase painting. Through such symbolism a spacial context is established (i.e., the Underworld or a cave) and a ritual context as well (i.e., supernatural events). The very placement of images in a cave communicates all of this to the viewer. The cave paintings are a mirror reflection of the dress and behavior of ritual participants. Since they are seen only by those entering the cave, they lack the formality associated with public scrutiny. And since they are in a cave, they lack the symbolic complexity necessitated in nonsacred contexts.

The kind of activities portrayed in the Naj Tunich paintings supports the idea that they center on a personal view of the ritual experience. This is no better seen than along one wall where there is a series of one-, two-, and three-figure scenes as well as hieroglyphic texts (Fig. 22-16). One of these scenes (Fig. 22-16, no. 18) has overt sexual content (Stone 1985), showing an ithyphallic male embracing a female or possibly a male playing a female role. According to my view of such isolated figures, this event actually took place in the cave and represents the acting out of a ritual performance. The painting sets an explicit sexual tone, unusual for the Classic Maya, which colors our view of nearby figures. One of these figures has an erect phallus (Fig. 22-16, no. 20). Squatting, he buries his hands in his lap. There are marks on his penis which may be slash marks, a reference to autosacrifice.



Figure 22-15. Drawing 72, Naj Tunich, Guatemala.

Another figure (Fig. 22-17) is equally dramatic. He holds an unusual twisting pose which underlies both tension and movement. His face is blackened in a manner reminiscent of the large profile faces from Loltun. Face-blackening recalls Landa's comment that ritualists covered themselves with soot while fasting (Tozzer 1941:152, 161, 165). What the Naj Tunich figure holds in his hands looks like his penis, yet it is marked such that this is not clear. A horizontal line is across the base, and the upper edge seems to have a jagged contour.

Matthias Strecker (1987) has interpreted both of these figures as in the act of masturbation. I have interpreted them in relation to autosacrifice (Stone 1985), although I would admit their strong sexual overtones, and I now see them increasingly in that light. We are, no doubt, witnessing two very private acts of ritual importance in a cave. One of the figures with his hands near his genitalia is nude (Fig. 22-16, no. 20), an unusual guise for the Maya to portray. Even figurines which blatantly show bloodletting from the penis are usually partly clothed. The cave figures appear alone, devoid of visual clutter and formal restraints. They offer a glimpse into the private world of ancient Maya ritual.

Another figure nearby (Fig. 22-16, no. 26) also seems to be involved in a personal sacrificial rite. This sole figure draws his hand to his mouth. Benson (1974) argues that the hand-to-mouth gesture is associated with autosacrifice; and later, Schele's (1984:39) work on the Orator from Palenque, a figure also drawing his hand to his mouth, revealed just this association. That the Naj Tunich figure (No. 26) is involved in autosacrifice is strongly suggested by his unsettled posture: head tilted back, open mouth, and raised arms. In another area of Naj Tunich, a standing figure has his hands placed near his groin and his head is tilted slightly upward. This may also be a portrait of an individual engaged in autosacrifice from the penis. Unfortunately, the figure is destroyed in the area critical to confirm this hypothesis.

MacLeod and Puleston (1980:75) discuss the presence of bloodletting paraphernalia, such as stingray spines and obsidian blades, in remote parts of caves and have suggested that these rites were an integral part of cave ceremony. In the eighteenth century, sacrifice in caves of the Quiche area is mentioned by Francisco Ximenez (1857:189), who states (my translation), "They made sacrifices in the caves and in the dark places, and in the intersections of the roads, and on the tops of hills, conforming to the petitions that they would make, thus, they chose the places."

Sacrificial acts are also seen in Maya caves as the remains of ritually killed human victims. Reents-Budet and MacLeod (in press) conclude that most of the so-called "burials" in caves are the deposited remains of such individuals. They note that Petroglyph Cave yielded about a dozen skeletons of children three years old or younger and cite one Belizean cave in which forty headless skeletons were found—their craniums were deposited in another part of the cave. Decapitation is also suggested by the twelve skulls found in the Gruta de Xcan, Yucatan (Márquez de González et al. 1982:9–10). Fuentes y Guzman (J. E. S. Thompson 1975:xxv) reports the sacrifice of children in a cave near Mixco Viejo to a spring called "Mother of the Water."

A cave painting that ties into the theme of human sacrifice comes from Actun Ch'on, Yucatan. This scene focuses on a bound, nude, ithyphallic captive (Fig. 22-7). His arms are tied behind his back with cloth or rope. His mouth is agape, as he perhaps reflects on his unenviable fate. A captive holds a similar pose on Piedras Negras Lintel 12. On a polychrome cylinder, a bound,

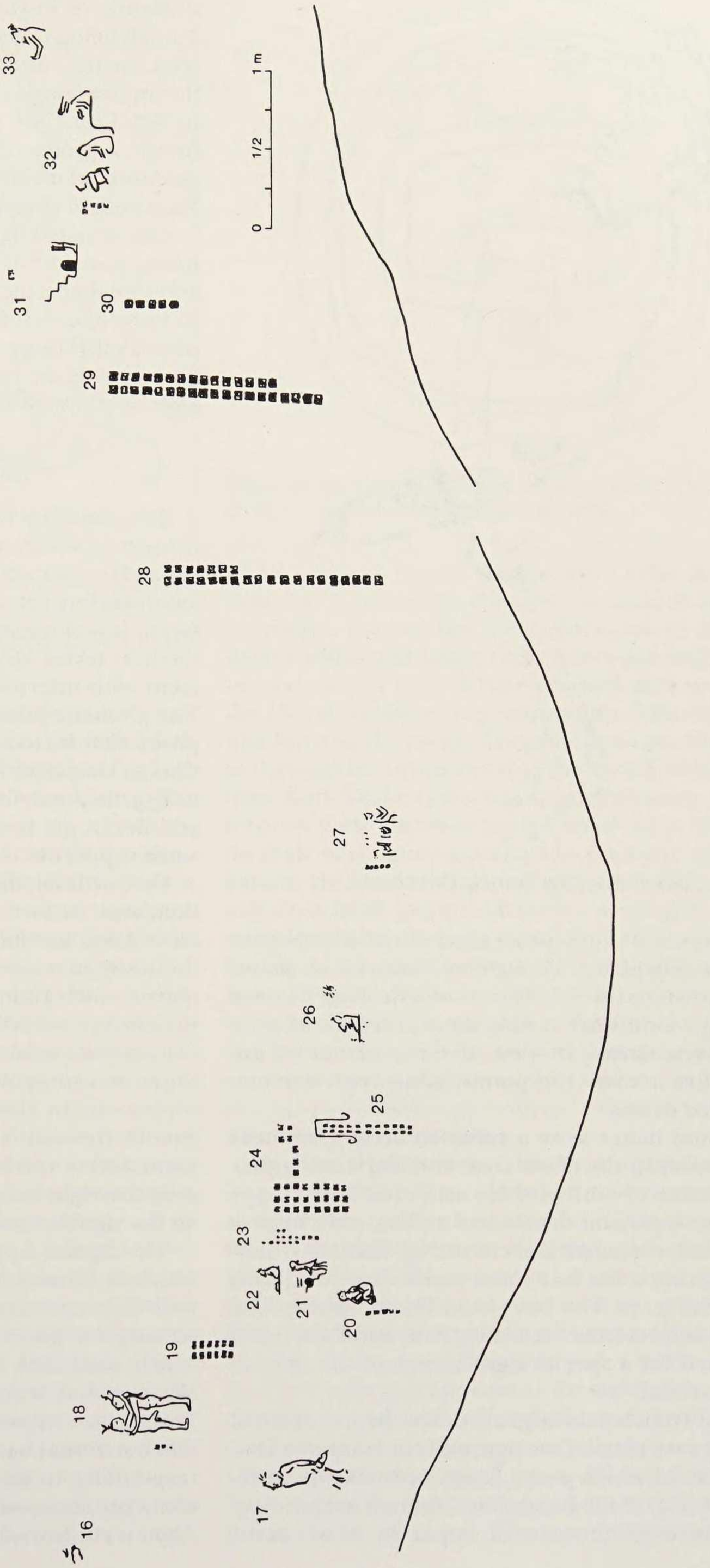

Figure 22-16. Wall profile, Naj Tunich, Guatemala.



Figure 22-17. Drawing 17, Naj Tunich, Guatemala.

nude captive walks in a procession of nobility (Schele and Miller 1986:pl. 84). Though the Actun Ch'on painting easily distinguishes between rank through posture and composition once again, there is a lack of symbolic appurtenances. In view of the evidence of human sacrifice in caves, this painting may represent one stage in that drama.

Music and dance were a common accompaniment to ceremonies in the Maya area, and Naj Tunich provides evidence of both of these activities. Two groups of musicians, playing drums and rattles, walk in procession. One costumed dancer at Naj Tunich, is portrayed wearing a bat face mask and a deer headdress (Stone 1982:fig. 7). The bat would be an appropriate animal to impersonate in a cave. Pohl and Pohl (1983) have argued for a special significance of the deer in Maya cave ritual.

The Naj Tunich paintings also show the use of copal incense in cave ritual. One figure sits in front of a flaring dish out of which pours fumes of smoke, presumably copal (Fig. 22-18). In addition, there is archaeological evidence of the use of copal in Maya caves. Evidence of burning is common in Maya caves, Naj Tunich being no exception. Smoke blackening is often seen on the lower surface of rock overhangs, giving the impression of repeated burning in a particular area. In Rio Frio Cave C, in the Mountain Pine Ridge of Belize, a group of bowls was found to contain large quantities of melted, hardened copal (Reents-Budet and MacLeod, in press).

Other seated figures at Naj Tunich also seem to represent portraits of ritualists. One is seated without any additional accouterment, except a lone profile face to its immediate left (Fig. 22-15). Another is seated in front of a shell (Stuart 1981:232). The shell, as a symbol of birth and death, recalls the essential role of the cave as a place of transition.

KATUN CEREMONIES

The paintings from Joloniel provide a more specific context in which to understand Maya cave ritual (Fig. 22-6a). Here, we see some event associated with a 9 Ahau katun-ending ceremony. The right-hand figure holds a torch. It is interesting to note the resemblance of the torch in terms of its flames and adjacent circular element with internal circle to the Maya grapheme T59. The phonetic value of T59 is *ti/ta*, and it has been proposed that its iconic form is based on a torch, *tah* in Cholan languages (Campbell 1984:11). In its resemblance to T59, the torch in the Joloniel painting, which I might add lies in the heart of Chol-speaking territory, lends some support to this argument.

On one level, the torch provides necessary illumination, and, in fact, this is the only means that the ancient Maya are known to have employed for lighting their way in a cave. The flames come out of a tubular object which resembles ceramic torch holders found in Belizean caves (Reents-Budet and MacLeod, in press). On another level, the torch, as fire, may refer to an important component of the ceremony. Period-ending ceremonies in Mesoamerica, such as the New Fire ceremony, frequently involve the use of fire. Black body paint covers the left figure and appears to have covered the right-hand figure as well. This may also bear on the significance of the katun ceremony.

The figures appear to be standing on a platform which is formed by a natural projection of the cave wall. Below, natural fractures in the cave wall outline a rectangular panel in which a second altar is painted which combines the stepped forehead of the Cauac Monster and features of an Ahau glyph (Fig. 22-6b). The Ahau component is specifically seen in the medial horizontal bar below which is an inverted "u" corresponding to the mouth of the Ahau glyph. The u-elements above suggest the eyes. The association with Ahau is confirmed by the number nine that appears to



Figure 22-18. Drawing 63, Naj Tunich, Guatemala, of a figure seated in front of a dish of smoking copal.

the right, reiterating the date 9 Ahau which is an important component of the scene above. The hybrid altar is analogous to the "Giant Ahau Altars" of Caracol and Tikal. On the Caracol monuments the Ahau glyph is contained within a quatrefoil (Fig. 22-19), a form associated with the entrance into the cave/Cauac Monster. The Joloniel painting contains the Ahau within a Cauac design, making essentially the same statement as the Caracol altar. Containing the Ahau glyph within a Cauac Monster may be the same as containing the katun-ending within a cave. The Joloniel painting, contained inside an actual cave, is especially emphatic on this point. Conversely, the Giant Ahau altars from Caracol bring the cave/katun-ending concept into the ceremonial center.

The Joloniel paintings provide graphic evidence from the onset of the Classic period of the celebration of katun ceremonies in Maya caves. This statement is based on the supposition, which I have attempted to support in this paper, that Maya cave paintings for the most part reflect activities taking place in the cave. At a distant end of the chronological spectrum, evidence of katun ceremonies in caves comes from Colonial paintings at Dzibih Actun, previously discussed, where we saw representations of lords of the katun (Fig. 22-13). These multiple representations correspond to the repeated appearance of Ahau glyphs on katun wheels and groups of katun lords in Colonial manuscripts.

At Dzibih Actun, below the Colonial paintings, are repeated Ahau glyphs with radiating "arms" and "legs"

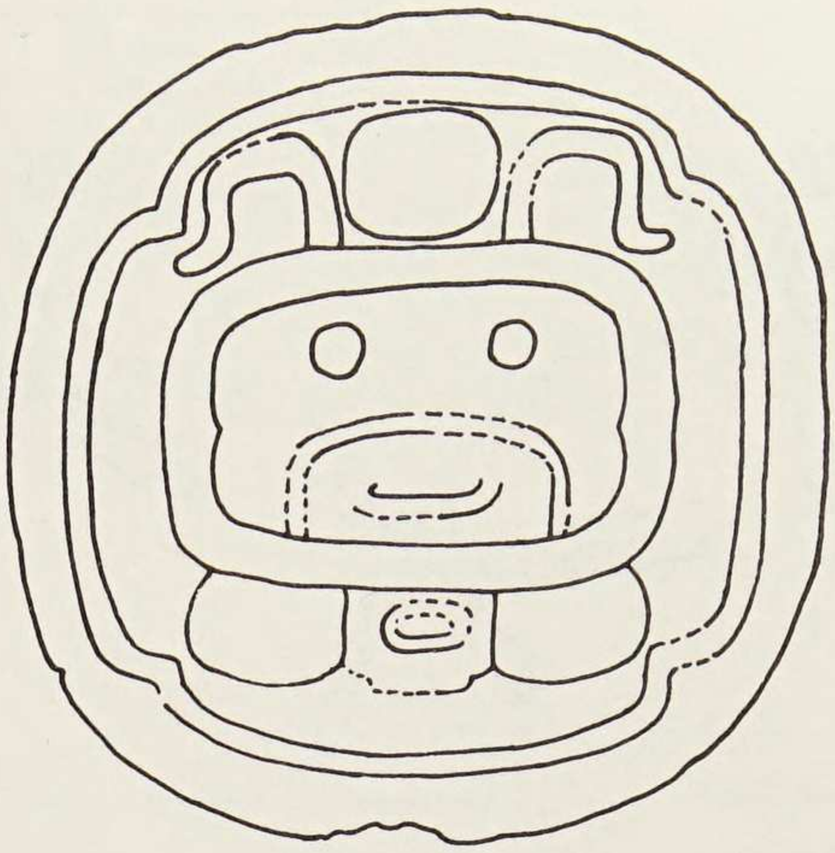

Figure 22-19. Altar 19, Caracol, Belize, a giant Ahau altar (after Beetz and Satterthwaite 1981:fig. 26b).

and a pointed "head" (Fig. 22-20). I offer the suggestion that these are pre-Hispanic versions of the lord of the katun, that is, they are emblematic of individual katuns within the katun cycle. There are multiple representations of them (I have counted nine so far), and the idea of repeated representations echoes the Colonial lords of the katun. They also have an Ahau glyph at their center which ties into the theme of katun endings. Karl Taube (personal communication, 1986) interprets these forms as turtles which bear Ahau faces on their back and are related to the cycle of thirteen katuns. He has found several examples from the Late and Postclassic period of turtles associated with the complete katun cycle or individual katuns. Thus, the Dzibih Actun "turtle-Ahaus" relate to a fundamental expression of the katun cycle. Since these paintings are mixed in with those dated as Middle to Late Postclassic, I would place them in this time period, roughly coeval with the Madrid Codex. These "turtle-Ahau" bearers provide further evidence of the importance of katun ceremonies in caves.

Naj Tunich also shows evidence of a katun ceremony being celebrated there. Here we have a painting of a seated figure holding a severed head (Fig. 22-21). A short text to the right presents the head of God K and the glyph 13 Ahau. The numerical coefficient appears to the right, but this kind of reversal is not uncommon in Maya inscriptions. A painting from a wall in Group G at Tikal shows a seated animal with a *tzolkin* date of 11 Ik. The coefficient appears to the right of the day sign (Orrego C. and Larios V. 1983:fig. 11a). Tzolkin coefficient reversals are also seen on polychrome vase texts. Given the chronological span of the dates at Naj Tunich, placing 13 Ahau at 9.17.0.0.0 is entirely appropriate (Stone, in press). The scene suggests that a de-

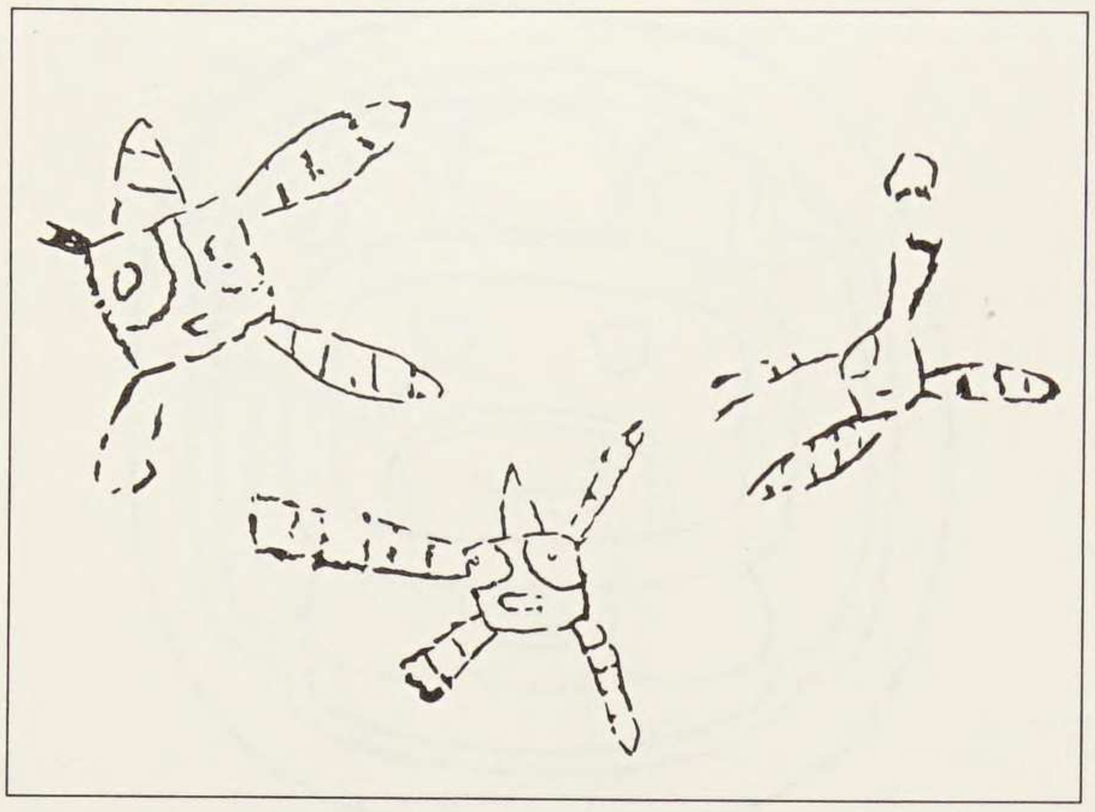

Figure 22-20. Drawing 20, Dzibih Actun, Yucatan, illustrating "turtle-Ahau" katun lords.



Figure 22-21. Drawing 11, Naj Tunich, Guatemala. Figure holding a decapitated head. Note the date 13 Ahau in the upper right text.

capitation took place, perhaps in Naj Tunich, for this period ending. As we have seen, there is abundant evidence of decapitation in Maya cave archaeology.

The 13 Ahau date becomes more interesting in light of the appearance just a few meters down the same wall and to the left of a *tzolkin* date 8 Lamat (Stone, in press). Counting forward from 13 Ahau the next Lamat position to be reached is 8 Lamat. If the 9.17.0.0.0.0 date is correct, then this date would be 9.17.0.0.8, 8 Lamat 1 Pop. This date is New Year's day, just eight days after the completion of the entire katun round (i.e., 13 Ahau). Considering the Maya affinity for the meshing of major cycles, this must have been an occasion of great ceremony.

We have already noted at Loltun Cave a *tzolkin* position which I have interpreted as 8 Muluc. The distinct possibility remains that this date is a Year Bearer, providing another instance of the association of New Year rites with Maya caves. It might also be noted that 8 Muluc is the Puuc-style Year Bearer corresponding to the Peten-style Year Bearer 8 Lamat. In addition, at Naj Tunich, a Tun glyph (T548) with a eroded superfix is found isolated on a wall (Stone, in press). This ties nicely into the themes we have been discussing.

It has been seen that Maya cave painting has a great deal to offer in terms of reconstructing ceremonial life from pre-Hispanic times. Cave painting prior to the Postclassic is especially rich in portraying individuals in ritual activity. It is during this time, and especially during the Classic period, that we note an abundance of human profiles painted and occasionally engraved on cave walls. There are eighteen profile faces from Naj Tunich and about a half dozen from Loltun. One of the Loltun faces belongs to the group of Protoclassic paintings. Olmec cave painting also contains profile faces (Grove 1970:figs. 17, 19). In my view, these faces reiterate the concern for marking a personal human presence in the caves and may be a shorthand form of portraying individual ritualists.

Hand prints, though more anonymous, serve a similar function; that is, they are a kind of personal signature, and assertively declare a human presence. In addition, they can be made without any graphic skills and little investment of labor. Hand prints probably form the single largest group of images to appear in Maya caves. There are hundreds of them found in Yucatan alone.

The celebration of katun ceremonies, and possibly New Year ceremonies, in Maya caves provides a key to understanding cave ritual in general. As noted by MacLeod and Puleston (1980), the awesome and terrifying ambience of the cave would serve to heighten the emotional ordeals that accompany ritual occasions. Thus, the cave is an environment well suited to celebrating rites of passage. The cave paintings support this very notion as we see individuals undergoing personally stressful rites at Naj Tunich; it is reasonable to suggest that they are undergoing rites of passage.

The katun and New Year ceremonies are similarly rites of transition which concern entire communities. The old katun or year metaphorically dies, and a new era is born. J. E. S. Thompson (1971:189) elucidates the notion of the expiration or death of the old katun, derived from the use of the word *hitz* in the Chilam Balams. He states:

> The Motul Dictionary gives for *hitz* the translation "death throes," and notes that it is applied to the end or last day of the year or month or week, *u hitz' haab*, "the last day of the year." The expression clearly implies the concept of the death of the period, and corresponds to our expres-

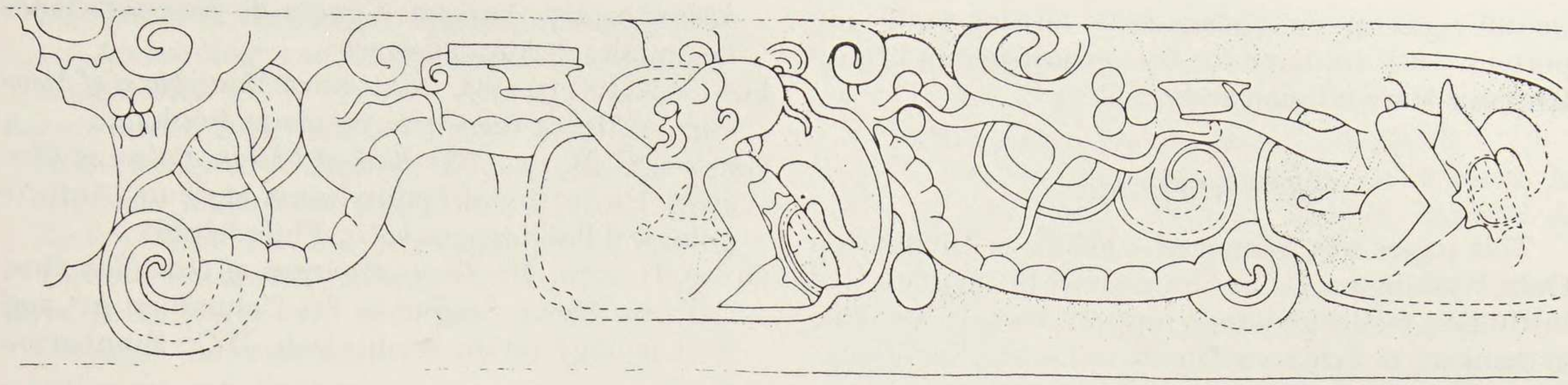

Figure 22-22. Altar 4, Tikal, portraying God N in a cave (from Jones and Satterthwaite 1983:fig. 58, courtesy of the University Museum, University of Pennsylvania).

sion "the dying year" or to our extension of the words expire and expiration to periods of time.

Perhaps the expired katun was discharged to the Underworld in a cave. The paintings from Joloniel (Fig. 22-6) seem to show such an event. Furthermore, some ethnographic accounts in the Maya area speak of ceremonies in which new time periods interface with cave ceremony. For example, in Santa Eulalia the last month of the native calendar initiates a sojourn of the souls of children and later adults to the cave Yalan Na?. The five days of the Uayeb see the return of these souls and community celebration (J. E. S. Thompson 1975:xxx). In this ceremony the idea of renewal, which is important in New Year celebrations, is evident in the return of souls from the cave.

Part of the renewal ceremony for the New Year described by Landa (Tozzer 1941:151–52) involves discarding household goods, such as dishes, stools, and mats. A frequent component of the cave archaeological complex consists of a heap of broken pottery which sometimes includes other objects, such as manos, metates, worked shell, and bone. The smashing of pottery is still part of Lacandon cave rituals (Bruce 1968:fig. III). Although we cannot say that the cave "pottery dumps" specifically reflect a New Year event, the idea of renewal may be part of their meaning.

The cave ceremonial complex is seen in a mythological guise on Altar 4 from Tikal (Fig. 22-22). Here we see God N emerging out of the quatrefoil mouth of a spectacular Cauac Monster. He is, in fact, sitting in a cave. With his left hand in each scene he raises a dish. Each object in the dish is relevant to painted representations of Maya cave ritual. In one hand he holds a torch; in another, a bowl of smoking copal; and in another, a stingray spine. The object in the fourth bowl cannot be identified. In addition, God N, the central protagonist, plays a major role as Mam and Pahuatun in period ending rites (Karl Taube, personal communication, 1986). Altar 4 is associated with a plain stela and lacks a hieroglyphic text (Jones and Satterthwaite 1983:79), so it cannot be determined whether it celebrated a period ending rite. Considering this important function for stelae and altars, however, it is quite feasible. In Altar 4 we see cave ritual from the point of view of public art. Cave painting, however, is much more direct in its portrayal of these events. These paintings dramatically reveal the cave as a place of metamorphosis—of the individual and of time itself.

Maya cave painting provides a unique window into the inner sanctum of ritual life. Its Classic humanistic phase gives us a remarkably vivid picture of individual acts and personal ritual experiences. Hieroglyphic paintings help to define events in more specific terms. Fortunately, enough of this painting has survived to show a continuous practice of cave painting from at least the Protoclassic right into the Colonial period. With the ever-growing corpus of Maya cave painting,

we can expect more scholars to be turning to this important visual resource for the reconstruction of pre-Hispanic Maya religion and ritual.

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23

Yucatec Sacred Breads through Time

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INTRODUCTION

This paper explores certain elements of modern Yucatec ritual which have been in use at least since the Classic Period of Maya culture. They are ceremonial breads, or maize cakes, and they are essential to many Maya rites. In modern times they are prepared from ordinary maize dough (the same dough used to make tortillas), appearing in a variety of shapes and sizes and called by many names. Often, the breads are built up of layers of dough interspersed with spreads of *sikil* (squash seed) and bean paste. An important, if not defining, characteristic of these breads is that they are wrapped in leaves and baked in earth ovens. In this sense, the word *tamale* as pointed out by Taube (1986), is a more accurate descriptive term than "bread." I will continue, however, to use the word "bread" throughout this paper, simply following the work of previous ethnographers.

The first part of this paper consists of rather detailed descriptions of the manufacture and use of a variety of these breads. I begin with my own ethnographic observations made during fieldwork in 1978 and 1983, then I review the ethnographic literature for other writers' accounts. Moving back in time, I touch on descriptions of these breads in an early nineteenth-century *informe*, in the Chilam Balam of Chumayel, and finally the sixteenth-century *relación* by Landa and one of the *Relaciones de Yucatan*.

Bridging the point of European contact, arriving in the Precolumbian past, the same breads are pictured in ritual scenes in the Postclassic codices where they are not only shown pictographically but are also spelled phonetically in accompanying hieroglyphic texts. Finally, the breads again appear, this time on Maya ceramic vessels, in ritual scenes from the Classic period, firmly demonstrating continuity for more than a millennium.

But this is more than a review of the literature on Maya ritual breads. It is also a demonstration of the usefulness of ethnographic analogy in studying the Maya past and, more specifically, the ancient writing system. By reviewing the literature, we not only get a sense of the ethnographic context in which these breads were used in the past but, in a real sense, clues are also provided for decipherment of the script. All of this is couched within an understanding of the remarkable consistency and conservatism of Maya ritual over time.

CEREMONIAL BREADS IN THE ETHNOGRAPHIC LITERATURE

I begin with my most recent field observations. In Ich Ek, between Hopelchen and Campeche, in the state of Campeche, in 1983, I observed a *Wahil Kol* ceremony which involved the use of ceremonial breads (Love 1983). The *Wahil Kol* ceremony is analogous to the *Hanli Kol* described by Redfield and Villa Rojas (1934). The first means "bread of the milpa," the second, "dinner of the milpa" or "food of the milpa." These ceremonies, along with *Ch'a Chaak* ceremonies, or rain ceremonies, were classed as agricultural ceremonies by Villa Rojas (1945). This seems to be an appropriate designation. The ceremonies are tied closely to the yearly agricultural cycle of clearing, burning, planting, and harvesting. The deities addressed are the guardians and workers of the forests and fields, and the offerings made are the fruits of agricultural labors (Love 1984:279). The main distinction between *Ch'a Chaak* ceremonies and *Wahil Kol*/*Hanli Kol* ceremonies is that *Ch'a Chaak*s are rain ceremonies whereas *Wahil Kol*/*Hanli Kol*s are more general petitions for protection (Love 1984:252) or ceremonies of thanksgiving (Hanks 1984:143). In Ich Ek, breads were made during the time of general preparation for the upcoming *Wahil Kol*. First, three cloth sacks were spread out on the ground. On top of these sacks, seven palm leaves (*xaʔn*, guano, the same palm used as roofing in Yucatan) were placed in an interlocking fashion to form a bed on which the bread would be con-

structed. After some water was sprinkled on the leaves, a large, flat, circular cakelike layer of maize dough (25–30 cm diameter, 2 cm thick) was laid on the leaves. On top of this the *h-men* spread a pastelike topping of mashed beans. On top of this, the second cake, the same size as the first, was placed. On top of this cake, a layer of *sikil* paste (ground squash seeds mixed with water) was spread. On top of the *sikil*, the third cake was placed. On this, beans were spread. Then the fourth cake was placed, then *sikil*, then the fifth, then beans, and so on, alternating beans and *sikil* between each layer until the thirteenth cake was set in place and coated with the bean paste.

After all thirteen layers were in place, the *h-men* molded the sides with his hands, pushing the edges of the layers together and pressing down on the top to make the thirteen layers into one complete bread (Fig. 23-1). Then the palm leaves on which the bread was lying were wrapped around the bread and tied with strips of vines or leaves. The wrapped bread was then set aside while construction of the second bread began. Four breads were made, all of the thirteen layers of maize cakes alternating with coats of beans and *sikil*.

When the four breads were finished, all the remaining dough was used to make the fifth bread. The fifth bread was made the same way as the others, but it turned out much larger because the *h-men* had to use all the leftover dough. This bread was specially marked on top with a tied piece of palm leaf pressed into the dough so that after the breads were baked it could be identified.

The breads were then baked in a *pib*, or earth oven. When they were done and removed from the oven, the specially marked bread was set apart. Somewhat later, the first four breads were placed on the *mesa* along with pieces of cooked domestic turkey as offerings. The fifth bread was broken up into crumbs and mixed with either posole or *saka?* (drinks made from ground maize and water), which produced the thick ceremonial bread-crumb soup known as *k'ol*. This *k'ol* was also put on the *mesa* as an offering, as were store-bought cigarettes.

When the ceremony was finished—that is, when the chanting over the *mesa* was completed—the breads were cut up and distributed to the twenty or so people present. Some ate the food there, others took their portions with them. The bread-crumb soup, *k'ol*, was also distributed, as were the cigarettes.

The use of these ceremonial breads at Ich Ek in1983 was similar in many respects to other uses of ceremonial breads which have been observed in their ethnographic contexts. In not all cases, however, have the breads been built up of layers and then baked as large loaves. In three *K'ex* ceremonies, also observed in 1983



Figure 23-1. Thirteen layers of dough are patted together to make a large cake at a *Wahil Kol* in Ich Ek, Campeche.

(Love 1983), regular tortillas, cooked on the standard kitchen *comal*, were used as offerings. The numbers of tortillas, like the number of layers in the *Wahil Kol* breads, was significant, as the following examples show.

K'ex means '*cambio*' or 'exchange'. In *K'ex* ceremonies, troubling spirits referred to as *Ik'ob*, winds, are drawn out of people or houses and transferred or transported away where they can no longer cause harm. Near Coba, Quintana Roo, I saw a nighttime *K'ex* ceremony which included offerings of specified numbers of tortillas.

This particular *K'ex* took place in the backyard of a residence. There was a path leading from the backyard into the bush behind the house. During the preparation for the ritual, a rope was tied across the path about two meters above the ground. From this rope four pairs of vine rings (*ch'uyub*) were suspended by tied strips of some kind of plant. In each ring, a leaf of *iximche* (*Casearia nitida*) was stuck so that the leaf protruded out away from the ring. Then, in the rings, bowls with offerings were placed (Fig. 23-2).

Four of the bowls, one bowl of each pair, contained *saka?*, the ceremonial white maize drink. The other bowl of each pair was filled with cooked domestic chicken and a certain number of tortillas. The number of tortillas in the four bowls, from left to right facing away from the house, was as follows: eight, nine, thirteen, and twelve.

Having asked the *h-men* the significance of the numbers of tortillas, I received the following explanation: Eight was for *Kanul* or *Bal* or *Balam*. The number nine was for the Virgin Mary. The number twelve was for the twelve apostles. Thirteen was for God. *Ah Kanulo?ob* is in the Cordemex Dictionary (Barrera Vásquez et al. 1980:299) glossed in part as the name given to certain spirit protectors in Quintana Roo. *Bal* does not

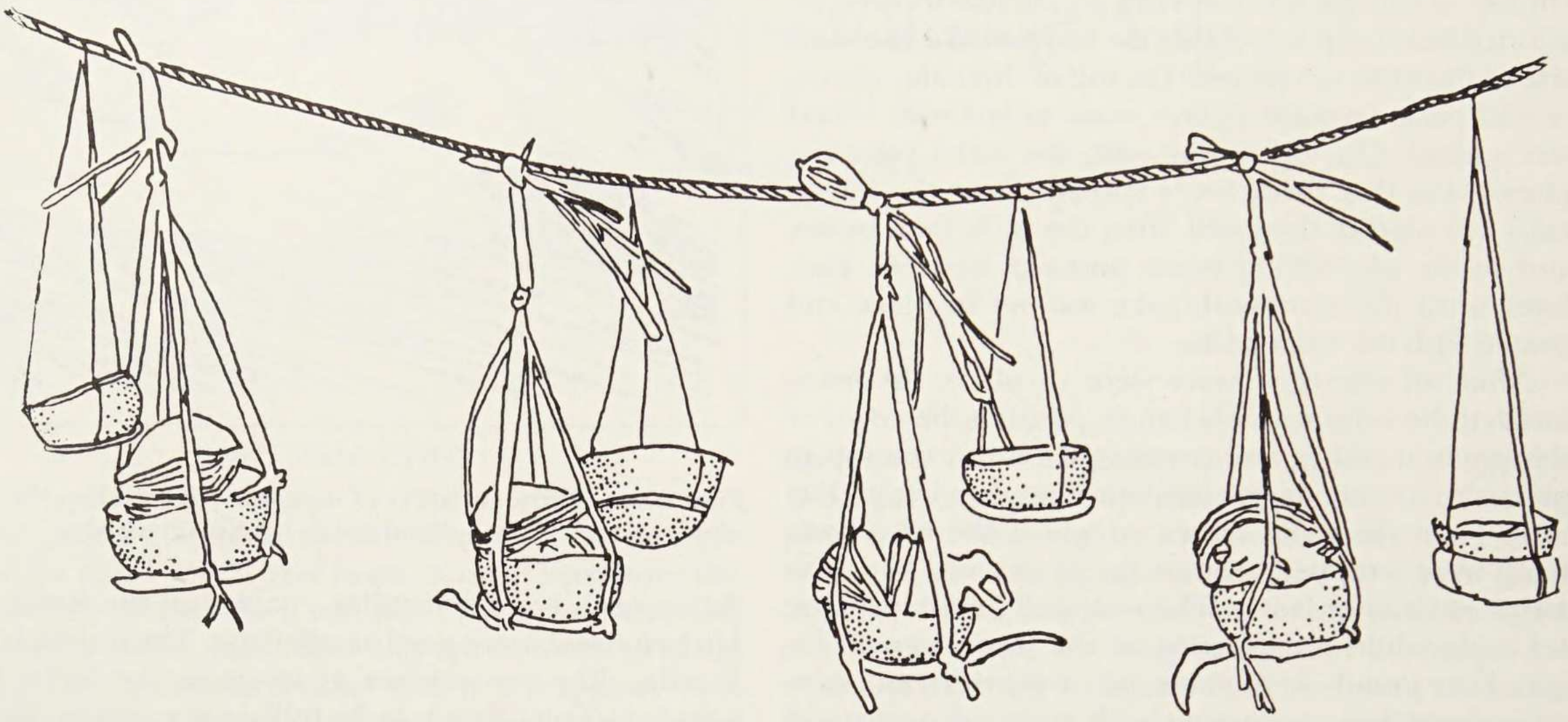


Figure 23-2. Offerings with chicken and specified numbers of tortillas from a *K'ex* ceremony near Coba, Quintana Roo.

have a gloss pertaining to spirit beings or gods in the Cordemex and is unexplained at this time. *Balam* refers to the ubiquitous spirit guardians of the forests, fields, and towns (Redfield and Villa Rojas 1934:112–16; Love 1986:72, 82–84).

In Popola, a town north of Valladolid, Yucatan, two much simpler and briefer *K'ex* ceremonies were observed (Love 1983). They took place in the house of the *h-men*. Nine bowls of *saka?* were arranged on an altar with one bowl of cooked chicken and tortillas. In these cases the number of tortillas was thirteen. In Becanchen, in 1978, breads for a *Wahil Kol* ceremony were prepared in the following way (Love 1984): balls of dough were first flattened into circular cakes. The first cake was put on some interlocking leaves. *Sikil* paste made of ground squash seeds and water was spread on each layer as more layers were added. This particular bread had twelve layers. On the top, four depressions were made; these are known as *u y ich wah* 'the eyes of the bread' (Fig. 23-3). *Balche?*, a ceremonial wine made from honey, was poured into the eyes of the bread. (*Balche?* is made with sugar in some places [James Fox, personal communication], but this was made from honey. For references to *balche?* and other ritual offerings elsewhere in the ethnographic literature, see Love 1984.) The eyes were then plugged with *sikil*. When this was completed, the bread was wrapped up in the leaves and tied. All the layered breads for this *Wahil Kol* were made of twelve layers except for one special bread. The special bread was composed of thirteen layers and my informants told me it was intended for *Dios*. Not only did it have one more layer than the other breads but it was also larger.

Besides the layered breads with *sikil* paste between the layers, thirteen balls of dough were set aside for another use. These were wrapped up in leaves in such a way as to resemble an armadillo, referred to as *wech* (Fig. 23-4). The wrapped breads, including the "armadillos," were taken to the pit oven, placed among the hot rocks, covered over with green leaves, and sealed off with sheets of corrugated steel roofing topped with earth. They were left to bake for about ninety minutes, after which the oven was uncovered and the breads removed. The cooked armadillo breads were collected in a pail and all the other breads were unwrapped. On the *mesa*, the thirteen-layered bread was set on the east side of the table under a crucifix, and the thirteen armadillo breads were piled near the center of the *mesa* along with feet and wings of chickens and turkeys. Meanwhile, all the other ceremonial breads were being broken up into bread crumbs on a sheet on the ground. Other elements in this ceremony included thirteen cigarettes, soup, incense, and candles. Later, the bread crumbs were mixed with the soup to make the ceremonial broth *k'ol*. The *k'ol* was placed on the *mesa* with the other offerings. During the fourth prayer of this particular ceremony, the *k'ol* was scattered to the four directions.

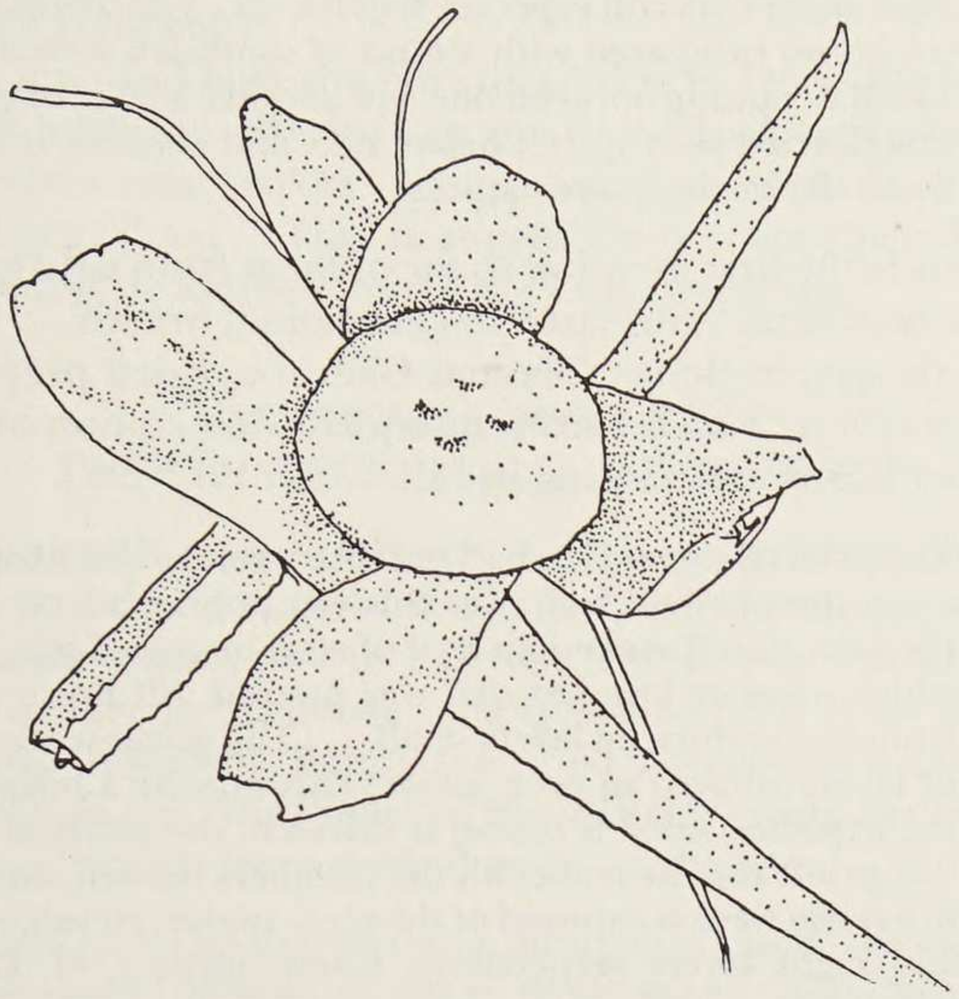


Figure 23-3. A twelve-layered bread with four "eyes" from Becanchen, Yucatan.

I turn now from my own observations to ethnographic reports in the literature. Most recently, John Sosa has reported the use of ⟨snoh wah⟩ 'great bread' (angled brackets indicate that words or phrases retain the orthography of the original source) in various Maya ceremonies in Northern Yucatan (1985:226, 336, 365, 392, 397). Although the construction of the bread is not detailed by Sosa, he does report some interesting variants of the markings on top. For a *Ch'a Chaak*, a ceremony calling for rain, four breads had the markings of ⟨kruus 'aarkoh⟩ 'cross arch', one had a cross with thirteen holes, one had a cross with twelve holes, and all the rest had only crosses that were filled with *sikil* (pp. 392–93).

The next most recent account I have found is of another *Ch'a Chaak*, reported in a publication of the University of Yucatan (Suaste 1981). This *Ch'a Chaak* was a three-day affair that took place in the forest. About sixty people participated, all under the direction of the presiding *h-men*. On the third day, ceremonial breads were made. The description of these breads is very close to the ones already cited above. Quoting the author, "Cada pan se formo con nueve capas de masa en forma de tortillas, untada cada tortilla con frijol y pepita molida" (p. 62). (Each bread was formed with nine layers of dough in the shape of tortillas, each tortilla spread with beans or ground squash seeds). The *pepita molida* is *sikil* paste.

There are some differences between these breads and the breads described in the *Wahil Kol* ceremonies above. For these breads there is no mention of any special markings on the tops. Also, both beans and *sikil* were put between the layers, probably in alternating layers like the Ich Ek example above, although the *h-men* in Becanchen used only *sikil*, spreading it between each layer. The other obvious difference is that these breads were made of nine layers. The *Wahil Kol* breads were made of thirteen or twelve layers.

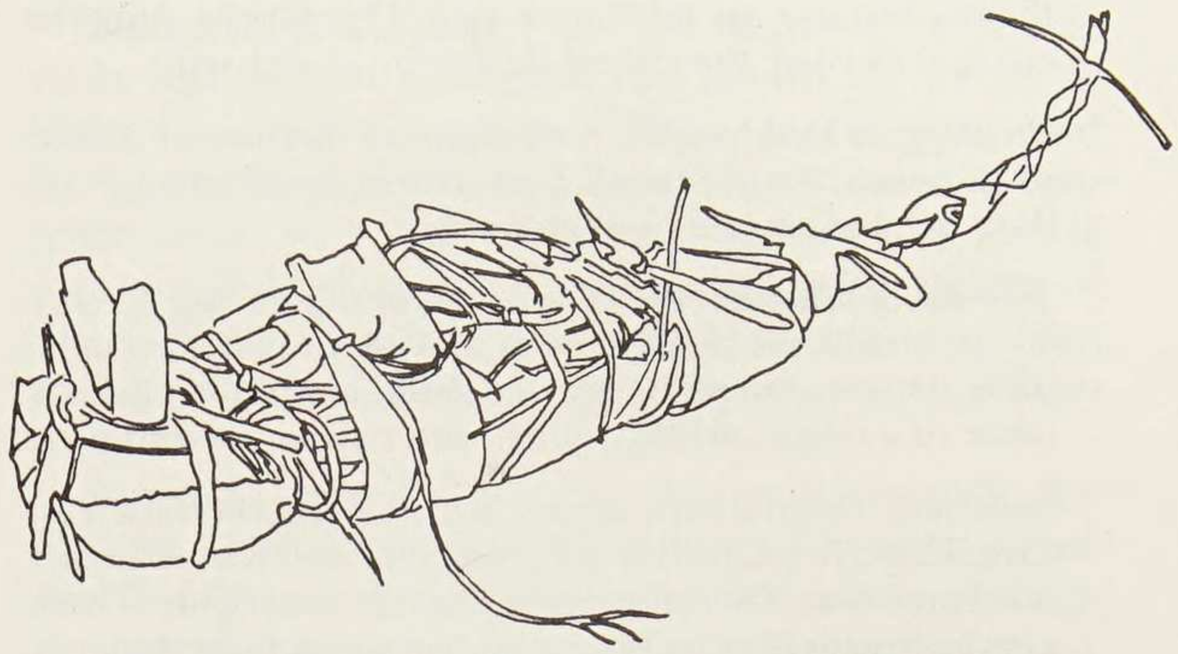


Figure 23-4. Armadillo effigy, *Wech*, from a *Wahil Kol* ceremony in Becanchen, Yucatan.

In the Balankanche cave ceremony recorded in 1959 (Barrera Vásquez 1970), there were many ceremonial breads. There were four breads of four layers each called ⟨kantas wah⟩, four breads of seven layers called ⟨u'uktas wah⟩ (*uuk* or *wuk* 'seven' is not glottalized; therefore *u'uktas*, as given here by Barrera, may be a typographical error as suggested by James Fox [personal communication, 1985]), four breads of nine layers called ⟨bolontas wah⟩, and thirteen breads of thirteen layers called ⟨oxlahuntas wah⟩. There was also one bread called ⟨nabal wah⟩ made with a soup called ⟨chok'ob⟩ (p. 76). These breads were used as offerings to the ⟨Yuntsiloob⟩, the spirit guardians of the cave of Balankanche.

There are three sources from the 1930s which describe sacred bread in the Yucatan peninsula. Steggerda (1941:57), with the Carnegie Institution, observed a *U Hanli Kol* ceremony (analogous to a *Wahil Kol*, see above) which included the baking of thirteen loaves of thirteen layers each.

Villa Rojas, in Quintana Roo, described four classes of breads as follows:

> *Noh-uah* ('great bread'). A pile of thick tortillas, placed one on top of another, each covered on one side by a paste of zicil. There are never more than four of these compound breads. The first is made of thirteen tortillas, and the others of nine, eight, and seven respectively. On the upper surface of each bread a number of depressions equal to the number of tortillas in the entire compound bread are made with the finger and arranged in a circle. In the center of the circle a cross is marked in the same way, and all

the depressions are filled with zicil. The dots forming the circle are called 'the eyes of the bread' (u yich uah).

Yal-uah ('divided bread'). An indefinite number of breads of this class are prepared. Each is composed of six tortillas; each has six 'eyes' but no cross.

Tut-i-uah or *noox-uah* ('the completing or supporting bread'). These breads are thought of as making the offering complete. They are small in size and seven in number. Each is made of a single tortilla, rolled, with zicil in the center.

Nabal-uah. These are the largest breads, prepared with least care. They are made by mixing together the leftover maize-meal and zicil. Therefore their number is variable. These are the breads used in preparing the sopas. (1945:109)

Redfield and Villa Rojas's classic study of Chan Kom provides the most detailed account of ceremonial breads. Seven kinds of breads are described and their Maya names are given as follows:

Noh-uah ('great bread'). A pile is made of thirteen, eleven, nine or seven large tortillas, each of which is covered on one side with a paste of zicil (ground squash seed) and water. On the topmost tortilla depressions are made with the finger and filled with zicil. The number of depressions corresponds to the number of tortillas in the pile.

Cruz-uah ('cross bread'). The same as noh-uah, except that the topmost tortilla is marked with a cross, filled with zicil.

Bolon-taz-uah ('nine-layered-bread'). A pile of six such tortillas. [One would expect nine; this may be an error.] On the topmost, nine depressions in the form of a cross are made with the fingers and filled with zicil.

Hol-che-uah (or hoppel-uah). Precisely similar to the preceding, except that only five tortillas constitute the pile and only five depressions are made.

Yaxche-uah ('ceiba break'; also called ba 'gopher', 'because they are given to the boys who hide under the altar at the ch'a-chaac, like those animals'). Single, large, long and narrow tortillas.

Yal-uah ('divide bread'). Four tortillas, with a leaf of the plant called bob between each two, and with four holes arranged in a square and filled with zicil on the topmost.

Nabal-uah. The remaining dough is thoroughly mixed with zicil and made into large thick tortillas of diminishing size superimposed on one another to form a sort of pyramid. These breads are mixed with broth to make kol.

All these breads are wrapped in bob leaves, tied with strips from a hibiscus tree (hol), and are cooked in the pib [earth oven]. (Redfield and Villa Rojas 1934:129)

In the 1920s, in Belize, Thompson described a *primicias* or "first fruits" ceremony, in which nine piles of nine tortillas and one of thirteen were used as offerings (1930:117). In 1928, Carlos Basauri, a member of Franz Blom's Tulane University expedition to Yucatan, described sacred breads used in *Ch'a Chaak* ceremonies in Santa Cruz de Bravo, Quintana Roo, as

se prepara con una especie de emparedados con 6 o 7 tortillas, poniendo entre una y otra una capa de carne de caza, masa frita con especias, frijoles, etc., y cociendolo en un horno (prepared with a kind of sandwich with 6 or 7 tortillas, putting between one and another a layer of game, dough fried with spices, beans, etc., and cooking it in an oven) (Basauri 1931:152, 1940:44).

This is the first mention so far of meat from wild game (*carne de caza*) being used in ceremonial breads.

In 1915, in Belize, Thomas Gann recorded preparations for a *Ch'a Chaak* ceremony. His description of the breads is worth quoting in full:

The priest flattened his ball out into a sort of thick tortilla upon the plantain leaf; over this was poured a little *sikil*; the next man flattened his ball of *masa* on top of this, over which another layer of *sikil* was poured, till there were from five to thirteen layers in all. . . . The greatest number of layers allowed in each *tutina* [This may be a misprint; the expected word is *tutiwa*] is thirteen, the smallest five; this priest says he makes all the numbers but ten, and his five *tutina* were composed of thirteen, twelve, eleven, nine, and eight layers respectively. (Gann 1917:412, cf. Gann 1918:44)

From the first decade of the present century, Tozzer provides an ethnographic account from Yucatan in which he describes the preparation of a nine-layered bread for an *U Hanli Kol* ceremony in Yucatan:

A pile of large and thick *tortillas* (tutiwa) [is prepared]. Between each two of the *tortillas* there are placed either *frejoles* [sic], cooked and mashed or *pepita* (sikil), the seeds of the *calabasa*. . . . Around this pile of nine tortillas, dishes of deer meat are placed. (1907:160–61; parentheses his, brackets mine)

In a story related by Rejón García (1905:37), printed in Merida in 1905, there is mention of a bread used in a *Ch'a Chaak* ceremony with sixteen layers called ⟨Xuaclahuntas⟩ (*wak lahun* 'sixteen'). The layers were dusted ("*se espolvorea*") alternatively with "*pepita*" (probably *sikil* paste), "*frijol*" (beans), and "*ibes*" (*ib*, large beans, perhaps lima beans, in Barrera Vásquez et al. 1980:261). For a *Loh* ceremony, a kind of purification rite, the same author describes seven breads of seven layers each, also with "*pepitas, frijol e ibes*" (1980:60). This completes the ethnographic review of ceremonial breads except for a few notes from my own fieldwork. The following information was given to me by an informant. I did not observe these directly.

1. *X-noh wah* is a kind of bread used in *Hanli Kol* and *Ch'a Chaak* ceremonies. This name, *x-noh wah*, agrees with the bread ⟨noh uah⟩, the "great breads" of thirteen layers reported by both Redfield and Villa Rojas (1934:129) and Villa Rojas (1945:109).

2. *Cho'kob* is the name of a large bread. This term does not agree with Barrera Vásquez' account in which a bread called ⟨nabal wah⟩ was made with a soup

called ⟨cho'kob⟩ (1970:76). In my notes the bread is called *cho?kob*. In Barrera Vásquez' account, the soup is called ⟨cho'kob⟩.

3. Finally, I have the note that *ho?che* is a term having to do with the offerings in the *Ch'a Chaak* ceremony. My notes read "*ho'che* – prepara una promesa de dios en Ch'a Chaak." This is suggestive of ⟨hol-che-uah⟩ recorded by Redfield and Villa Rojas (1934:129).

CEREMONIAL BREADS IN THE ETHNOHISTORICAL LITERATURE

In the nineteenth century, a description of ceremonial bread is found in the *Informe* of Bartolomé del Granado Baeza, *cura* of Yaxcaba. The *Informe* was written in 1813 in response to a questionnaire from the bishop in Merida. Baeza described a ceremony locally known as *tich'*, the "mass of the milpa," in which ceremonial breads were cooked in an earth oven:

> Estan cociendo bajo de tierra, unos panes grandes de maiz, que llaman *canlahuntaz*, esto es, de catorce tortillas o costras, entreverada con frijol, cuyo misterio no han declarado (they are cooking beneath the earth, some large breads of maize, which they call *canlahuntaz*, that is, of 14 tortillas or crusts [?], mixed with beans, whose mystery has not been explained). (1813:170)

Going back in time, the next reference to layered breads comes from the native literature itself. In the Chilam Balam of Chumayel—compiled in 1782 but probably copied from sixteenth- and early seventeenth-century originals (Roys 1933:5–6)—there are two "chapters" which mention ceremonial breads with specific numbers of layers. In chapter 9, called "The Interrogation of the Chiefs," there is a series of questions and answers given in the metaphorical language ⟨zuyua than⟩. During the fifth question by the head chief are these lines:

> "Then you shall bring me thirteen layers wrapped up in a coarse white fabric." This is what the covering of the thirteen layers is which is mentioned. It is an enormous tortilla. Thirteen layers of beans are in it. This is what the coarse white fabric is, it is a white mantle. (Roys 1933:91, his translation)

In the Maya transcription given by Roys, "thirteen layers" is ⟨oxlahun yal u tas⟩, "enormous tortilla" is ⟨yahau uahe⟩, and "thirteen layers of beans are in it" reads ⟨oxlahun yal buul yan ichile⟩ (p. 26). In chapter 16, a chapter of questions and answers similar in format to The Interrogation of the Chiefs, the following is found:

> "Son, bring me here that which stops the hole in the sky and the dew, the nine layers of the whole earth," ⟨bolon taz lah cab⟩. "It is a very large maize tortilla," ⟨noh uah⟩ (1933:128).

Landa (Tozzer 1941:90) did not mention tortillas as such, but instead described various breads found in sixteenth-century Yucatan: "They made good and healthful bread of different kinds." In ceremonial contexts (listed in Tozzer's syllabus [1941:315–16]), Landa has the following: bread with eggs, with hearts of deer, with iguana, with chiles, without salt or pepper, with gourd seeds, in the shape of hearts, and as pasties of quail.

Another source from the sixteenth century, the *Relación* of Dzonot, from the *Relaciones histórico-geográficas de la governación de Yucatán*, contains a rare description of an apparent rain ceremony. The native priest, the *Ah K'in*, takes a maize bread, amassed and cooked, "*pan amasado y cocido de maiz*," and raises it to the sky, after which he announces to the people around him that there will be an abundance of food and good years ahead (*Relaciones de Yucatán* 1898–1900, 1:86). The act of raising the sacred offering up to the sky is a key act in many Maya rituals—so much so that the term *tich'*, which means 'to hold up or raise up', survived into the early twentieth century as a name for agricultural ceremonies, described by some early writers as *misas milperas*, "milpa masses" (e.g., Baeza, above).

Summarizing the information from Baeza, the Chilam Balam of Chumayel, Landa, and the *Relaciones de Yucatán*, it is apparent that throughout the Colonial period in Yucatan, ceremonial breads played an essential role in native ritual. In at least two sources, Baeza and the Chumayel, mention is made of breads of specified numbers of layers. In Baeza it is fourteen layers; in the Chumayel it is thirteen and nine.

CEREMONIAL BREADS IN THE PRE-HISPANIC LITERATURE

It is now apparent that ceremonial breads in which the number of layers is ritually important and in which the number of layers figure into the name of the bread (e.g., *bolon tas wah*) have been used for some four centuries in the Yucatan Peninsula. There is no reason to suspect this practice to be a Spanish introduction, so it is reasonable to assume that these breads were also used in pre-Hispanic times. As evidence to support this assumption, I will show that hieroglyph T506, the so-called *Kan* sign, should be read logographically as WAH (bread) and that it also can be used pictographically, outside of the written texts *per se*, in scenes showing offerings of ceremonial breads.

T506 Used Logographically as WAH

(Following transliteration conventions proposed in the Albany volume on phoneticism [Fox and Justeson 1984a], I will use lower-case letters for phonetic or syl-

labic spellings [e.g., *wa*] and upper-case letters for logographic or morphemic spellings [e.g., WAH].)

First, I want to secure the reading WAH for T506. The interpretations of T506 given in Justeson's glyph interpretations section of the Albany volume (Justeson 1984:334) vary somewhat among scholars, but those in attendance at the 1986 Palenque Conference (*Sexta Mesa Redonda*) heard two papers (mine and Victoria Bricker's) with persuasive arguments that T506 should be read WAH. In addition, and independently, Karl Taube (1986) has arrived at the same reading. All three of us are indebted to John Justeson and Peter Mathews for suggesting that T506 be read WAH when affixed with T130 *wa*. To help the reader understand how we arrived at our current understanding of the glyph, I will review the history of its interpretation, which begins a century ago with Cyrus Thomas.

Thomas (1882:156) began by assigning the meaning "maize" to the sign T501 (Figs. 23-5, -6). T501 is the logogram for the Yucatec day *Imix* as given by Landa (Tozzer 1941:134). Thomas's reasoning was that the Yucatec word for maize, *ixim*, was so similar phonetically to the day name *Imix*, that the two words could both be assigned to the same glyph. In effect, Thomas was arguing that T501 was polyvalent—in this case demonstrating metathesis—being a logogram for *Imix*, the name of the day, and *ixim*, the Yucatec word for maize.

Thomas went on to argue that the *Kan* sign (T506), also given by Landa (Tozzer 1941:134), is so frequently paired with the *Imix* sign in the codices, that they make up a "compound character" (Fig. 23-6), the meaning of which must be "bread of maize" or "corn bread" (Thomas 1882:156). Thomas's reasoning was if this "compound character" means "maize bread," and the *Imix* sign means "maize," then it follows that the *Kan* sign must mean "bread." He noted the *Kan* signs (without the *Imix* sign) were obviously meant to depict offerings when they were seen pictured in plates and upright ceramic vessels in the pictorial codices. In these examples Thomas thought that the *Kan* signs could be representing "maize" as well as "bread (or tortillas)" (1882:156).

Brinton (1895), following C. H. Berendt, suggested that the *Kan* sign was an iconic representation of the red stone beads used as currency in Yucatan in the sixteenth century. These stones, which perhaps could have been shell or coral (discussed by Tozzer 1941:95), are called *Kan* in the *Relación de Kanpocolche y Chochola* (*Relaciones de Yucatán* 1898–1900:2, 323). The iconic representations of the *kan* stones were used in rebus fashion, according to Brinton, for the day name *Kan*. In contexts where it was not used in rebus fashion to represent the day sign, it was used as a pictograph of the *kan* stones. There it was used semantically, conveying



Figure 23-5. T501:506. "Maize and bread" according to Thomas (1882:fig. 90).



Figure 23-6. T162:506.501. "Abundance of maize" according to Thompson (1950:271–72).

the idea of "food, prosperity, and abundance" (Brinton 1895:110).

Gates thought the *Kan-Imix* compound (Fig. 23-6), frequently found in the glyphic texts in the codices must surely denote "food and drink, corn and wine" (1931:19–20,194; noted by Thompson 1950:72). Since the *Imix* sign alone refers to water or wine in Gates's analysis (1931:1–5), then the *Kan* sign alone must refer to food or corn.

Thompson (1950:75) is in no doubt on the subject:

> There can be no question that the Kan sign represents grains of maize since young maize plants are frequently depicted in the codices issuing from a Kan sign, and not infrequently a young maize plant, growing from a Kan sign, forms the headdress of the maize god and other deities. (See Figs. 23-7, -8, -9.)

The combination of the *Kan* and *Imix* signs in the already mentioned compound (Fig. 23-6) was interpreted by Thompson to mean "abundance of maize" (1950:271–72), a good prognosis or omen. Thompson further builds upon his interpretation of T506, the *Kan* sign, as maize, by giving examples of glyph groups from the codices accompanied by his own transliterations as follows: new maize (Fig. 23-10; his fig. 13-6), red maize (Fig. 23-11; his fig. 13-7), yellow maize (Fig. 23-12; his fig. 13-8) and white maize (Fig. 23-13; his fig. 13-9). All of Thompson's interpretations just mentioned have the *Kan* sign meaning maize, not bread, but he allowed that there was a broader meaning, "food in general," as the following quote shows (1950:72):

> Kan certainly represents the ripe maize, but, by extension, it covers food in general (cf. *uah*, "bread," used also to signify food and abundance, and our own "Give us this day our daily bread").

Indeed, he suggested a "tortilla" interpretation for T506 where it was used in the offerings associated with the bee ceremonies in the Madrid Codex (Figs. 23-14, -15). He reasoned that the glyph groups there referred

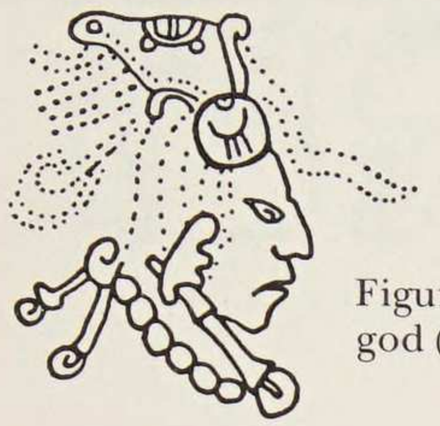


Figure 23-7. Maize headdress on maize god (after Thompson 1950:fig. 13-1).



Figure 23-8. Maize headdress on Moan bird (after Thompson 1950:fig. 20-14).



Figure 23-9. Maize headdress on god on Dresden 14a (after Thompson 1950:fig. 63-3).



Figure 23-10. T17:506.130. "New maize" according to Thompson (1950:fig. 13-6).



Figure 23-11. T109.506.506. "Red maize" according to Thompson (1950:fig 13-7).

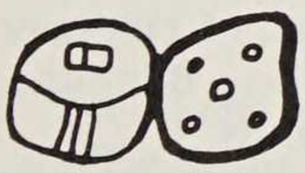


Figure 23-12. T506.585(?). "Yellow maize" according to Thompson (1950:fig. 13-8).

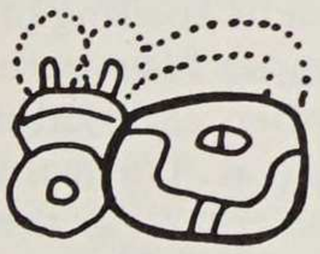


Figure 23-13. T58.?:506. "White maize" according to Thompson (1950:fig. 13-9).

to a "ritualistic offering of nine tortillas to the bee god" (p. 129).

Kelley (1976) is skeptical. He notes Knorozov's 1955 proposal that the *Kan* glyph was used as a semantic determinative for food but challenges anyone to provide a logical explanation for why that glyph should mean "food" (1976:209). Kelley tends to agree with Knorozov that the iconic representation of the *Kan* sign is a form of shell, referring to Brinton's interpretation



Figure 23-14. Offering in bee ceremony on Madrid Codex 103b. IX:T506.87:102.

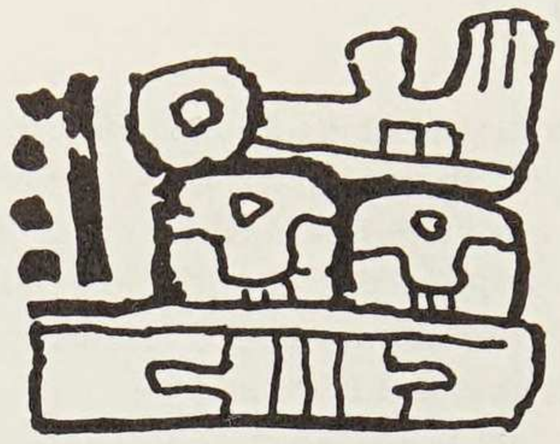


Figure 23-15. Offering in bee ceremony on Madrid Codex 106b. IX.T87:506.506:102.

(above) of the glyph (1976:109). He does not accept the general interpretation of maize, bread, or food. It is clear to Kelley that depictions of fish, iguanas, turkeys, and deer are offerings, but why they are combined with the *Kan* glyph is not clear (1976:144).

More recently, scholars have found phonetic evidence for the reading of the *Kan* glyph as WAH. The argument begins with the phonetic reading *wa* for T130 (Fig. 23-16). Lounsbury (1973:138), as part of his decipherment of T168, AHAW, first tentatively proposed that glyph T130 be a syllabic sign, phonetic *wa*. Fox and Justeson (1980:212–13) followed this by presenting three examples strongly supporting the *wa* reading for T130. Mathews and Justeson (1984:204–5) succinctly reviewed the history of the decipherment of this glyph and stated there is no longer any reason to doubt the correctness of Lounsbury's original reading. In the appendix on glyph interpretations in the Albany phoneticism volume (Justeson 1984) there appears to be complete unanimity among glyph scholars for the phonetic *wa* reading of T130.

The decipherment of T130 bears directly on the study of Maya breads because Mathews and Justeson (1984:205; Justeson 1984:338) have proposed that T506, the *Kan* sign, is logographic WAH 'tortilla' (their gloss) when suffixed or prefixed with T130, the *wa* sign. In such cases T130 acts as a phonetic complement. A good example of the *Kan* sign affixed with the *wa* phonetic complement is in Figure 23-17. Other examples, from the codices, of *Kan* with the *wa* affix are listed in Zimmermann (1956:95–97). In his catalog, the *wa* affix (Z76) is found suffixed to the *kan* sign (Z1324) fourteen times (24 percent) from a total of fifty-eight appearances of the *Kan* sign. It is prefixed only once, and in that case



Figure 23-16. T130. Phonetic *wa*.

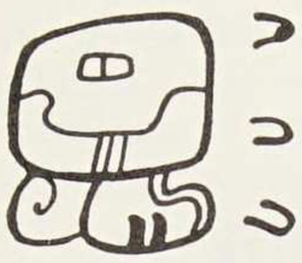


Figure 23-17. T506 with T130 *wa* suffixed.

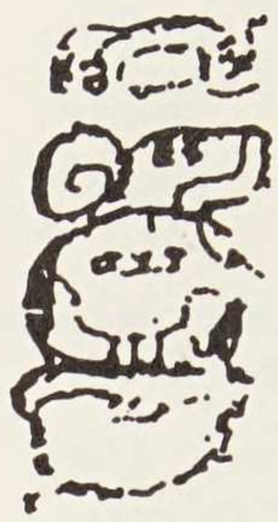


Figure 23-18. ?:T130:506, ?-(wa)-WAH in a vessel, Dresden Codex 42c.

it is in a picture (Fig. 23-18), not in a text. Futhermore, it can now be shown that T506, the *Kan* sign, can be read WAH even when not affixed with T130, *wa*. In fact, there is no evidence it should be read KAN or K'AN anywhere other than when it is a day sign. In glyphic texts, where it is not used as a day sign, it should probably always be read WAH. There are several lines of evidence for this:

1. At Chichen Itza (Fig. 23-19, pointed out to me by David Stuart in 1986), there is a clear substitution pattern of T130-prefixed-to-T506 and T506 by itself. In the first four examples of the seven parallel texts in this figure, at compound "C", T506 occurs with T130 prefixed; in the next two examples, T130 occurs by itself, substituting for the T130.506 compound. Having accepted the *wa* reading for T130 by itself, I maintain this substitution is a strong argument for a WAH reading for the compound. (In the seventh example, there is another substitution: a head facing the "wrong" way.)

2. Taube (1986; from Stephen Houston's personal communication) points out a substitution pattern at Machaquila, where T506 on MQL St. 5, at K3 replaces T130 on St. 2 at A3 (Fig. 23-20), further supporting the WAH reading for T506.

3. In the Dresden Codex 13b–14b (Fig. 23-21), there is an interesting substitution pattern in the first two blocks of each four-block text. The first block (following Fox and Justeson 1984b:21–22) is apparently the verb, *u mach* on page 13b and *mach* (without the third person preposed *u*) on page 14b. *Mach* means '*asir con la mano*', (to grasp in one's hands), (Barrera Vásquez et al. 1980:473). The second block has the phonetic spelling of the object of the verb, which is also the offering, represented pictographically, held by the ritual participant in the scene below. (The three little "U" elements, T136, which also occur in the Chichen Itza examples above, have not yet been deciphered and cannot help this analysis.) In the first three cases, on page 13b, T506 is suffixed by T130, giving the reading WAH as discussed above. On page 14b, in the second three cases, T130 is suffixed to the verb, whereas T181, logographic AH or phonetic *ah* or *ha*, is suffixed to T506. If T181 is being used phonetically here, as *ah/ha*, then the following transliterations show that glyph blocks 1 and 2 of these two pages can be read alike, except for the presence and absence of the possessive *u*:

Dresden page 13b, blocks 1 and 2 of each *t'ol* (double column). (T — Thompson [1962] numbers, Z — Zimmermann [1956] numbers.)

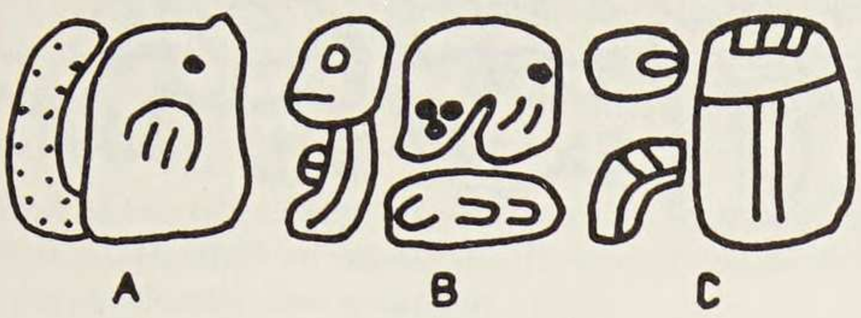
T1.74:669a	506.130:136
Z1.75:166	1324.76:65
U ma-ch(a)	WAH-(wa) ?
'his grasping bread'	

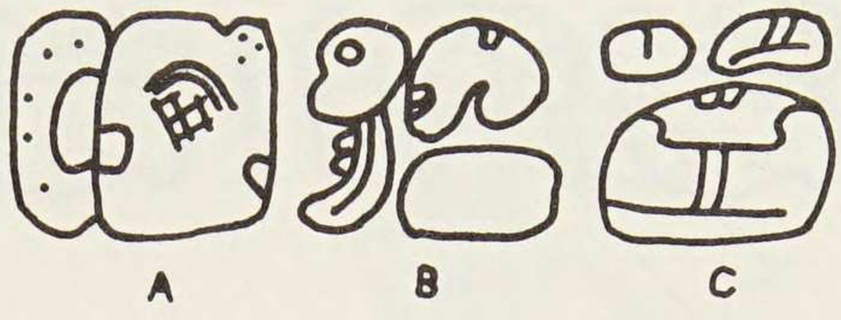
Dresden page 14b, blocks 1 and 2 of each *t'ol*.

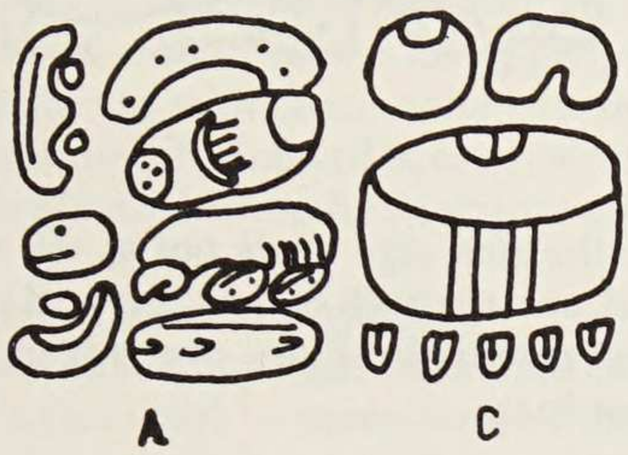
T74:669a.130	506.181:136
Z75:166.76	1324.60:65
ma-ch(a)	(wa)-WAH-(ah/h[a]) ?
'grasp bread'	

There is an alternative interpretation for these blocks which has T181 as a verbal suffix in complementary distribution with the pronoun *u*; in which case, on page 14b, the object, *wah*, is imbedded in the verb itself. This possibility has been discussed informally with F. G. Lounsbury, V. R. Bricker, and B. MacLeod at various times and places during 1986 with no clear-cut results. I think the phonetic interpretation of T181 here, rather than the grammatical one, is likely. But either way, the reading WAH for T506 still stands.

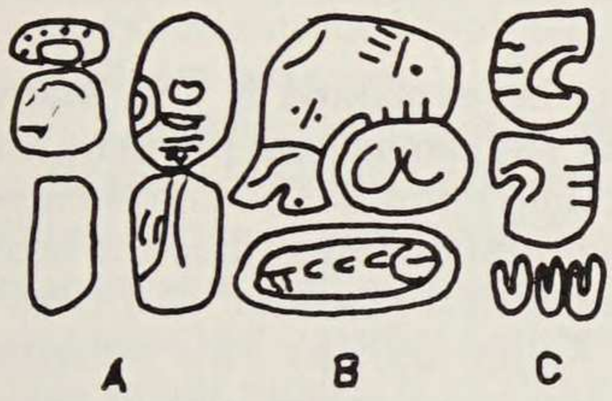
4. In the Madrid Codex, on pages 65 to 72, on both a and b sections, there is a possible phonetic spelling of *wah* in the sixth block of each *t'ol* (Fig. 23-22). Elsewhere (Love 1986:274–77), I argue that T17, often called the *Yax* sign, can sometimes be read NOH 'great'. The main points of the argument are (a) its occurrence as the main sign in the *Nohol* compound, (b) its semantic substitution with T109 CHAK 'great' in the second compound of the bottom row of glyphs in the Dresden Codex New Year pages, and (c) the appropriateness of the reading *noh wah* 'great bread' (as opposed to *yax wah* 'new or green bread') in pictures and texts in the Dresden Codex New Year pages (fourth compund, bottom row, page 26, read NOH WAH HAAB-IL; in the bottom picture of the same page, in a vessel; and twice in the top section on page 27, at D2 and C3).

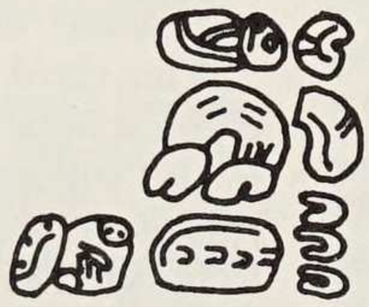












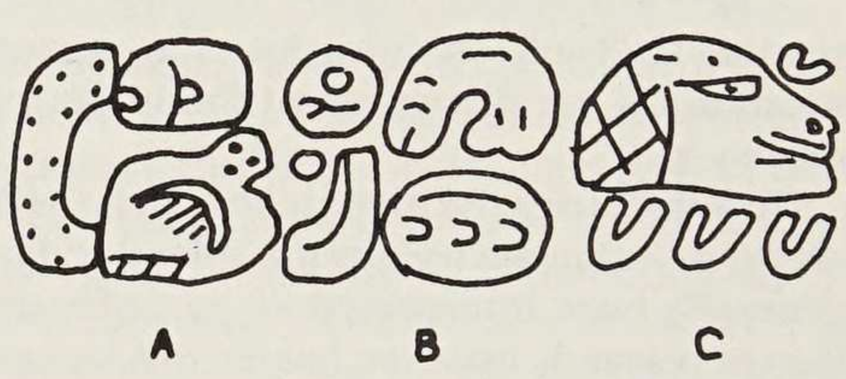


Figure 23-19. Substitutions of T130 for T506 (at compound marked "C") at Chichen Itza (from Beyer 1937:figs. 86–91).

Acceptance, perhaps tentatively, of the reading NOH for T17 in the above-mentioned Madrid pages, results in the following transliteration:

Madrid Codex pages 65 to 72, a and b, block 6 of each *t'ol*.

T17.130:136
Z24.76:65
NOH wa-h(a)
'great bread'

Accepting the above transliteration as valid also means accepting the reading order as main sign, superfix, postfix. This reading order, although contrary to traditional constructions, has ample precedent in the *ahaw* reading for T168 ("ben-ich" prefix) with the T130 *wa* suffix. The reading goes back to Lounsbury (1973), but the establishment of the reading order which puts the main sign *before* the *AWAH* was convincingly demonstrated by Mathews and Justeson in their readings

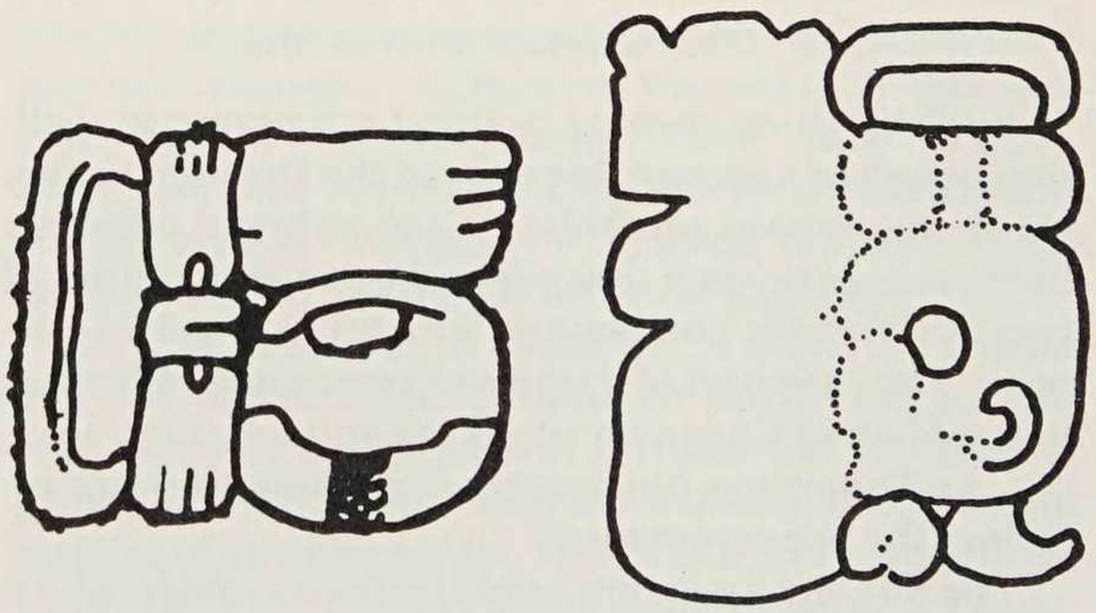


Figure 23-20. Substitution of T130 and T506 at Machaquila (from Graham 1967:figs. 47, 53).





Figure 23-21. Phonetic spellings of *wah* in Dresden Codex 13b–14b.

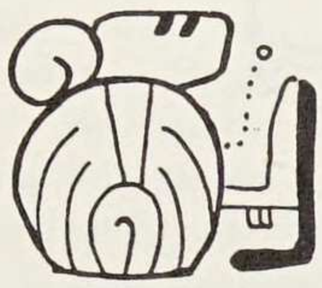


Figure 23-22. Phonetic spelling of *noh wah* in Madrid Codex 65ab–72ab.

for "number-katun-status [ahaw]," "Lady Katun Ahau (sic), Lady 6 Sky Ahau, and Jaguar Ahau" (1984:215). My transliteration NOH wa-h(a) follows the same order.

5. Recently, Bricker (1986) has also accepted the WAH reading for T506 (crediting Justeson, personal communication) in her discussion of food offerings on Dresden 29–31.

To summarize the glyphic research for T506: In addition to its known use for the calendar day *Kan*, it has generally been interpreted, or paraphrased, as maize. Recent research, however, has led to a logographic reading WAH.

T506 Used Pictographically as "wah"

In point three above, I pointed out phonetic spellings of *wah* in hieroglyphic texts in the Dresden Codex which accompany pictures of T506 as bread offerings in the scenes below. I now present an interpretation of two other glyph compounds which use T506 in pictures. They are part of a series of ceremonial offerings in the Madrid Codex on pages 103 and 106 (Figs. 23-14, -15). As Thompson (1950:129) pointed out, they are offerings for bee ceremonies.

The *Kan* signs can now safely be read as *WAH*, which leaves three other elements to be analyzed in these compounds: (1) the *te* or *che* sign (T87), (2) the sign on which the offerings rest (T102), and (3) the dotted-line element over the *Kan* sign in Figure 23-14.

The dotted-line element in Figure 23-14 is the least understood. It may be a pictographic representation of some sort of offering in a vessel. The solid line running up beside the *Kan* sign curls out at the top like the lip of a vessel, and the arch of dots is found throughout Maya art over openings of jars, perhaps indicating a frothy liquid or foam.

The second element, found in both compounds, is the object on which the bread offerings rest. Fox and Justeson (1984b:29–47) argue that, in the context of the depictions of offerings, this glyph (T102, *KI?*) works as a semantic determinative for "offering" (i.e., representing Yucatec *ki?* 'sweet, tasty').

The third element to be explained is T87. Many glyph scholars agree that T87 can be both phonetic for *te* and logographic for TE(?) and CHE? morphemes (Justeson 1984:322). Thompson first identified the dual usage of T87 for TE 'numerical classifier' and CHE? 'wood' (pointed out by Kelley 1976:191). This presents two possibilities in reading the glyph groups in question. One reading could be *bolon te wah*, translated 'nine numerical classifier bread'. The other reading could be *bolon te?/che? wah* translated 'nine tree-or-wood-product bread'. Since there is no known precedent for this latter reading in the literature but ample evidence for 'nine numerical classifier bread', it is reasonable to suppose that in the compound in question, T87 is being used as a numerical classifier.

"Nine (and other numbers) numerical classifier bread" is found throughout the review of the literature on breads (above), but in the ethnographic/ethnohistorical context the numerical classifier is *tas*, not *te*. According to the list of numerical classifiers (*particulas para contar*) given by Beltran (1746:160–64; translated by Nuttall 1903:674–78; also see Tozzer 1921:290–92), *tas* and *te* are used in the following ways (translation Nuttall's):

> Taz. For things which follow each other in order or in line; also for heavens: *tu yox taz caan*, "in the third heaven," and for regions: *tu yox taz metnal*, "in the third region of hell." This particle is an ordinal number like "first," "second,"

etc., and when it is joined to another number it ceases to be a numeral and becomes a noun, signifying "said region." Thus, *canpel utaz al metnal* signifies "the regions of hell are four in number."

Te. For counts of years, months, days, leagues, cocoa, eggs, and calabashes or squashes. Example: *hunte ti haab*, one year; *hote cacao*, five grains of cacao.

The idea of heavens piled one on top of another forming layers in the sky is very similar to the structure of the sacred breads we have been discussing. It is easy to see why *tas* is the numerical classifier used for both layers of heaven or hell and for layers of bread. *Te*, however, would not be an appropriate numerical classifier to use with ceremonial breads.

The following names of breads using numerical classifiers is gleaned from the literature review completed above:

1. Barrera Vásquez (1970:76)
   ⟨kantas wah⟩ — four-layered bread
   ⟨u'uktas wah⟩ — seven-layered bread
   ⟨bolontas wah⟩ — nine-layered bread
   ⟨oxlahuntas wah⟩ — thirteen-layered bread
2. Redfield and Villa Rojas (1934:129)
   ⟨bolon-taz-uah⟩ — nine-layered bread
3. Rejón García (1905:37)
   ⟨xuaclahuntas⟩ [wah] — sixteen-layered bread
4. Baeza (1845:170)
   ⟨canlahuntaz⟩ [wah] — fourteen-layered bread

Te was not found in the ethnographic/ethnohistorical sources as a numerical classifier used with ceremonial breads. Neither does it appear to be an appropriate numerical classifier for breads according to Beltran. This would suggest that T87 in the glyph compounds being studied here (Figs. 23-14, -15) is not being used as a logograph for the numerical classifier *te*, but for *tas*. T87, then, is being used semantically rather than phonetically, a kind of generic numerical classifier which may be read *tas* in this case and *te* in other cases. This has implications for the understanding of the writing system in general, which is discussed below.

"Wah" in the Classic Period

I have demonstrated that the *Kan* sign was used by the pre-Hispanic Maya for pictures of offerings of *wah*, and there is now clear evidence for the use of these sacred breads during the Classic period. This argument is thoroughly covered by Taube (1986) and need not be repeated here, but an illustration from a Classic Period pot showing the *K'an* sign held out as a ritual offering (Fig. 23-23) clearly makes the point.

"Wah" in the Dictionaries

If T506 is read WAH, then it is important to discuss the lexeme *wah* as it was used in Yucatan. In Colonial



Figure 23-23. *Kan* sign as bread offering from Classic period vessel (Coe 1973:70).

Yucatan the Maya word *wah* was used for both *pan* (bread) and tortilla without apparent distinction. Evidence for this comes from early Maya dictionaries. The Motul Dictionary (Martínez Hernández 1929:887; Ciudad Real 1984:438) of the late sixteenth and early seventeenth centuries glosses *wah*, spelled ⟨vah⟩, as ⟨tortillas de pan, de maiz, desta tierra⟩ (tortillas of bread, of maize, of this country). The next earliest (seventeenth century) dictionary, the Vienna Dictionary (1972), which is Spanish-Maya only, has both *pan* and tortilla entries glossed as *wah* (e.g., ⟨Pan comun [common bread] piz uah, Pan de maiz nuebo [bread of new maize] chipaa uah⟩ and ⟨Pan fresco, Recien sacado del comal [fresh bread, recently taken from the *comal*] Lik xamachil uah⟩ [p. 156r], and ⟨tortillas hacer [to make tortillas(?)] pakoch uah⟩ [p. 196r]). The San Francisco Dictionary (Michelon 1976:376), perhaps from the seventeenth century (see discussion by Barrera Vásquez et al. 1980:25a-27a), has the following entry: ⟨Uah: pan, tortilla⟩. (Kaufman and Norman's 1984 reconstructed Cholan vocabulary has *waj, item 610, glossed as Spanish '*tortilla, comida*'; and as English 'food' on pages 135, 153).

So it is clear that in Colonial Yucatan, the lexeme *wah* did not distinguish between bread and tortilla. *Wah* referred not strictly to tortillas but to bread in general. In fact, even today, the traditional homemade tortillas of Yucatan are fat, almost cakelike patties made by pressing out balls of maize dough against a flat surface with the fingers. They are more breadlike than the machine-made tortillas.

IMPLICATIONS

This study of ritual breads through time has implications for the understanding of certain principles

found in Maya studies. One principle clearly set out is the conservative nature of certain elements of Yucatec ritual. Through centuries of prohibition and punishment for practicing "pagan" rites and through centuries of extreme disruption of native life-styles, the construction of sacred ritual breads on ceremonial occasions has survived essentially unchanged since before the arrival of the Europeans in the sixteenth century. By demonstrating continuity in this one aspect, it is implied that there may be other, probably many more, elements of Yucatec ritual with a similarly conservative nature.

Another principle pointed out by this paper has to do with the Maya writing system in general. The use of the *te* glyph (T87) for a numerical classifier that is consistently *tas* in the spoken language shows that the spoken language is underrepresented in the written script. Although many numerical classifiers were in use in pre-Hispanic times, only one (T87 *te*) has been securely identified so far in the script (though others have been suggested, as in Kelley 1976:190; Thompson 1950:197; and Fox's [personal communication] *p'is* at Chichen Itza). Underrepresentation is also true for grammar (e.g., only the simplest grammatical forms are used in the script) and phonetics (e.g., vowel length and tone are not distinguished in the script). It is an important task for researchers to learn the nature and extent of this underrepresentation. If T87 TE can serve as a generic numerical classifier to be read TAS, then it is reasonable to assume there may be other "generic" glyphs—perhaps there are generic tense markers or generic person markers that do not precisely match the spoken language. The equivalence, or lack of it, of written and spoken languages is an ongoing research question. Specific examples, such as the numerical classifiers discussed in this paper, will inform that research.

CONCLUSIONS

The most important contribution made by this paper is much more than ethnographic descriptions of ritual offerings or specific readings of glyphs. It is an understanding of some of the deep and rich complexities of Maya religion below the surface. In ethnographic descriptions of bread offerings carefully arranged on ceremonial *mesas*, the observer sees and records the layout of the offerings, but underneath this material manifestation lies a system of ritual knowledge that has been evolving for millennia.

In the Maya writing, the "nine-layered bread" glyphs in the Madrid Codex, for example, are a kind of tip-of-the-iceberg representation of an entire system of ceremonial breads that was known to the Maya. The ethnographic research revealed a vast number of breads with many different numbers of layers and configurations of depressions on top. There were sixteen-layered breads, fourteen, thirteen, twelve, all the way down to four. All had very specific ways in which they were constructed and all were used somewhat differently. This tremendous range of ritual knowledge, discovered through ethnographic and ethnohistorical research, enriches the understanding of *bolon tas wah*, the "nine-layered bread" glyph compound in the Madrid Codex.

Almost any element in the codex scenes could be so analyzed. The codex scenes are really only schematic representations of extremely diverse underlying systems. The hieroglyphic writing may be viewed in the same light. By doing ethnographic and ethnohistorical research, the glyph student can look beyond the two-dimensionality of the written word to the vast complexities beneath.

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24

Ritual Humor in Classic Maya Religion

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Dumbarton Oaks

Our understanding of Classic Maya society and religion has changed radically over the last several decades. Due to the epigraphic insights of Tatiana Proskouriakoff and others, it is now known that the individuals depicted on Maya monuments are not calendar priests, but kings. It is becoming increasingly evident that the monumental texts record dynastic history, the achievements of particular rulers, and the structure and organization of regional polities. In this extremely exciting and fruitful time of glyphic and iconographic research, there has been a primary orientation toward the monuments and their accompanying texts. However, this has given a somewhat limited view of Classic Maya religion and society. The scenes provided by this public art are highly idealized portrayals of rulership. Almost invariably kings are presented in the prime of youth, despite the fact that they are frequently mentioned in the texts as being of advanced years. Were all Maya kings handsome, young and trim? Probably not. Important figures captured from *other* sites are depicted with wrinkles, lumpy noses, withered limbs, and sagging bellies (e.g., Piedras Negras Stelae 8 and 12). The recurrent themes in Classic monumental scenes appear to be warfare and the humiliation of captives, ancestor worship, and blood sacrifice. However, there was surely more to Classic ceremonial life than this. Scenes portrayed on portable objects, notably ceramic vessels and figurines, reveal a complex array of festival events and characters, many of which can be related to ceremonial performances of the Colonial and contemporary periods.

In an important work, Victoria Bricker (1973) discussed ritual humor of the post-Conquest Maya. Although focusing principally upon the Tzotzil Maya of highland Chiapas, Bricker discussed highland Guatemala and Yucatan, as well as ceremonial clowning of highland Mexico, the Gulf Coast, and the American Southwest (1973:166–218). More recently, René Acuñu (1978) has summarized the ethnohistorical material pertaining to ritual jesting and dances of protohistorical Yucatan. Despite the extensive background provided by these and other works, there has been no detailed study of ceremonial clowns and jesting in pre-Hispanic Maya art. In view of the abundant imagery of death, mutilation, and sacrifice, humor may seem quite out of place in the art not only of the Maya but also ancient Mesoamerica as a whole.[1] However, ritual clowns, spoofs, and excessive drinking were also an important part of ancient Maya ceremonialism. Although festival humor seems to have frequently satirized established authority, it had a decidedly sacred role. Ritual clowning seems to have marked key periods of transition in the succession of calendrical periods, such as that of the vague year, the katun, and the agricultural year.

Evidence of pre-Hispanic Maya clowning is widespread and takes many forms. One of the most compelling examples occurs in the New Year pages of the Dresden Codex. Here, a specific clown character, the opossum *mam*, can be compared to data in dictionaries, the Chilam Balam books, and other early Colonial accounts. The same character may be found in the Classic Maya period, along with a host of other festival entertainers. One particular Maya deity, known as God N or Pauahtun, is a central figure in the pre-Hispanic clowning complex. This deity appears to be generally equivalent to the Mam of contemporary Maya groups, an aged thunder god of the earth and the Underworld. For the Classic period, figurines are an especially rich source of information on ritual humor. Due to the presence of dancing fans and rattles, many figures previously identified as gods or animals can now be identi-

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[1] An important exception is the smiling figure complex of Classic Veracruz. Many of the Nopiloa style smiling figures are probably entertainers, for they hold rattles and appear to be dancing. It is recognized that Nopiloa figurines have close affinities to Classic figurines of the western Maya region, especially Jaina (cf. McBride 1971:28–29). One of the striking shared features is the "world-bearer" dancing position, with the elbows out and upward from the sides and the hands either at or above head level.

fied as festival performers. One particular Classic clown appears on Classic figurines, two-part effigy vessels, painted vessel scenes, and as a particular glyph in Maya script, the personified *pa* (T1023). Along with the Pauahtun Mam, this simian entity appears in two related Classic performances either coupled with a woman or in a dance featuring serpents as well as a pretty woman. Both themes are found in ritual humor of the contemporary Maya, which appears to differ little from that of the pre-Hispanic past.

THE YUCATEC NEW YEAR FESTIVAL

The Uayeb New Year festival of Postclassic Yucatan is an excellent example of the seasonal rites of passage described by Arnold van Gennep (1960:178–82). According to Gennep, there are three distinct phases in ceremonies marking the transition from one state to another: separation, transition, and incorporation. In terms of this general schema, the period of separation would correspond to the death of the year—that is, the end of Cumku, the last 20-day Maya month. The time of transition is the 5-day Uayeb period, and the period of incorporation, the first of Pop, or the beginning of the year. Of most interest is the time of transition, or the liminal period. It has been noted in a number of studies (e.g., Turner 1969; Ortiz 1972; Vogt 1976) that there is frequently a repudiation or even mocking of established authority during the liminal period. Forms of symbolic inversion are especially common; chaos and flux pervade. Turner (1969) noted that this "antistructure" often results in a negation of social differentiation, creating—at least temporarily—an experience of solidarity within the community.

In the Colonial Yucatec *Cantares de Dzitbalché* (Barrera Vásquez 1965), there are two remarkable songs that provide explicit Maya conceptions of the New Year festival. In one, the Uayeb period is mentioned as a time of danger and chaos:

chakaab cizin	Cisin is unbound
heekaab mitnal	the underworld is open.

(1965:34)[2]

The text then mentions that the sins (*keban*) of everyone, young and old, rich and poor, are accounted for at this time, and that eventually, the Uayeb will constitute the destruction of the world. In a lighter tone, Song 12 describes a night ceremony concerning the end of Uayeb. At dusk, the ceremonial performers convene in the central square:

dzu kuchul h'pax kayoob	Arrived are the musicians
h'paal dzamoob h'okotoob	comedians, dancers,
h'ualak zut ziithoob	contortionists, jumpers,
bey ppuz	hunchback
yetel nac yaob	and spectators.

(1965:71)

It is uncertain on what day this night celebration occurred, but an account in the *Relación de la Villa de Valadolid* suggests that it was the night preceding 1 Pop, the day of the New Year bearer; "the first day of the year before dawn, everyone and the *Alquin* watch and wait for the sun, making a grand festival that day" (*Relaciones de Yucatán* 1898–1900, 2:237; my translation).

The comedians, or *ah paal dzamoob*, mentioned in the installation of Pop are probably much like those described by Fray Cogolludo (1656:339):

> They are clever in their mottoes and jokes, that they say to their mayors and judges: if they are too rigorous, ambitious, or greedy, they portray the events that occurred and even what concerns the official's own duties, these are said in front of him, and at times with a single word. . . . They call these buffoons *Balzam*. (My translation.)

The jokes of the *baldzam* were often burlesque, and in the Motul dictionary there are the expressions *baldzam ach* and *baldzam pel*, referring to the male and female genitalia, respectively (Acuñu 1978:32). In fact, a general Yucatec term for comedy or farce was *tah* or *taah*, with *ta* being the term for excrement (Barrera Vásquez et al. 1980:748, 752–53). In the Pío Pérez dictionary, *ta?ah* is glossed as '*regir el vientre, evacuar en algo, ensuciarlo con excremento*' (Barrera Vásquez et al. 1980:752). This same term is used in the Motul dictionary to describe the events of a year, *u ta?ah ha?ab*: "*lo que sucede, trabajos, hambres, muertes, pestilencias, dentro de un año*" (Barrera Vásquez et al. 1980:753). As social commentators, or "muckrakers," the *baldzam* exposed scandals and misdeeds through their dramas. The end of the year seems to have been a particular time for this ceremonial jesting.

THE PRE-HISPANIC NEW YEAR PAGES

For over a hundred years, it has been known that the sixteenth Yucatec New Year ceremonies described by Fray Diego de Landa appear in the pre-Hispanic Maya codices. Cyrus Thomas (1882) first noted the New Year themes on the Madrid Codex pages 34 to 37 and the Dresden Codex pages 25 to 28, and it was subsequently pointed out that the Paris Codex pages 19 and 20 also concern the installation of the year. Bruce Love

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[2] In the English transcriptions of the *Cantares de Dzitbalché*, I am relying heavily on the Spanish translation by Barrera Vásquez (1965), although at times my choice of words differs slightly.

Save for phonetic values and terms cited for contemporary Yucatec, I will use Colonial Yucatec orthography. Terminology and transcriptions from other Maya languages will retain the original orthography of the authors cited.

(1986) has recently suggested that the Madrid New Year pages describe the ceremonies on or following the first of Pop, and not the Uayeb period. Although possessing only New Year "year bearer" dates, Paris pages 19 and 20 may concern the Uayeb period as well.[3] In the page 20 scene corresponding to the year bearer Akbal, there is a jaguar and another clawed mammal; and on page 19, a jaguar attacks a human figure. Cogolludo (1656:336–37) mentions that one of the primary fears experienced during the Uayeb period was that of being bitten by snakes or wild beasts (*animales fieros*). It is clear the Dresden pages concern both the Uayeb and the first of Pop, since each year bearer is provided with its preceding day. Thus, whereas the four year bearers are repeated thirteen times at the lower left of each page, the upper left contains a repetitive series of the previous day. The sequence runs as follows: Eb/Ben, Caban/Etz'nab, Ik/Akbal, and Manik/Lamat. The previous days, Eb, Caban, Ik, and Manik correspond to o Pop, the last day of the Old Year. Although not a year bearer, this last day corresponds closely to the Old Year, since it is oriented to the same direction as the Old Year bearer. For example, the day sign Eb, occurring just before Ben, is situated to the south, the same direction as its year bearer Lamat. It may be that this last day is a concentrated embodiment of the associations and events of the Old Year, the climax of the Uayeb.

On each of the four Dresden New Year pages, directly to the right of the last days of the Old Year, there is a curious anthropomorphic animal (see Fig. 24-5d). Due to its black eye markings, whiskers, conical teeth, and especially the long hairless tail, this creature has long been identified as an opossum. In every case, he carries an image in a sack or bag slung across his back. Although Thompson (1934:227) initially suggested that the opossums carry the gods of the "dying year", he later stated that they are bringing in the gods of the New Year (1970a:483, 1972:90); his original interpretation appears to be correct. Peter Mathews (1976) has noted that, in each of the four accompanying texts directly above, the hieroglyphic sign corresponding to the opossum is marked with a particular color. Although the glyphs are effaced on pages 25 and 27, it can be seen on page 28 that the color is red and on 29, black. These colors do not relate to the day sign and direction of the New Year bearer below, but to the first and last day of the Old Year. David Kelley (1962:286) noted that the following compound on all four pages can be phonetically read *u mam*. Both Cogolludo (1656:343) and Pío Pérez (Tozzer 1941:139) mention that the god of the Uayeb period was termed Mam, meaning 'maternal grandfather'. Kelley identified the opossum with the aged Mam. Noting that *uch* is a common Mayan word for opossum, Kelley (1962:286) pointed out that the equivalents of the Cakchiquel month Nabei Mam and Rucab Mam are known as Alauch and Mucuch in Tzeltal. In support of Kelley, it may be noted that in Chamula Tzotzil, the Tzeltal Mucuch is known as *hʔuč*, or *mol hʔuč*, the latter term meaning 'old man opossum'. In addition, the previous month is occasionally called *meʔel uč* 'old woman opossum' (Gossen 1974a:237). In Yucatan, the opossum may have been also identified with the quality of age; whereas the word for opossum in Yucatec is *och*, the term for old is *uch*.

Aside from its general attribute of age, little is known of Maya conceptions of the opossum.[4] The Yucatec were well aware of the creature's tendency of "playing possum," for according to the Pío Pérez dictionary a hypocrite or crafty fellow was referred to as a *cimen och*, or "dead opossum" (Barrera Vásquez et al. 1980:318). The Yucatec identification of opossums with buffoons or entertainers has been often cited. In the Tizimin tun prophesies, the *tolil och* appears in the years 11 Cauac, 2 Cauac, and 5 Ix (cf. Edmonson 1982:90, 99, 104). In the Motul dictionary, *ix tol* is glossed as '*truan, moharrache*', meaning buffoon or jokester. The Motul also describes the *tah ix tolil* as an 'entremes', or one-act farce. In the aforementioned Tizimin passages of 11 and 2 Cauac, the *tolil och* is mentioned in relation to Ah Can Tzicnal. For 11 Cauac, Ah Can Tzicnal is described as the 'masked Bacab', *ah koh bacab* (cf. Roys 1949:172, 181). As noted by Thompson (1970a:471) and others, the Motul dictionary glosses *bacab* as '*representante*' or actor. The white Bacab of the north, Ah Can Tzicnal, plays an important part in the New Year account of Landa.

During the late nineteenth and early twentieth centuries, there was a special dance performed during Carnival in northern Yucatan. Termed the Xtol, it has been suggested that this burlesque festival performance

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[3] The Maya calendar was composed of two combined cycles, a 260-day divinatory calendar and a vague year of 365 days. The 260-day calendar was formed of twenty day names counted through a thirteen-day permutating cycle. The twenty day names partially overlap the 365-day cycle, since the vague year was formed of eighteen twenty-day months and a five-day remaining period, the Uayeb. Thus, the New Year and each of the twenty-day months began on the same day. Because of the Uayeb, the day names count forward five days each year, creating a succession of four day names over a period of four years. These four day names, the "year bearers", were Ben, Etz'nab, Akbal, and Lamat throughout much of the Classic and Postclassic periods, although in the region of the Puuc, the year bearers shifted one day ahead, to Ix, Cauac, Kan, and Muluc.

[4] Among the Pedrano Tzotzil, the opossum is believed to be the owner of fire (Guiteras-Holmes 1961:196–97). A similar belief is recorded for the Nahuat of Huitzilan in the northern Sierra de Puebla. In one Huitzilan tale, the opossum steals fire to warm Christ, and in so doing burns the hair off his tail (Taggart 1983:103–4).

may derive from the pre-Hispanic *ix tol* dance (cf. Makemson 1951:101; Acuña 1978:53, n57). In 1901, Starr (1902:80–82) witnessed a Xtol dance in Merida and mentioned that it consisted of fourteen individuals, presumedly all males, with seven dressed as women with exaggerated breasts. Starr noted that during the dance there was "a good deal of indecent suggestion" and that the songs were sung in Mayan. Although Starr did not record the words, one version may be found in a romanticized description of the Xtol by Rejón García (1905:97–98). The final lines concern the payment of taxes or tribute:

A Kateexan bool patan	Do you all also want to pay tribute?

The chorus answers:

Matan, Matan, Matan, tat	No way, no way, no way, sir.

The refusal to pay tribute, an open denial of civic responsibility, recalls the socially charged humor of the seventeenth-century *baldzam*.

Although Thompson provided ethnohistorical evidence that the opossums on Dresden pages 25 to 28 are mummer entertainers, little attention has been paid to their dress and accouterments. The opossums on pages 26 and 27 both have belts with pendant conical shells. In the art of Postclassic Mexico, these shells frequently fringe the costume of dancers and other entertainers (cf. Vaticanus B, p. 52; Borgia, p. 64; Nuttall p. 38). Each of the Dresden opossums carries a fan and a strange staff topped with a human hand. Virtually identical staffs occur in Central Mexican codices, where they have been interpreted as *chicahuaztli* rattle staffs. According to Seler (1963, vol. 2:106) the *chicahuaztli* was associated with gods of the earth and fertility. Ichon (1973:427) noted that because the Postclassic staff frequently ends with a serpent—a widespread symbol of lightning—the instrument probably represents thunder.[5] The fans carried by the Dresden opossums may also have been important articles of spoofs and dances. In Classic Maya vessel scenes, dancers and animal impersonators are frequently found with fans (cf. Robiscek and Hales 1981:fig. 23a; Schele and M. E. Miller 1986:pl. 71). Ciudad Real mentioned that during a dance at Kantunil in 1588, one performer held rattles in one hand and a feather fan in the other (Noyes 1932:327). Writing on the early seventeenth-century Pokoman Maya, Thomas Gage (Thompson 1958:244) noted that the *toncontin* dancers wielded feather fans. During the 1901 Xtol dance in Merida, certain of the comedians carried feathered fans as well as rattles (Starr 1902: 81–82). Both accounts mention that the fans were flourished with particular movements and gestures.

Representations of opossum entertainers are not limited to the Postclassic Dresden Codex. In one Late Classic Maya vessel scene, a procession of three seedy opossums dance in file (Fig. 24-1). Although they are anthropomorphic and lack tails, all three have the long snout, conical teeth, and whiskers characteristic of opossums. In addition, they seem to be old; one has a wrinkled face as well as the sagging belly. Each carries a large instrument, apparently a gourd rasp, stroked by a stick in the right hand.[6] The same opossum figure, complete with musical instrument, appears on a Late Classic pottery mold from Guatemala (Fig. 24-2).

PAUAHTUNS, BACABS, AND THE OPOSSUM MAM

There has been a great deal of discussion, and confusion, over the identity of God N, one of the major deities of the pre-Hispanic Maya pantheon. Since the early work of Förstemann (1901:189–92) and Schellhas (1904:37, 38), it has been widely thought that God N was the god of the 5-day Uayeb period. In a discussion of the Classic personification of the number five, Thompson (1950:133–34) stated that this aged face represents God N as the Mam, the god of the Uayeb, and that the contemporary Kekchi and Pokomchi regard the Mam as an aged and powerful earth deity. Thompson (1950:133–34) also mentioned that like the Yucatec worship of the Uayeb Mam, in contemporary Kekchi Easter ceremonies, an image of Mam is buried during an "unlucky" five-day period. Thompson (1970a:473) later recanted this view and stated that God N was not the feared god of the Old Year, but rather the quadripartite Bacab that supports the heavens: "it is abundantly clear that Mam, the dressed up piece of wood with his five day rule and contemptuous end, had nothing in common with the four Bacabs." Disregarding the *u mam* reading proposed by Kelley, Thompson viewed the Dresden opossums as Bacab entertainers. Thompson was a staunch skeptic of phoneticism in the Maya script, and had previously discounted the *mam*

[5]The contemporary masked clown of the Huichol rain ceremony holds a rattle staff composed of a rattan stick to which a dried gut rattle is tied (Zingg 1938:200). Zingg (1938:200, 324) states that this object represents the staff of Grandmother Growth, fashioned from "the point of a cloud."

According to Ichon (1973:423) in the Pastores dance of the Sierra Totonac there are two dance staffs known as *bastones-truenos*, or "thunder staffs."

[6]This particular instrument—a rasp attached to a hollow sounding chamber—appears to be of great antiquity in Mesoamerica. Parsons (1980:no. 14) illustrates an Early Formative example possibly from Las Bocas, Puebla. Modeled in clay, the piece represents a rasp attached to a sounding chamber of gourd and armadillo shell.



Figure 24-1. Procession of three opossum entertainers with gourd rasps, rollout scene from Late Classic polychrome (drawing by Diane Griffiths Peck, reproduced courtesy of Dr. Michael D. Coe).

reading (Thompson 1963:125). However, in the light of more recent epigraphic work, there is every reason to regard the *mam* reading as correct (e.g., Lounsbury 1985:48).

Michael Coe (1973:15) was the first to note that the conventional nominal glyph of God N can be phonetically read as *pawahtun*. The Pauahtuns mentioned in Landa's description of the New Year ceremonies are equated with the Bacabs and the Xib Chacs, all of these being oriented to the four directions with their appropriate color (cf. Tozzer 1941:137). Landa may actually be correct; the terms Bacab and Mam are probably aspects or simply epithets of Pauahtun. According to Landa (Tozzer 1941:135), the Bacabs support the sky. However, the only pre-Hispanic deity which holds such a position is God N, named phonetically as Pauahtun. Whereas Thompson viewed God N as the Bacab sky bearer, Coe (1973, 1978) has considered him as the supporter of the earth, not the heavens. However, I know of no explicit example of God N sustaining the earth, and in a number of instances, he appears to hold up the sky. Thus, the two Pauahtuns flanking the doorway of Copan Structure 22 have been interpreted as sky bearers (Schele and M. E. Miller 1986:122). According to these authors (1986:122), the Bacabs are young aspects of the Pauahtuns. In another case, a pair of aged God N figures serve as supports of a sky band throne (cf. Robicsek and Hales 1981:fig. 9a). Among the Zinacanteco Tzotzil, there are the *vašak men*, who as the gods of the four corners hold up the earth and apparently the sky as well (cf. Vogt 1976:15–16). Similarly, the Chamula earth bearers are supporters of the "universe" (Gossen 1974b:22). Rather than making a sharp distinction between earth and sky bearers, it may be more appropriate to consider the Pauahtuns as sustainers of the world.

The four Dresden opossums are labeled as Mams, who seem to be the same as the Pauahtun—the aged god of the Old Year. Although the close relation between the opossum and God N has not been previously documented, there is direct evidence for the Pauahtun identity of the opossum Mam in Classic Maya iconography. On one remarkable Early Classic effigy vessel, God N is modeled within his conch (cf. Coe 1982:no. 33). The tip of the spiraling shell is covered with a single glyph. On close inspection, it is found to be the head of an opossum, complete with short round ears, bearded cheek, and conical teeth (Fig. 24-3a). An Akbal marking, a symbol of darkness, is placed over the eye to represent the black facial marking of the opossum. A crosshatched or netted element caps the head, probably referring to the characteristic cloth headdress of God N. In a Late Classic vessel scene, God N holds his netted cloth headdress before him (Fig. 24-3d). Although generally human, he has the black eye marking, conical teeth, and snout whiskers of the Dresden opossums. There are also Late Classic anthropomorphic opossums wearing the God N headdress (Fig. 24-3c). In the illustrated example, the upper eye region is again marked with the Akbal sign. Although the opossums on Dresden pages 25 to 28 do not wear the God N headdress, opossum glyphs fre-



Figure 24-2. Late Classic mold with modern caste representing opossum musician with drum or rasp (photograph by William Sacco, reproduced with permission of Peabody Museum of Natural History, Yale University).

quently appear with this headdress in Dresden texts (Fig. 24-3b). The Dresden opossum Mams are almost surely an aspect of God N.

THE PAUAHTUN MAM: AGED GOD OF THUNDER

Many of the overt characteristics of God N have been widely noted, such as his aged bearing, costume, and frequent appearance in conch or tortoise shells, but there has been little interest in the relation of this deity to the natural world. It is becoming increasingly evident that the agricultural cycle was of great importance in Classic Maya religion, and deities of maize, rain, and lightning are commonplace. In particular, one deity, known either as the Rain Beast or as the bestial form of G 1, is now known to be a Classic form of Chac, the Postclassic Yucatec god of rain and lightning (cf. Coe 1978:76–77; David Stuart, cited in Schele

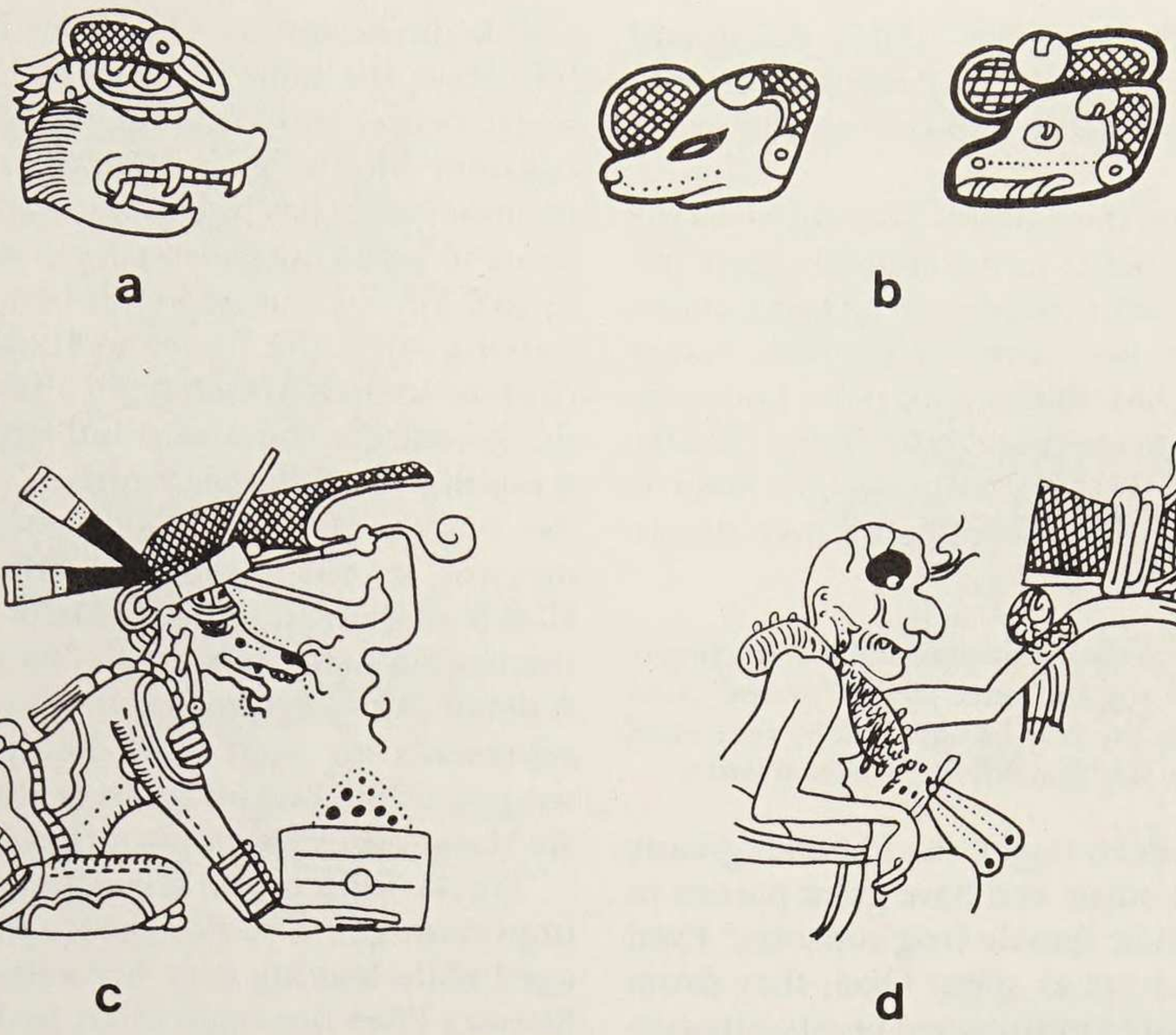


Figure 24-3. The opossum God N in Classic and Postclassic Maya art. (a) Opossum glyph on Early Classic God N effigy vessel; crosshatched element on forehead probably headdress (after Coe 1982:no. 33); (b) Postclassic examples of opossum heads with God N headdress, Dresden Codex, pp. 55b, 56a; (c) Late Classic opossum with God N headdress; compare Akbal eye marking with Figure 24-3a (after Coe 1975:no. 9); (d) God N with opossum attributes; note black eye, nose whiskers, and conical teeth. Detail from Late Classic vessel (after Robicsek and Hales 1981:vessel 7).

and M. E. Miller 1986:60 n55). God N is frequently found with Chac in Classic Maya scenes. The Early Classic vessel naming God N as the opossum Mam has on its opposite side a complex rendering of Chac within his Cauac-marked cave (see Fig. 24-15b). The figure is very much like a series of Early Postclassic Chacs at Chichen Itza, where in each case they wield a similar burning serpent-footed lightning axe (see Fig. 24-15c). One Late Classic vessel represents a veritable orgy of music and drink, with four God N's being accompanied with young women and four Chacs within a cave (Coe 1978:vase 11). The identification of God N with Chac continues in the Postclassic period. On page 41b of the Dresden Codex, there are two separate scenes of God N and Chac, each deity surrounded by beads of water, probably rain. In the texts immediately above, both are described as *pawahtun chac*.

The association of God N with Chac is entirely consistent with contemporary Maya conceptions of the Mam. Thompson (1930:57) noted that in the village of San Antonio, Belize, the Mams are merged with the Chacs and the gods of wind. Four in number, their domain is the mountains and the Underworld: "The Mams are gods of the mountains, of the plains, of the underground, of thunder and lightning, and, by extension, of the rain" (Thompson 1930:57). The contemporary Chol also consider the aged *lak mam* as lightning, or *chajk* (Cruz Guzmán, Josserand, and Hopkins 1986). However, the sons of *lak mam* are stronger, and whereas these youths frequently throw lightning, *lak mam* is best known for his thunder (Cruz Guzmán, Josserand, and Hopkins 1986:42). Both the San Antonio Maya and the Chiapas Chol consider the principal Mam to be extremely old, and this belief is also found with the Kekchi, in the intermediate region of Alta Verapaz. Dieseldorff (1926) posited that the Kekchi have two distinct sets of gods in complementary opposition, one being the Tzultacaj, the young gods of lightning, and the other, the aged Mam. The Kekchi Mam is essentially malevolent and dangerous, and the thundering at the onset of the rains is thought to be Mam trying to escape his bonds in the Underworld. Mendelson (1959) has made a similar case for the Tzutuhil of Santiago Atitlan. There, the young benevolent god of rain and lightning is San Martín, and the aged god is known as Mam or Maximon. As with the Kekchi, the Maximon Mam idol is worshipped for five days of Holy Week. This widespread concept of young and old gods of lightning and thunder may be pre-Hispanic. Whereas Chac is the young axe-wielding god of lightning, the Pauahtun Mam is an aged thunder deity. But although the Chacs and Pauahtuns may thematically overlap,

there is no evidence that they are simply young and old aspects of the same god. The Pauahtuns, rather than the Chacs, are inevitably depicted as the world bearers.

It has been noted that the Huastec Maya of Veracruz also have a widespread belief in the Mamlab, aged and malevolent gods of thunder. Stresser-Péan (1952) stated that there are actually two forms of Mamlab, young and robust forms and old, degenerate types known as Oçel. Alcorn (1985:58–59) mentioned that in the Huastec community of Teenek Tsabal, the principal Mam is Muxi', who undergoes a process of aging over the solar year:

> Muxi' miraculously becomes a newborn baby at the beginning of the year when the sun once again "moves" away from the South. During the year he ages and by year's end he is an old man as the sun reaches the winter solstice.

According to Stresser-Péan (1952), the Mamlab greatly love dance, drink, and music and have great parties in mountain caves with their female frog consorts.[7] Even when floating down rivers as spent Oçel, they drum upon the bloated stomachs of drowned beasts. Stresser-Péan recorded that the Mamlab are the souls of ancestors drowned in the last creation. This is interesting in light of the description by Alcorn (1984:57) of four drowned men who support the earth; as they age and break, they are replaced by another four at the New Year. These drowned men eventually go to the eastern realm of Muxi' (Alcorn 1984:57). Among the neighboring Sierra Totonac, there is a similar aged thunder god known as San Juan, or Aktsini'. As with the Huastec Mam, he is an aged god associated with mountains, thunder, and drowned humans. Moreover, he is the most important of the four thunder gods who support the world (Ichon 1973:45, 123, 130, 137).[8]

The cited ethnographic material from Veracruz is strikingly similar to contemporary and ancient lore of the Maya region. In both regions, there is an old and often malevolent mountain god, a quadripartite supporter of the world identified with thunder, music, drunkenness, and the Old Year.[9] The Huastec even call him Mam, the same name used for the deity in Guatemala, Belize, and Yucatan. This god appears to be of considerable antiquity. Michael Coe (personal communication, 1984) has noted that Kaminaljuyu Stela 17 appears to be a Late Preclassic rendering of God N (Fig. 24-4a). An old bearded man bent over his serpentine walking stick, the figure wears the diagnostic rolled cloth headdress of God N. In addition, the rear part of the headdress contains a bulbous netted element resembling the "spangled turban" frequently found at the base of Classic God N headdresses (e.g., Coe 1973:nos. 17, 70). Although I know of no example of God N carrying a staff in Classic Maya art, there is an interesting Late Classic relief from El Tajín, Veracruz. A detail from a cylindrical bas-relief column, the scene represents an aged male holding a staff. With his wrapped cloth headdress, he is almost identical to Classic Maya representations of God N (Fig. 24-4b).

The El Tajín figure seems to be an early form of an important genre of Postclassic Huastec sculpture—an aged male leaning over his walking stick (Fig. 24-4c). Stresser-Péan (1971:596) identified this common sculptural type as the Mam, "the old god of the earth and of thunder, lord of the year, ancestor of the Huastec." In direct support of this interpretation, one example has the wrinkled face of Tlaloc, the Central Mexican god of rain and lightning (Fig. 24-4d). A recent account of the chief Huastec Mam could serve as a vivid description of the pre-Hispanic sculptures; "Muxi is generally thought of as a dangerous, powerful old man bent over his walking stick of ak'" (Alcorn 1984:59). The stick held by the pre-Hispanic Mam figures can either be a simple shaft or a serpent. The latter variety probably alludes to a thunderbolt, the snake being a widespread symbol of lightning in Mesoamerica and even the American Southwest. Although somewhat eroded, it is quite possible that the undulating staff carried by the Kaminaljuyu figure is also a serpent. The opossum Mam of the Dresden New Year pages may also be wielding *chicahuaztli* thunder staffs.

THE SOCIAL ENVIRONMENT OF GOD N

In order to understand God N and his role in Classic Maya religion, it is necessary to examine how he is socially defined in the ancient art. He is frequently found in palace scenes, and although God N may be

[7] The contemporary Chol similarly believe that the wife of Lak Mam is a large toad (Cruz Guzmán, Josserand, and Hopkins 1986:42).

[8] A similar concept is recorded for the contemporary Chorti Maya of Guatemala. There, it is believed that four *?an'hel*, beings of rain and lightning, hold the corner posts sustaining the world. These same *?an'hel* were credited with destroying the last world by causing their burden to shake and fall into the sea (cf. Fought 1972:377–79). This event is almost identical to the famous Bacab episode of page 43 of the Chumayel: "There would be a sudden rush of water when the theft of the insignia of Oxlahun-ti-ku occurred. Then the sky would fall, it would fall down upon the earth, when the four gods, the four Bacabs, were set up, who brought about the destruction of the world (Roys 1933:99–100).

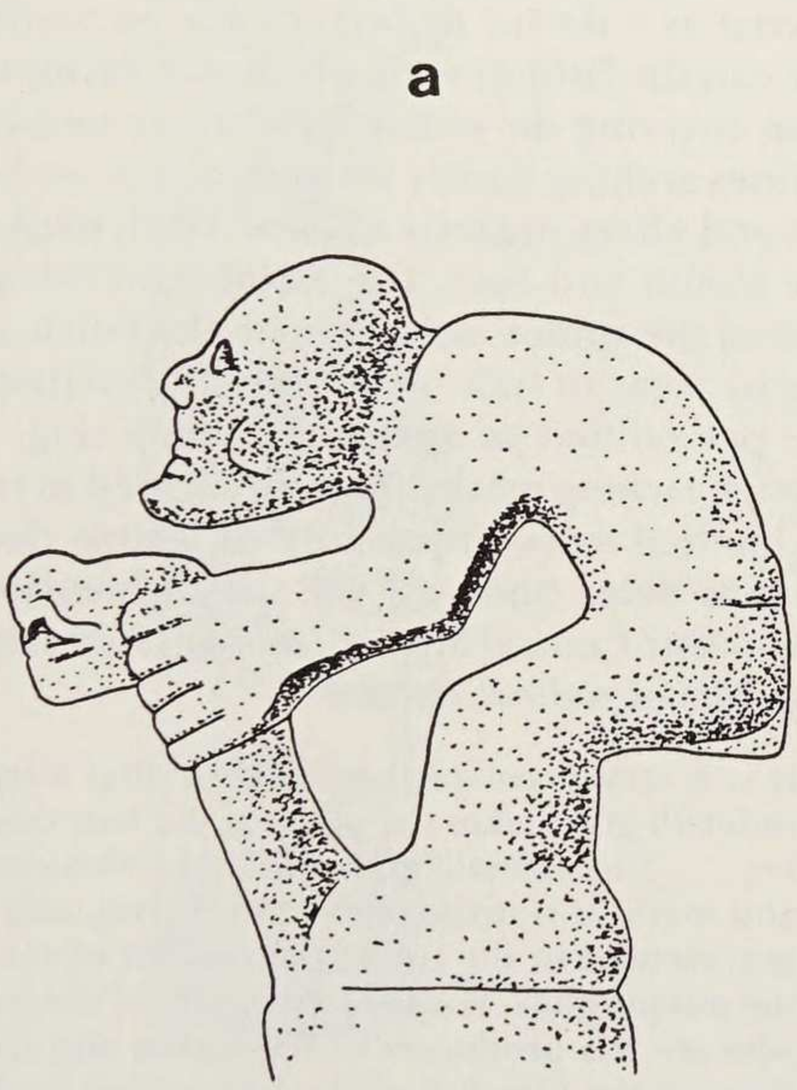
[9] Klein (1980) has argued that the Bacabs, Pauahtuns, and Mams are functionally related to Tlaloc, the Central Mexican god of rain, lightning, and thunder. Moreover, Klein posited that lightning had an important symbolic role in period-ending ceremonies, such as the end of the 365-day year and also the 52-year cycle.



a



b



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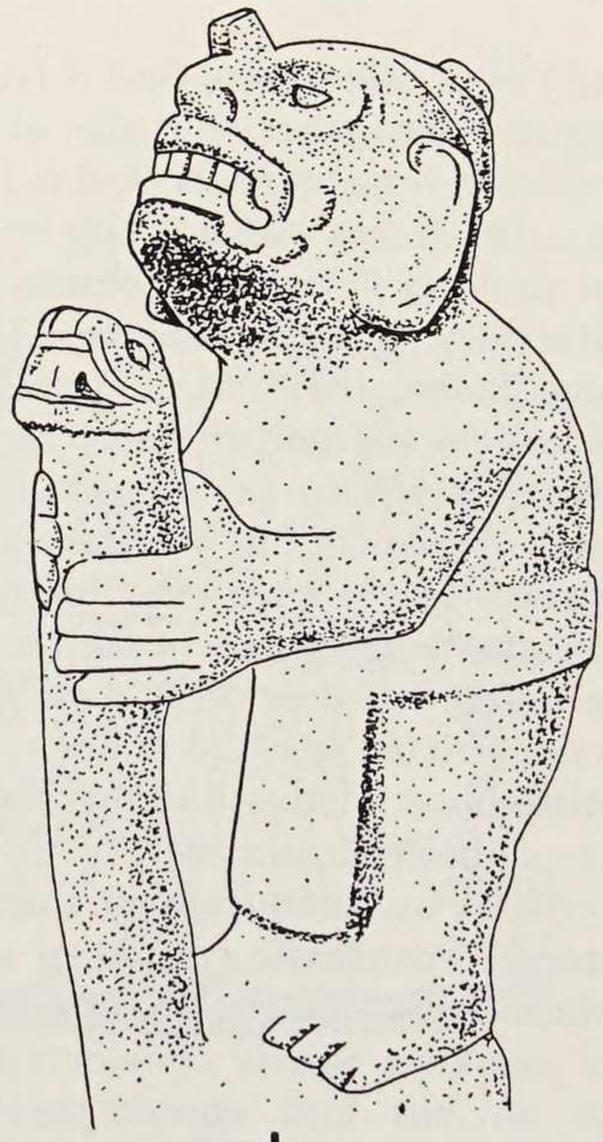

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Figure 24-4. The aged Mam, comparison of stone sculpture from Guatemala and the Gulf Coast. (a) Stela 17, Kaminaljuyu; a Late Preclassic representation of God N. Note bound cloth headdress and undulating staff in right hand; (b) detail of Late Classic scene from mound of the Building Columns, El Tajin. Aged figure with staff and rolled cloth headdress of Maya god N (after Kampen 1972:fig. 34c); (c) Postclassic Huastec sculpture of Mam bent over serpent lightning staff (after de la Fuente and Gutiérrez Solana 1980:pl. 237); (d) version of Huastec Mam figure with serpent lightning staff, face of Mam replaced with that of Tlaloc, the Central Mexican god of rain and lightning (after Anton 1969:pl. 182).

seated upon a throne or dais, he is also often placed in a subservient position to a principal lord (cf. Coggins 1975:fig. 127b). Although the crosshatched rolled cloth headdress is an important attribute of God N, it appears to be also a general article of court dress. Rolled cloth headdresses, whether crosshatched or plain, are frequently worn by individuals in what appear to be actual palace scenes (Coggins 1975:figs. 122–26, 140–42).

The cloth headdress is often affixed by the "Jester God" plaque, identified by Schele (1978; Schele and M. E. Miller 1986) as a Classic Maya symbol of rulership. God N may also occasionally be found wearing the Jester God (cf. Haberland 1971:197). But in contrast to the panoply of Classic ceremonial dress, God N wears the casual garb of daily court life. It is noteworthy that he is almost the antithesis of a proper Maya ruler. Whereas Maya lords are usually depicted in war or engaged in penitential sacrifice, in Classic scenes God N is never found wielding weapons or participating in penitential bloodletting. Instead, his favorite pastimes appear to be drinking, the taking of intoxicating enemas, and dallying with nubile women.[10] Perhaps due to his excesses, he is aged and physically puny, quite unlike the youthful rulers found on Classic monuments. This is a striking contradiction; although extremely powerful—a god of thunder and bearer of the world—there is little about this deity which could command respect. He appears to be almost the embodiment of the vanities and corruption which accrue with excessive power and wealth.

In Classic and Postclassic scenes, God N is a god not only of drinking and debauchery but also of dance as well. One Late Classic vessel depicts God N holding a rectangular fan as he dances with a young woman (see Fig. 24–12a). On an Early Postclassic column from the Temple of the Warriors at Chichen Itza, God N is found carrying the same dance articles as the Dresden opossum Mam, a fan and the *chicahuaztli* staff (Fig. 24-5c). In addition, the figure wears the same conical shell tinklers, in this case as bracelets. On the basis of costume elements, Seler (1902–23, vol. 5:284–85, illus. 131) identified the God N atlantean figures of Chichen Itza as dance gods. He noted that they often wear loincloths with knobbed ends and the *oyoualli* symbol of cut shell, costume elements almost identical to the dancing figure on page 52 of the Vaticanus B (Fig. 24-5b). This scene is presided over by Huehuecoyotl, the aged coyote god of dance. A Postclassic symbol of sensuality and pleasure, the *oyohualli* shell pendant is frequently worn by spider monkeys, widely considered as droll entertainers in ancient and contemporary Mesoamerica. In fact, the Vaticanus A dancer has the large round eye markings and forward-sweeping hair commonly found with depictions of spider monkeys. His stance is also striking, as the raised arms and outward-turned hands duplicate the world-bearer position of God N. Running spider monkeys hold their arms similarly, and are thus depicted in many regions of ancient Mesoamerica (Fig. 24-6). In one Late Classic vessel scene, a dancing God N in quadruped stance bears the facial markings of the spider monkey (Fig. 24-6e). The ambivalent nature of God N does resemble that of the monkey, a creature associated with drunkenness and sexual transgression as well as dance, fertility, and pleasure (cf. Seler 1902–23, vol. 4:456–64).

[10] For discussions of enema use and intoxication in Classic Maya art, see Furst and Coe (1977), de Smet (1985), Barrera Rubio and Taube (1987).

THE PERSONIFIED PA GLYPH: A CLASSIC MAYA CLOWN

The personified *pa* glyph (T1023) frequently appears in Classic Maya texts. Although of varying form, the sign is usually composed of a crosshatched anthropomorphic face. Michael Coe (cited in Mathews and Schele 1974:64) first suggested that the head is an aspect of God N. At Palenque, the glyph is often identical to the aged face of God N, save for the curious cross-hatching (Fig. 24-7a). In Classic script, this marking is infixed in the simple cartouches of T586 and T602, both signs providing the phonetic value of *pa*. The cross-hatching in T1023 could be simply interpreted as a device to provide the *pa* reading save for the careful fashion with which it is delineated. Rather than covering the entire face, the cross-hatching ends at lines arching widely around the eye and mouth. The general effect suggests a coarse cloth mask cut around the mouth and eyes. The facial patterning duplicates that of the spider monkey, with the fabric corresponding to areas of hair. A number of full-figure forms of the personified *pa* appear at Copan (Fig. 24-7j, k). Although lacking masks, they are covered in crosshatched or knotted suits, apparently of coarse cloth or grass. Eduard Seler (1902–23, vol. 4:459) mentioned that in Postclassic Central Mexico, monkeys are depicted wearing suits of *malinalli* grass:

> It is a very peculiar characteristic that frequently green *malinalli* grass takes the place of the hair coat of the monkey. . . . The *malinalli* grass was to the Mexicans the symbol and mark of transitoriness and revival, and is, therefore, represented in the list of the regents of the day signs by the pulque gods. The twofold nature of the pulque gods . . . who are the producers of vegetation and the representations of the blessing of the harvest but at the same time are also the embodiment of intoxication, drinking-bouts and sexual excesses, is expressed I think, in this disguise. (Translation in Seler, 1939, vol. 4:2)

The Classic Maya suit had many of the same associations; however, the personified *pa* character is not simply a monkey, but a ceremonial buffoon with its own specific attributes and symbolic domain.

Although commonly misinterpreted as monkeys, full-figure representations of the personified *pa* occur on a number of two-part effigy vessels. During the La Finca Esperanza excavations at Kaminaljuyu, a remarkable two-part effigy vessel was discovered in Tomb A-II (Fig.

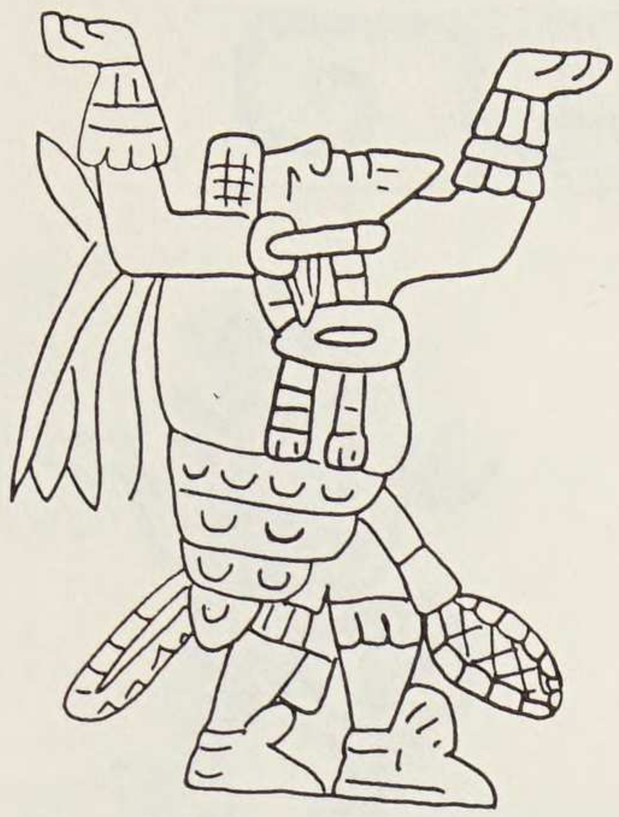

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Figure 24-5. Comparison of Early Postclassic representations of God N at Chichen Itza with depictions of entertainers in pre-Hispanic codices. (a) God N atlantean figure wearing *oyohualli* pendant, from the Castillo, Chichen Itza (after Seler 1902–23, vol. 5:292); (b) dancer accompanying Huehueteotl, page 52, Vaticanus B (detail). Compare arm positioning to God N figure and pre-Hispanic depictions of spider monkeys (cf. Fig. 24-6); (c) representation of God N on painted column from the Temple of the Chac Mool, Chichen Itza; figure holds *chicahuaztli* staff and fan (after Morris, Charlot, and Morris 1931:pl. 37); (d) opossum Mam from New Year pages of Dresden Codex holding fan and *chicahuaztli* staff. Compare conical shell tinklers on belt with examples on necklace of Fig. 24-5b and wrists of Fig. 24-5c; Dresden Codex, p. 27.

24-8a). Kidder, Jennings, and Shook (1946:188–90) noted that this figure, modeled in "sardonically rendered ugliness," is largely covered with the impressions of "a harsh checkerboard weave fabric." It should be noted that this cloth marking ends sharply at the wrists and mouth. The hands and huge bulging lips are smoothly

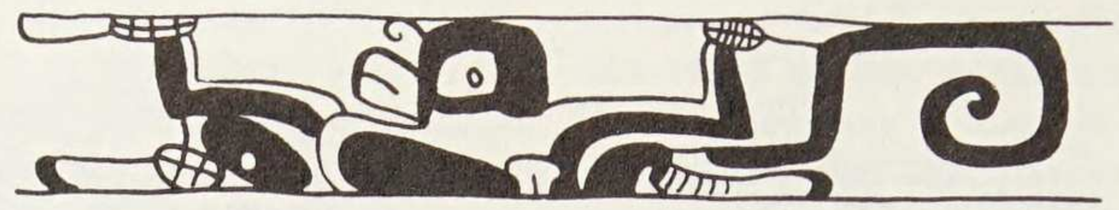

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Figure 24-6. Representations of spider monkeys and God N. (a) Spider monkey in "world bearer" posture, detail of Copador style vessel, Copan (after Longyear 1952:fig. 14b); (b) one of four spider monkeys on Copador style bowl, Late Classic period (after Bray 1970:pl. 24); (c) ceramic *sello* representing spider monkey, Late Postclassic Central Mexico (after Field 1974:fig. 28); (d) anthropomorphic spider monkey wearing headdress of God N, from Late Classic polychrome bowl (after Andre Emmerich and Perls Galleries 1984:no. 21); (e) dancing God N with facial markings of spider monkey (after Coe 1981:fig. 2).

finished, thus giving the distinct impression of actual skin protruding from a coarse cloth suit. Whereas the Kaminaljuyu piece was described as a "human effigy" (Kidder, Jennings, and Shook 1946:188), Smith (1955:85–86, fig. 11j, k) interpreted a similar jar excavated at Uaxactun as a "monkey." This figure also has a large "Roman nose" and bulging lips as well as probable cuffs on the wrists. As with the Kaminaljuyu example, there is no sign of any tail. The Uaxactun effigy is a uniform brownish black and bears no evidence of textile patterning, but there are two other examples from Uaxactun that clearly wear the coarsely woven suit (Smith 1955:fig. 5e, h, i, j). Here, the figures are clearly human, not monkeys.

Similar but unprovenanced two-piece effigy vessels are also in private collections. In the Barbachano Collection of Merida, Yucatan, there is a standing two-piece vessel having the facial characteristics of the Kaminaljuyu example (cf. de Cantú and Carballo 1969:no. 1). The fibrous suit is represented by a checkered pattern

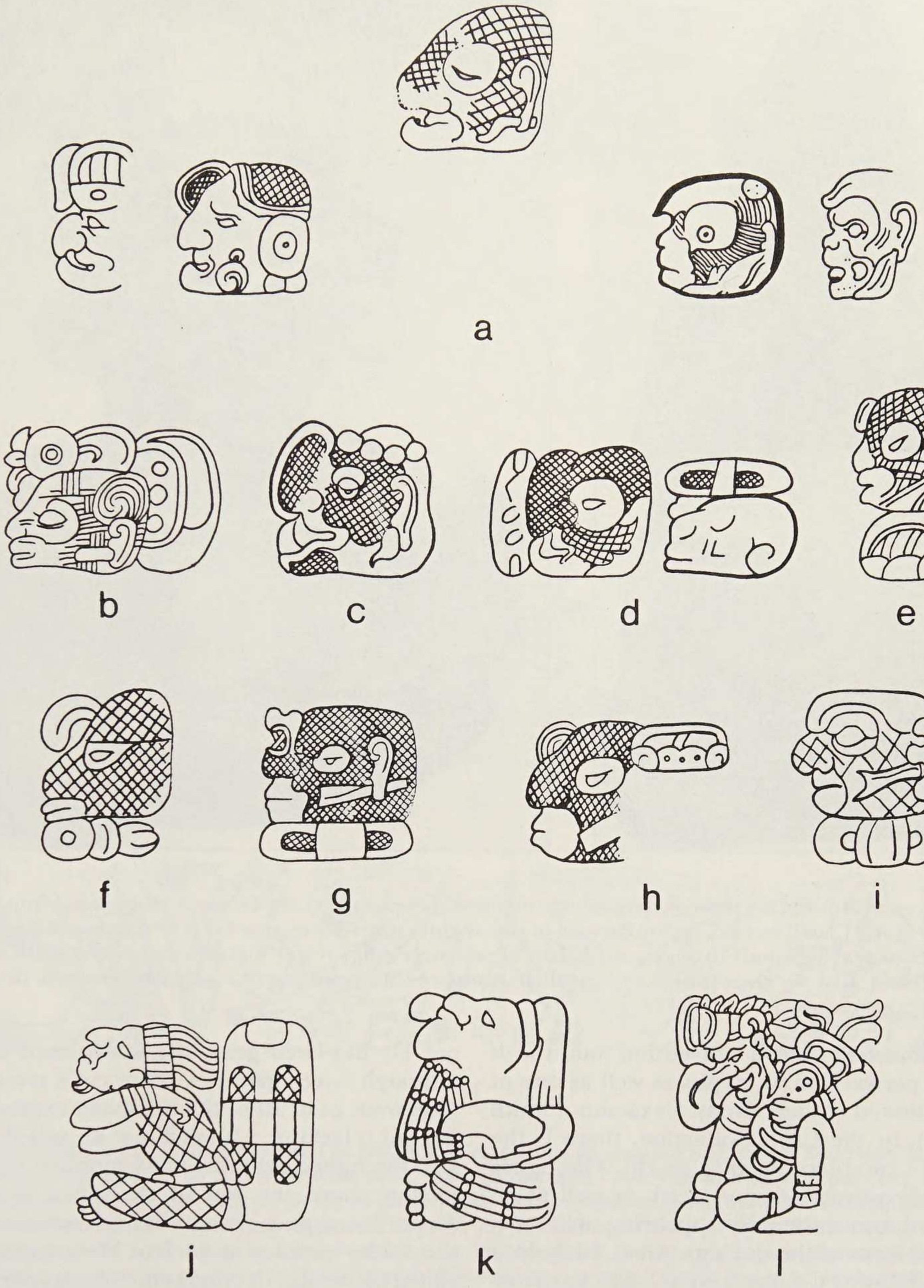

Figure 24-7. Examples of the personified *pa* in Classic Maya epigraphy. (a) Comparison of personified *pa* with glyphs of God N and spider monkey, all examples from Palenque; (b) personified *pa* in "*tupah*" period ending expression, Tikal Stela 12, D2; (c) *pa* head with large nose and curving tooth, forming part of phonetic spelling of *pacal*, Palace Tablet, G7, Palenque; (d) personified *pa* head in compound read *chac patan* (S. Houston, personal communication, 1982) from incised conch (after Robicsek 1978:fig. 155); (e) personified *pa* in *pat* period ending expression, Yaxchilan Lintel 44, A4; (f) *pat* period ending expression, Stela 1, Ojos de Agua A9; (g) *pat* period ending expression, Machaquila, carved stone from Structure 4; (h) *pat* period ending expression, Bonampak Stela 1, N1; (i) *pat* expression occurring in hieroglyphic cornice of Structure 1, Quirigua; (j) full-figure *pat* period ending expression, Oblong Altar, Copan; (k) full-figure *pa* forming part of name glyph of Madrugada, carved hieroglyphic bench, Copan; (l) form of personified *pa* with long sicklelike nose, forms part of "*tupah*" period ending expression, Copan Stela D, B5.





Figure 24-8. Representations of the personified *pa* character on effigy vessels. (a) Left: Two-part effigy vessel from Kaminaljuyu, Esperanza phase, Early Classic period. Figure dressed in coarse cloth suit; note exposed skin of hands and lips (from Kidder, Jennings, and Shook 1946:fig. 190d); (b) right: upper half of two-piece effigy vessel. Figure wears coarse cloth suit and mask; note Ahau headband. Disk on chest possibly of cut shell; compare with pendants of Figs. 24-10a and -10b (from Nicholson and Cordy-Collins 1979:no. 130).

of broad crosshatched lines, a convention found with certain of the personified *pa* glyphs as well as one of the aforementioned vessels from Uaxactun (Smith 1955:fig. 5h, k). In the Land Collection, there is the upper half of a two-piece jar (Fig. 24-8b). The figure wears a coarsely woven suit and mask as well as an Ahau headband, conventionally appearing on T1000, the personified form of the day sign Ahau. Nicholson (Nicholson and Cordy-Collins 1979:no. 130) has compared this example to the black effigy described by Smith (1955:85–86), noting that neither appears to depict a monkey, but rather a figure with monkey attributes.

The vessels that have been discussed date largely to the later part of the Early Classic period, at approximately A.D. 500 to 600. The roughly contemporaneous incised peccary skull from Tomb 1 of Copan contains an excellent example of the suited character (Fig. 24-9c). He has been generally interpreted as a monkey, although once again the sleeve cuffs are quite visible. Moreover, as in all of the discussed examples, the simian tail is lacking. Although not an actual spider monkey, the figure exhibits many monkey attributes. Projecting above the top of the Ahau headband is a forward-sweeping crest of hair, a common attribute of the spider monkey in ancient Mesoamerican art. The suited figure and its epigraphic counterpart, T1023, tend to have hanks of cloth or unspun cotton pulled through the ears. Spider monkeys are not only found with similar earpieces in Classic art of the Maya, but also Veracruz (cf. Hammer 1971:no. 56). In Classic Veracruz, the pendant ear elements also occur with the smiling figurines of Nopiloa and Remojadas, generally interpreted as dancers or entertainers (e.g., McBride 1971).

The Copan peccary-skull figure is paired with a jaguar, and whereas the personified *pa* shakes a rattle, the

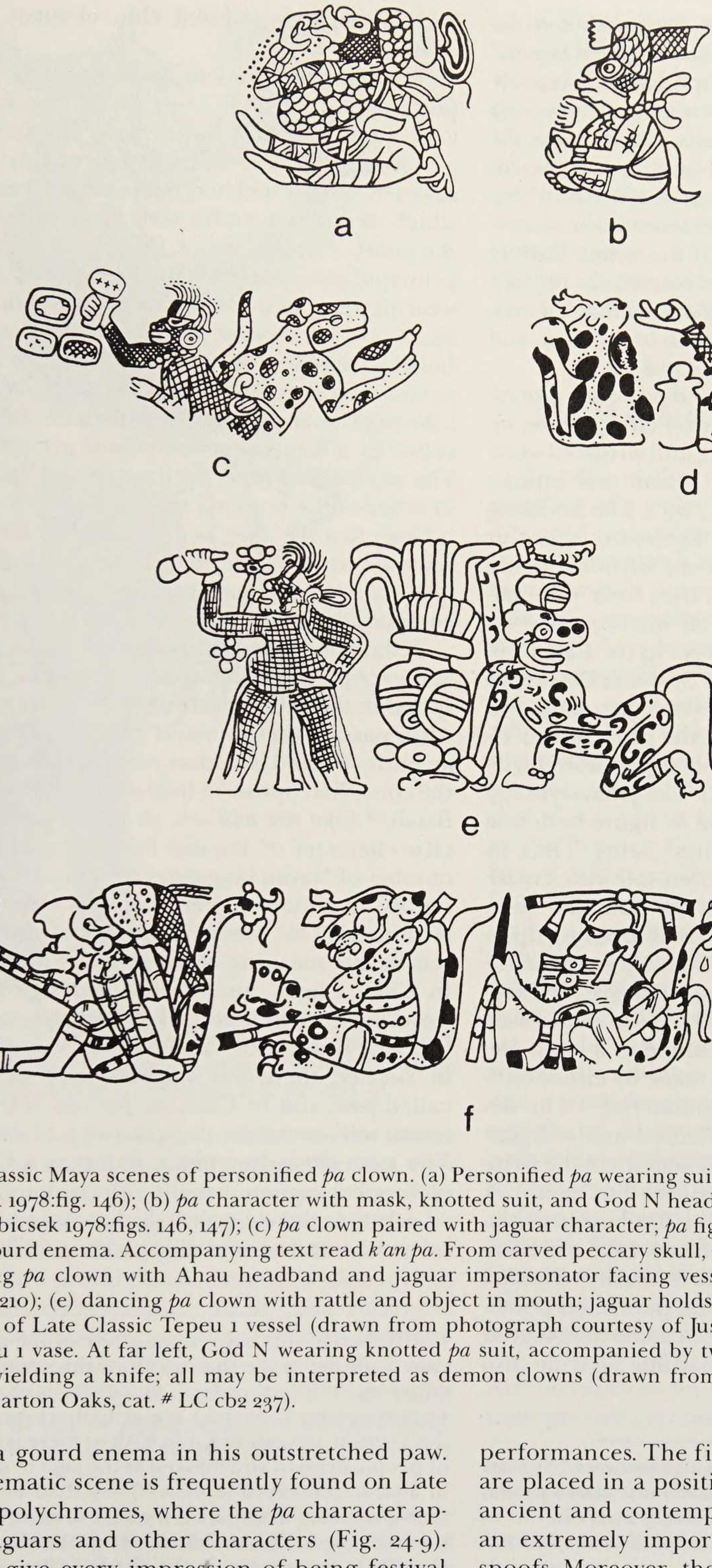

Figure 24-9. Classic Maya scenes of personified *pa* clown. (a) Personified *pa* wearing suit of rags and mask in act of vomiting (after Robicsek 1978:fig. 146); (b) *pa* character with mask, knotted suit, and God N headdress; compare suit with that of Fig. 24-6k (after Robicsek 1978:figs. 146, 147); (c) *pa* clown paired with jaguar character; *pa* figure with Ahau headband and rattle, jaguar holds gourd enema. Accompanying text read *k'an pa*. From carved peccary skull, Copan Tomb 1 (after Graham 1971:no. 10); (d) smoking *pa* clown with Ahau headband and jaguar impersonator facing vessel, possibly containing *balche* (after Hellmuth 1978:210); (e) dancing *pa* clown with rattle and object in mouth; jaguar holds two urns, both probably containing alcohol; detail of Late Classic Tepeu 1 vessel (drawn from photograph courtesy of Justin Kerr, photo no. 505); (f) rollout scene on Tepeu 1 vase. At far left, God N wearing knotted *pa* suit, accompanied by two jaguars, one drinking, and hairy-suited figure wielding a knife; all may be interpreted as demon clowns (drawn from slides in F.L.A.A.R. Maya Ceramic Archive, Dumbarton Oaks, cat. # LC cb2 237).

feline holds a gourd enema in his outstretched paw. This same thematic scene is frequently found on Late Classic Maya polychromes, where the *pa* character appears with jaguars and other characters (Fig. 24-9). These scenes give every impression of being festival performances. The figures frequently hold rattles and are placed in a position of dance. In many regions of ancient and contemporary Mesoamerica, the rattle is an extremely important instrument in dances and spoofs. Moreover, there is widespread evidence of al-

cohol, which can be seen in large urns, either to be consumed orally with cups or via the cut-gourd enema. Rather than being purely supernatural scenes, it is probable these vases portray actual ceremonies in which people impersonate particular gods and demons. As Stone (1986) has recently pointed out, during the ritual event, the impersonator became the mythical being. Thus, in the vessel scenes, the artisan was not restricted by the physical realities of the actual festival performance; demons and beasts commonly replace the human actors. However, it is also true that the costumes are often indicated, with human hands, feet, and even faces emerging out of the suits and masks.

In Late Classic Maya art, the suited *pa* figure is occasionally replaced by the supernatural entity. Here, he appears as a fantastically ugly, aged, and wrinkled were-monkey, an organic blending of simian and human physiognomy (see Figs. 24-11b, -12c, -13c). The kneeling figures upon the Western Court Reviewing Stand at Copan are probable examples of the mythical being (see Fig. 24-16c). Old and simian, they wear the pendant ear cloth and hold rattles, an instrument commonly found with the personified *pa*. In the Late Classic ceremonial dump excavated by Susanna Ekholm at Lagartero, there are number of ceramic pendants and figurine fragments that represent the *pa* character either masked by rough cloth or in its supernatural simian form (cf. Ekholm 1979:fig. 10-5). The Jaina style figurines of Campeche represent the *pa* figure both as a festival performer and as a mythical being. Thus, in one instance, he wears a coarse woven suit with a mask pinched together in the region of the nose and chin. The pocked brow region and the cross-hatching upon the nose reveal that the mask is woven either of coarse cloth or even wicker (see Fig. 24-11a). The greatly exaggerated nose-bridge and pointed chin, also found with examples of T1023, are perfectly suited to a cloth medium, since they could be simply made by either folding or sewing together the rough material.[11] The Regional Museum of Campeche contains a similar figure with the sharply pointed chin, although there the wrinkled face is not woven but fleshed (see Fig. 24-11b). A slightly more simian figurine is in the National Museum of New Delhi (cf. Morley 1968:21). Like the Campeche Museum piece, this example is heavily wrinkled and holds a rattle. Moreover, in the published photograph it appears that there has been some breakage at the tip of the chin, suggesting that this figurine also had the sharply pointed chin element, probably a goatee.

The phonetic element *pa* or *pat* seems to be an important part of the Classic maya character. On the Copan peccary skull, the *pa* figure is acccompanied by a hieroglyphic text that can be read as *k'an pa* (Fig. 24-9c). A similar text may be found on the Chama Vase, which depicts six males with features exaggerated to the point of caricature (cf. Coe 1978:vase 9). One of the principal protagonists is the personified *pa*. Instead of wearing the rag or woven suit, he is painted entirely black save for around the mouth and eyes (Fig. 24-10). In his accompanying nominal phrase, the crosshatched personified *pa* glyph mirrors the painted facial pattern. Like the Copan peccary-skull text, the *pa* glyph is preceded by a Kan Cross compound probably read *k'an*. The main sign T281 is prefixed by the T116 *ne* sign, but in other of the nominal texts, it follows a *k'a* or *k'an*. It is likely that the T245 *ta* preceding the T1023 is also in reversed order, since the personified *pa* appears frequently in compounds read *pat* (Fig. 24-7). The entire compound can be read as *k'an pat*.

Although T1023 clearly has the value *pa* in Classic Maya script, the term *pat* seems to more closely correspond to the suited performer. For one, in the katun 5 Ahau passage on Chumayel page 91 (Roys 1933) there is an entity termed *ah xaclam pat*, who is paired both with the comedian opossum (*tolil och*) as well as an opossum Batab.[12] Like the *tolil och*, *ah xaclam pat* may be a specific character of Yucatec festival performances. In a number of Mayan languages the phonetic value *pat* can signify 'to imitate or jeer', 'cover in cloth', and 'end or terminate'. The coarse cloth suit of the *pa* character recalls one meaning of *pat* in many Mayan languages. In Chol, Cholti, and Tzeltal, *pat* signifies 'bark' or 'covering' (Schele and J. H. Miller 1983:table 5). Moreover, the root *pat* can also refer to 'woven cloth'. Thus, in Yucatec, there was a special type of tribute cloth called *pati*; and in Chol, *we pat* can refer to a 'cloth, towel, veil', or '*rebozo*' (Schele and J. H. Miller 1983:85). The term *pat* is frequently found as a Classic period ending expression, usually referring to a completion of a katun. Schele (1982:148) has noted that this may mean 'the end of something'. Thus, in Tzotzil, *ta patil*

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[11] During the Merida Xtol performance witnessed by Starr (1902:81), the performers appear to have worn masks similar to the *pa* figure: "All were masked, mostly with old bits of brown cloth, with eye perforations and with nose and chin pinched up and developed by tying."

[12] Although it is beyond the scope of the present study, a case could be made that many of the creatures identified either as "military orders" or *uay* form changers by Roys (1933:appendix F, 1954:14) are actually clown characters. In the Tizimin account of katun 7 Ahau there is the description of people dressed and masked as the jaguar, deer, and rabbit in a clear context of humor: "They shall be masked representatives; they shall put on the skin of another, a jaguar, the mask of a deer. The rabbit is their genius. Laughing shall be their faces in the town, in the district" (Roys 1954:38).



Figure 24-10. Detail of Chama Vase, *pa* character wearing black paint in place of suit. Compare nominal text with figure on Copan peccary skull (Fig. 24-8c) (after Coe 1978:no. 9).

signifies 'at the end', and *patebal*, the 'moment before finishing being made' (Laughlin 1975:268). Not only does the personified *pa* appear in *pat* period ending expressions but the character is also found in scenes with period-ending Ahau dates. Thus in the center of the carved Copan peccary skull, there is the date 1 Ahau, 8 Sac, probably corresponding to the Tun ending of 9.7.8.0.0 (cf. Graham 1971:no. 10). In Yucatec, *pat* signifies 'to make up, pretend' or 'to insult', and a number of Yucatec dictionaries gloss *ah pat t'an* as '*trovador*', with connotations of liar or gossip (Barrera Vásquez et al. 1980:632–34).[13] The early Colonial Vienna dictionary contains the curious phrase *pat-hal ti ahaulil*, meaning 'to make oneself king, pretending to be one'.[14] It will be recalled that both T1023 and the full-figure character frequently wear the Ahau headband. Stephen Houston (personal communication, 1983) called my attention to an extremely strange full-figure form of the personified *pa* at B5 on Copan Stela D (Fig. 24-7l). In this case, the nose turns out in a huge, sharply curving sicklelike form. The same character occurs on a Late Classic vase where he wears the Jester God plaque, another sign of rulership (see Fig. 24-13a).

THE OLD MAN AND YOUNG WOMAN THEME

A common theme of Classic Maya figurines is the coupling of a young and attractive woman with a usually aged and ugly male. The pairs are definitely amorous, for the man frequently either touches the woman's breast or is in the act of lifting her skirt. Figurines of this type are widely distributed in the Maya region. Although best known for Jaina, other examples have been reported for Tonina (Becquelin and Baudez 1982, vol. 3:fig. 258c) and the Rio Chixoy (cf. Wilkerson 1985:539). The paired figures have been interpreted as depictions of the moon deity, Goddess I, with her many paramours (e.g., Miller 1975; Benson 1979). Both authors note that Goddess I appears in a comparable context in the Dresden Codex, there paired with a whole series of deities (cf. Dresden pp. 21c–23c). However, aside from being sexually active females, the Classic women bear no specific attributes of Goddess I or the moon, although at times the companion of the woman is a rabbit, a well-known moon symbol (e.g., Miller 1975:fig. 9; Anton 1970:pl. 211). However, not every rabbit in Maya art can be interpreted as the moon. In some vessel scenes, the rabbit is found with other animals playing music and dancing (e.g., Clarkson 1978:fig. 13; Coe 1978:no. 17). Although the paired figures may well have a mythical analogue, they allude as much to festival performers as to specific deities.

In a number of instances, the figurine pairs wield fans (cf. Figs. 24-12b, -12c, -13b). As with rattles, these fans provide an important thematic message, for they tell us we are watching *performances*, not just the mythical deeds of demons and gods. Rather than being special attributes of particular deities, these articles were basic accessories for dancers, actors, and buffoons. Gestures provide yet another clue to dramatic performance

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[13] In Yucatec, the word for nickname is *pat k'aba', k'aba'* being the term for name. These nicknames are generally not complimentary, and individuals are commonly called by the name of a particular creature they are believed to resemble. Examples I am familiar with are *ch'o* 'rat', and *much* 'toad'.

[14] This phrase recalls a similar expression *ma'ax ahaw*, which Barrera Vásquez et al. (1980:511) glosses as '*mono sustituto del señor o rey*'.

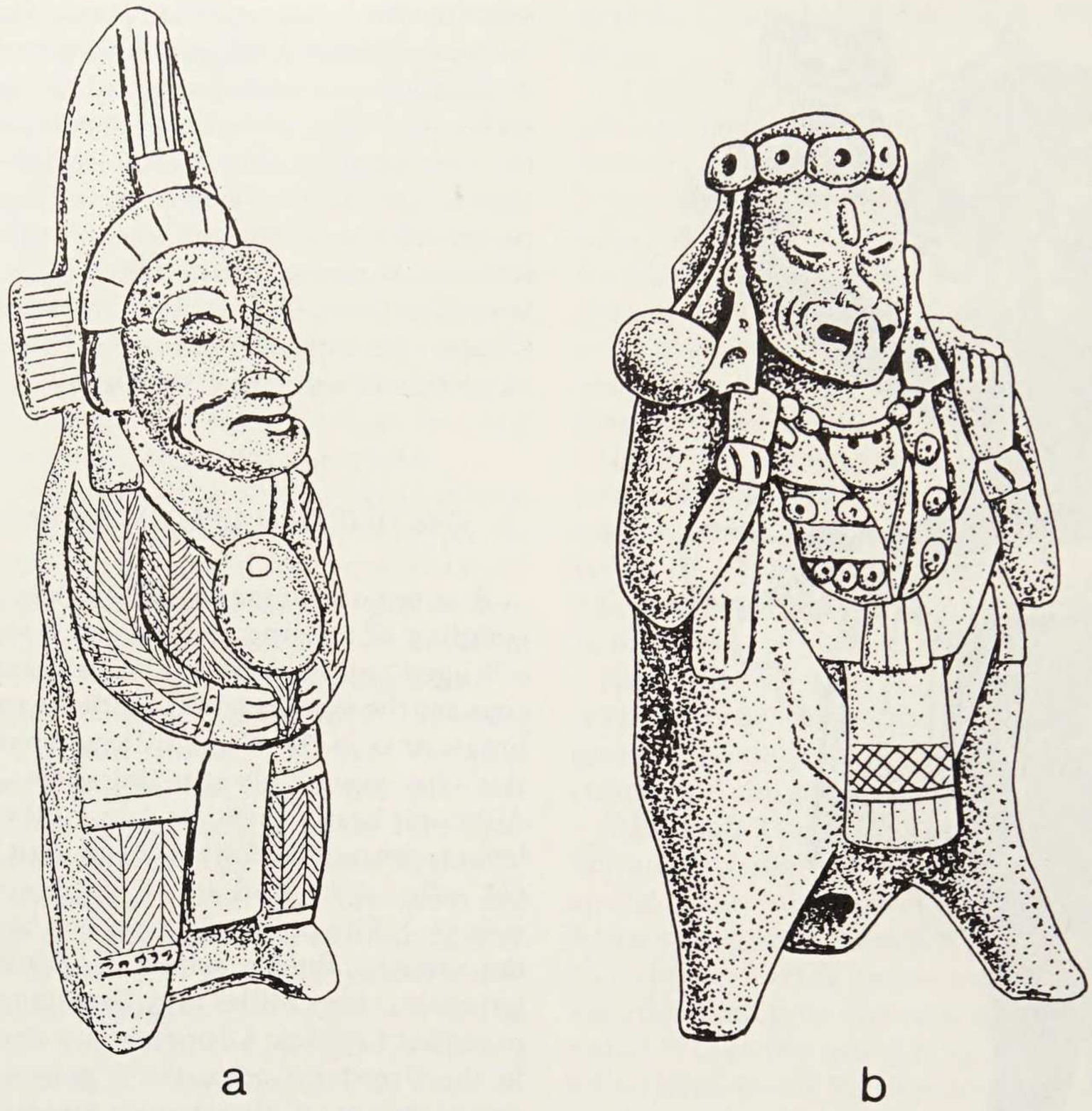


Figure 24-11. Representations of *pa* character on Jaina-style figurines. (a) Personified *pa* wearing suit and mask; compare face with Fig. 24-6d (drawn from photograph courtesy of David Joralemon); (b) *pa* clown with rattle and shell pendant. Figurine on display in the Museo Regional de Campeche (drawing by Taube).

since many seem to allude to the dance. An especially common dancing position is one hand up against the chest with palm outward (cf. Anton 1970:pl. 190). The same gesture occurs with a woman coupled with the simian *pa* figure; the pair are clearly dancing (Fig. 24-13c).

The ugly old man and young woman theme is not limited to figurines. Virtually identical scenes may be found on Late Classic vessels. Thus, the aforementioned depiction of God N dancing with a young woman is thematically identical to many figurine groups, where the aged male seems to be God N (Fig. 24-11). In one remarkable vessel scene, a male with an obscenely extended nose dances with a young woman (Fig. 24-14). Lines running diagonally across the nose reveal it to be false—probably wrapped cloth over a stiff armature—and it is likely that the entire face is a mask. Not only does the figure wield a fan and rattle but he is also accompanied by two other musicians, one with a gourd rasp and the other, a small ceramic drum. This scene is clearly a detailed rendering of a dance or spoof accompanied by music.

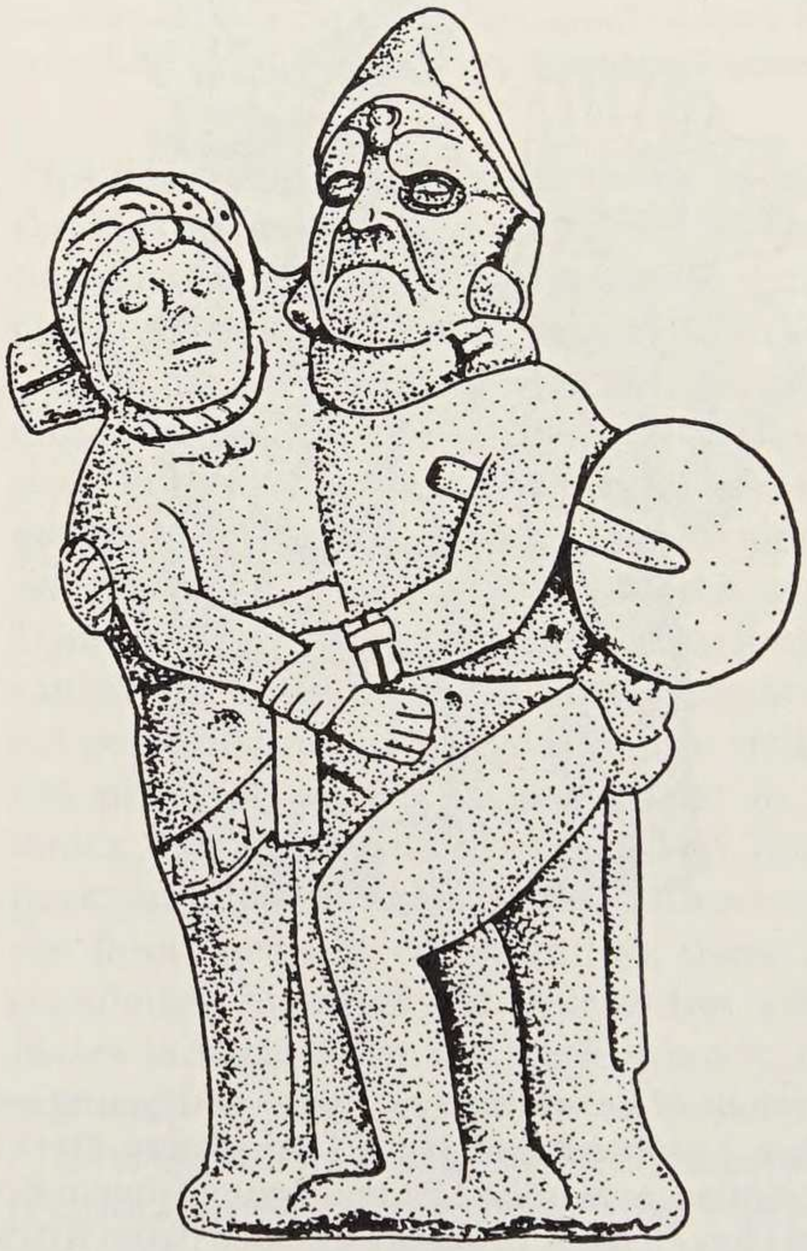
In the vessel scenes and figurine groups, the companions of the woman are of three basic types: an old man, usually God N, anthropomorphic animals, and forms of the personified *pa*. In many cases, the male appears to be the aged God N wearing a rolled turban headdress as well as sporting a small goatee. The long-nosed vessel figure wears the cloth headdress, and he may be either a form of God N or the personified *pa*. One recently exhibited Jaina-style figurine depicts the simian form of the personified *pa* with a young and beautiful woman (Fig. 24-13c). The contrast is striking: one face wrinkled and hideous; the other, serene with full, rounded cheeks. In the aforementioned vessel scene depicting the sickle-nosed personified *pa* with the Jester God plaque, the figure caresses the breast of a full-bodied young woman (Fig. 24-13a). Far from re-



a



b



c

Figure 24-12. Old man and young woman couples dancing with fans. (a) God N dancing with young woman; detail of Late Classic polychrome vessel (after Bolz 1975:pl. LIX); (b) figurine representing God N with young woman; note fan and probable rattle held in arm of God N (after photograph in Robicsek and Hales 1981:fig. 67); (c) form of personified *pa* character dancing with young woman. Figurine reportedly discovered near banks of Rio Chixoy (drawn from photograph courtesy of Dr. George Stuart).

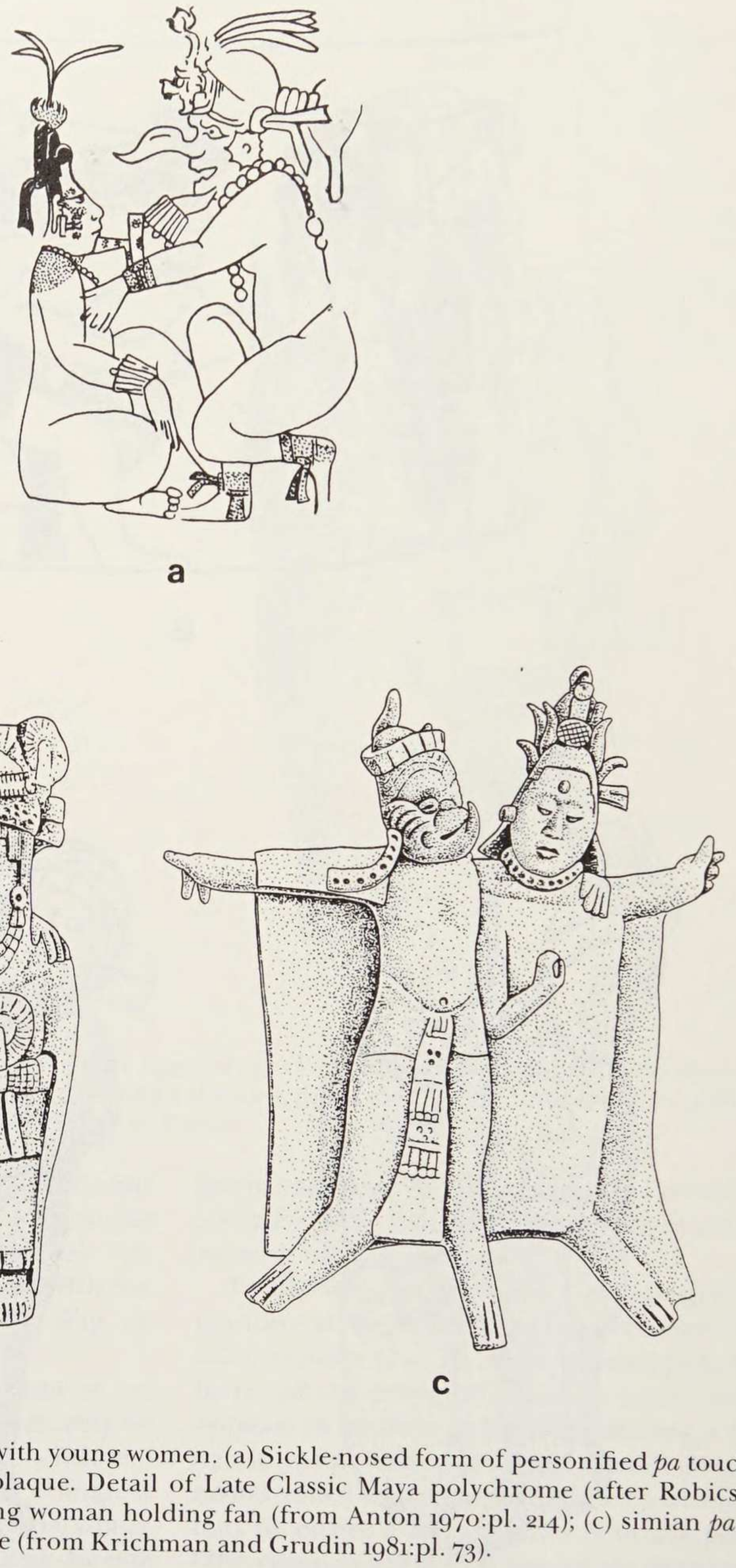


Figure 24-13. Versions of personified *pa* figures with young women. (a) Sickle-nosed form of personified *pa* touching woman's breast; note Ahau headband and Jester God plaque. Detail of Late Classic Maya polychrome (after Robicsek and Hales 1981:fig. 68); (b) simian personified *pa* and young woman holding fan (from Anton 1970:pl. 214); (c) simian *pa* dancing with woman; pointed chin element probably a goatee (from Krichman and Grudin 1981:pl. 73).

sisting this repulsive figure's advances, the woman holds one hand up against his chin. At times, animal characters are paired with the woman; along with the rabbit, the spider monkey occasionally appears. A well-known example occurs on the rim of a Uaxactun plate, where a monkey fondles the breast of the semireclining woman (cf. Anton 1970:pl. 70). The two cited rabbit figures and the monkey all wear a prominent circular chest pendant, evidently of cut shell. A great many of the discussed Classic clowns wear a similar device (e.g., Figs. 24-8b, -11a, -14). This device is perhaps analogous to the *oyohualli* pleasure sign (Fig. 24-5a) of Central Mexico, and it may mark the office of entertainers, such as musicians, dancers, and buffoons.



Figure 24-14. Dancing scene on Late Classic Maya polychrome. At center, man with absurdly long nose dances with woman; note rattle and fan held in hands of male. Dancing couple flanked by musicians, one plays small pottery drum, the other holds either gourd rasp or drum (drawn from photograph by Justin Kerr published in Coe, Snow, and Benson 1986:138–39).

The significance of the young woman and old man theme remains largely unknown. It is quite possible that the woman is the moon goddess, although at present, the evidence is weak. However, mythological meaning aside, it is clear that these scenes refer to actual performances involving the courtship and perhaps even simulated copulation of the woman with extremely unlikely mates. It will be seen that the coupling of lecherous old men or animals with young women is a favorite theme of contemporary Maya humor. However, ethnographic lore aside, it is difficult to conceive how an amorous dance featuring an old, very ugly and probably drunk man and a pretty young woman could *not* be presented in a humorous light.

THE CLASSIC MAYA SNAKE DANCE

In contemporary highland Guatemala, there are a number of humorous dances that feature the association of aged and ugly men with a pretty young woman, all in the context of rain and fertility. According to Edmonson (1965:86), the term *patz-kar* in Quiche means 'masked', with *patz-karin* signifying 'a comic dance'. This performance is probably a version of the modern Patzca described by Mace (1970). Performed in Rabinal with the music of a Tun drum, the dance consists of a group of males wearing rags and masks of aged men afflicted with goiter. Carrying rattles and twisted canes carved with lightning serpents, they dance and moan around a single male dressed and masked as a pretty woman. This humorous dance is a petition for rain performed during the spring celebrations of Corpus Christi. Mace (1970) has noted the similarity of the dance to the Quichean Patzaj, commonly referred to as the *Baile de Culebra*, or *Baile de los Gracejos*. The Patzaj is a popular dance in the Quiche region and varies according to each community; nonetheless, it tends to feature a group of performers dressed as aged men in old, worn-out clothes and one man costumed as a woman (cf. Lothrop 1929; Termer 1930; Schultze-Jena 1946). Gourd rattles are again an important accessory of the comical performance, although the most striking feature is the presence of live serpents, kept in jars until the dance. The snakes may be flourished, hung around the neck, and passed through the clothes until they fall to the floor. In some communities, there is a simulated copulation in which the woman lies with each of the males in turn. After the performance, the snakes are released.

The Quichean Patzaj has been compared to the contemporary snake dance of the American Southwest, and the swallowing of snakes during the Aztec festival of Atamalcualiztli (Lothrop 1929; Termer 1930). In the Hopi snake dance, the serpents are explicitly identified with lightning and on their release are supplicated to bring rain (cf. Stephen 1936:704, 715, 747). The Aztec ceremony also concerned rain and lightning, with the snakes in a pool directly in front of Tlaloc (Sahagún 1981, bk. 2:177–78). There is strong evidence for a Classic Maya snake dance, in this case also involving light-

ning. In the two previously described Classic representations of Chac, the lightning god has snakes emerging from the mouth and holds a serpent lightning axe (Fig. 24-15). The dancing ruler on the Dumbarton Oaks panel is portrayed as a Chac impersonator, and wields a burning serpent lightning axe. In his other hand, he holds a jar and a single serpent. But although the figure is dancing, this scene is clearly in the genre of Classic historical monuments. Two important Palencano rulers, Pacal and Kan-Xul, are mentioned in the text, and there is nothing even remotely suggestive of clowning or humor. However, there are a number of unusual monuments from the northern Yucatan Peninsula that seem to describe a serpent dance far more like the Patzaj. A complex silhouette carving at the site of Telantunich, near Peto, contains one figure with a serpent wrapped around the neck, the head and tail held aloft in either hand (Fig. 24-16b). Andrews (1939:74) noted that there originally were five figures around this individual. Although one of the lower figures is missing and the other fragmentary, the two immediately above have their hands on their enlarged phalluses. The description of the facial features of the six individuals is especially interesting:

> They bear no slightest resemblance to what we know as Maya sculpture, either in subject matter or in execution. The faces have large bulging foreheads, flat noses with excavated alae, and thick, highly everted lips. (Andrews 1939:74)

Andrews (1939:74) compared this sculpture to a stone figure at Kabah which has identical features and holds a serpent draped around the neck (Fig. 24-16a). Of course, the facial characteristics are simian, and recall the illustrated dancer figurines of Campeche and, especially, the two flanking figures of the Copan Reviewing Stand (Fig. 24-16c). The Copan figures not only hold rattles but also have snakes in their mouths. Moreover, each has a snake with fiery breath at the waist, almost surely an allusion to a burning lightning serpent.[15]

In the account by Schultze-Jena (1946), the earth lord (*juyup-tik'aj*) is supplicated before and after the snake dance since serpents are his special charge. Among the Kekchi, snakes are the servants of the Tzultacaj, or "*trueno*" (Thompson 1970b:274).[16] According to the Tzotzil Chamula, certain snakes are considered as transformations of the earth lord, the god of thunder and lightning (Gossen 1974b:86). A number of Late Classic vessel scenes depict God N emerging out of the mouth of a large serpent commonly referred to as the Bearded Dragon (Robicsek and Hales 1981:vessels 6, 7, 8, 12).[17] In two of the cited examples, God N is confronting a young and beautiful woman wrapped in the serpent's coils. One of the scenes actually shows God N leaning over and touching the breast of the lady (Fig. 24-17), thematically almost identical to the Jaina-style figurines of God N fondling young ladies. Just as the old man and young woman figurines have a direct analogue in ritual dance, the God N serpent and woman may represent the snake dance and its mimed copulation.

DEMON CHARACTERS IN CLASSIC AND CONTEMPORARY MAYA FESTIVALS

There is fairly extensive evidence that the pre-Hispanic God N is an antecedent of the aged thunder god known under such epithets as Angel, Mam, Yahval Balamil, Tzultacaj, and Trueno in the contemporary Maya region. Rather than entirely benevolent, this powerful being can kill with lightning, or be the source of sickness and famine as well as prosperity. His behavior could hardly be called responsible, and both the Chamula and Zinacanteco Tzotzil consider him as an unpleasant, greedy, and wealthy Hispanic (cf. Gossen 1974b:86–87; Vogt 1969:302). The Kekchi believe that floods are the sign of great feasts in the Underworld regions of the Tzultacaj (Thompson 1970b:274). Throughout the Maya area, caves are anomalous places, filled with riches but also the regions of demons and disease.

The Classic period identification of God N with the spider monkey is in accord with contemporary conceptions of the Earth Lord. The licentious character of the Mam is most clearly seen in the Tzutuhil Maximon. Dually sexed, he may copulate with both men and women, and lives in an underground sweat bath with

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[15] Just behind the two serpent dancers, there is a series of three large conch. During the preparation of one form of the Quichean serpent dance, trumpets and conches are blown to announce the dancers (Mace 1970:107). Along with the tortoise shell and tun drum, this instrument may have served as an imitation of thunder, an entity personified as God N.

[16] Thompson (1930:60) disagreed with the Mam/Tzultacaj dichotomy proposed by Dieseldorff (1926). According to Thompson, the contrast was overstated, and the Mam and Tzultacaj were one and the same.

[17] Michael Coe (1978:28), who first coined the term "Bearded Dragon," has compared this serpentine entity to the similar-appearing Xiuhcoatl fire serpent of Central Mexico. The Xiuhcoatl serpent has often been interpreted as lightning (cf. Seler 1963, vol. 2:34; Krickeberg 1949, vol. 1:193–94; Taube 1986). The serpent axe wielded by the Palencano Chac impersonator is actually the Bearded Dragon (Fig. 24–15a). Moreover, in the cited vessel scene, the serpent's tail is capped by God K, in effect turning the entire snake into a God K scepter. Coggins (1979:259) has interpreted the God K "Manikin Scepter" as a lightning symbol. The illustrated Chac figures on the Early Classic vessel and the Chichen Itza mural painting both wield forms of the serpent-footed Manikin Scepter lightning axe (Figs. 24–15b, c). In short, I believe that there are excellent grounds for identifying the Bearded Dragon with lightning.

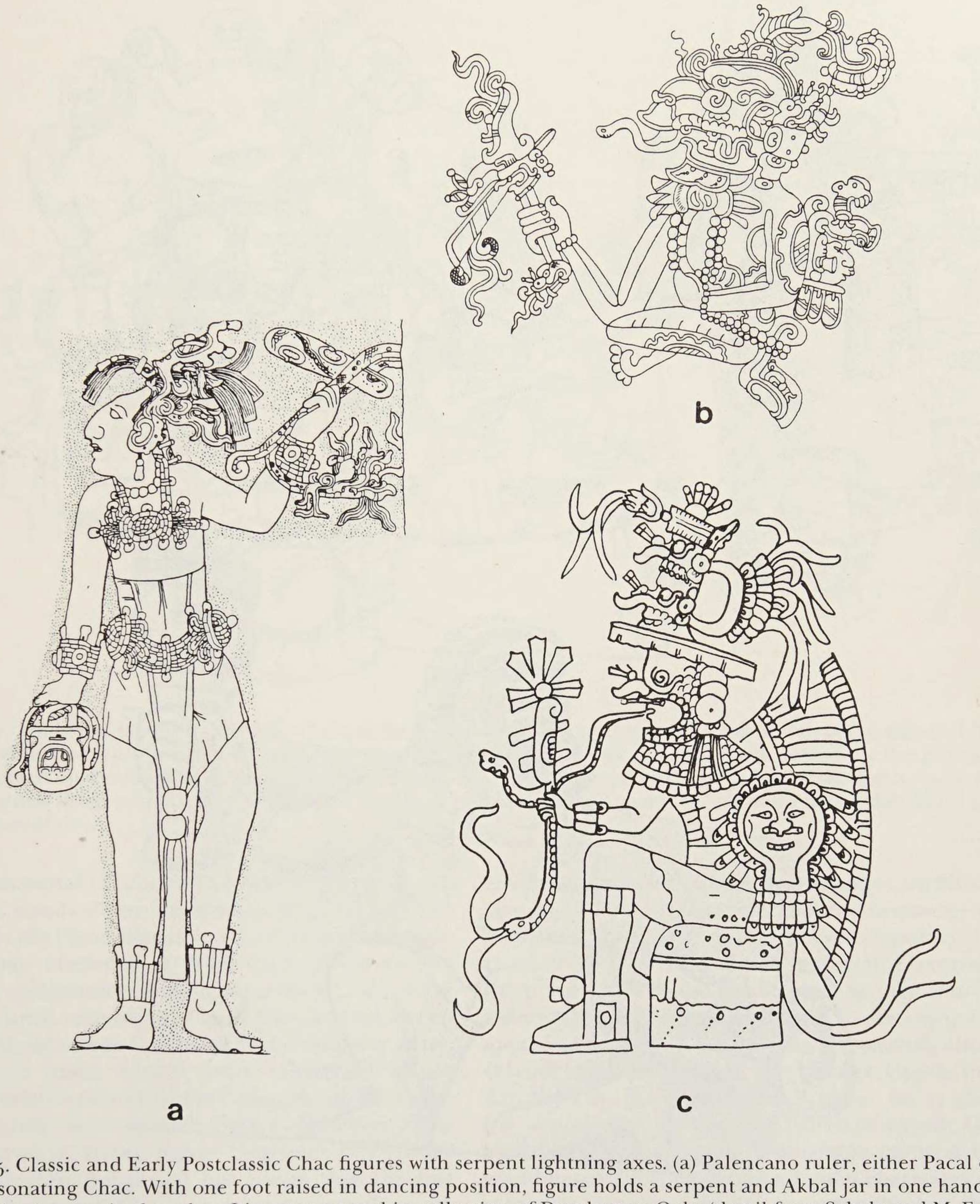
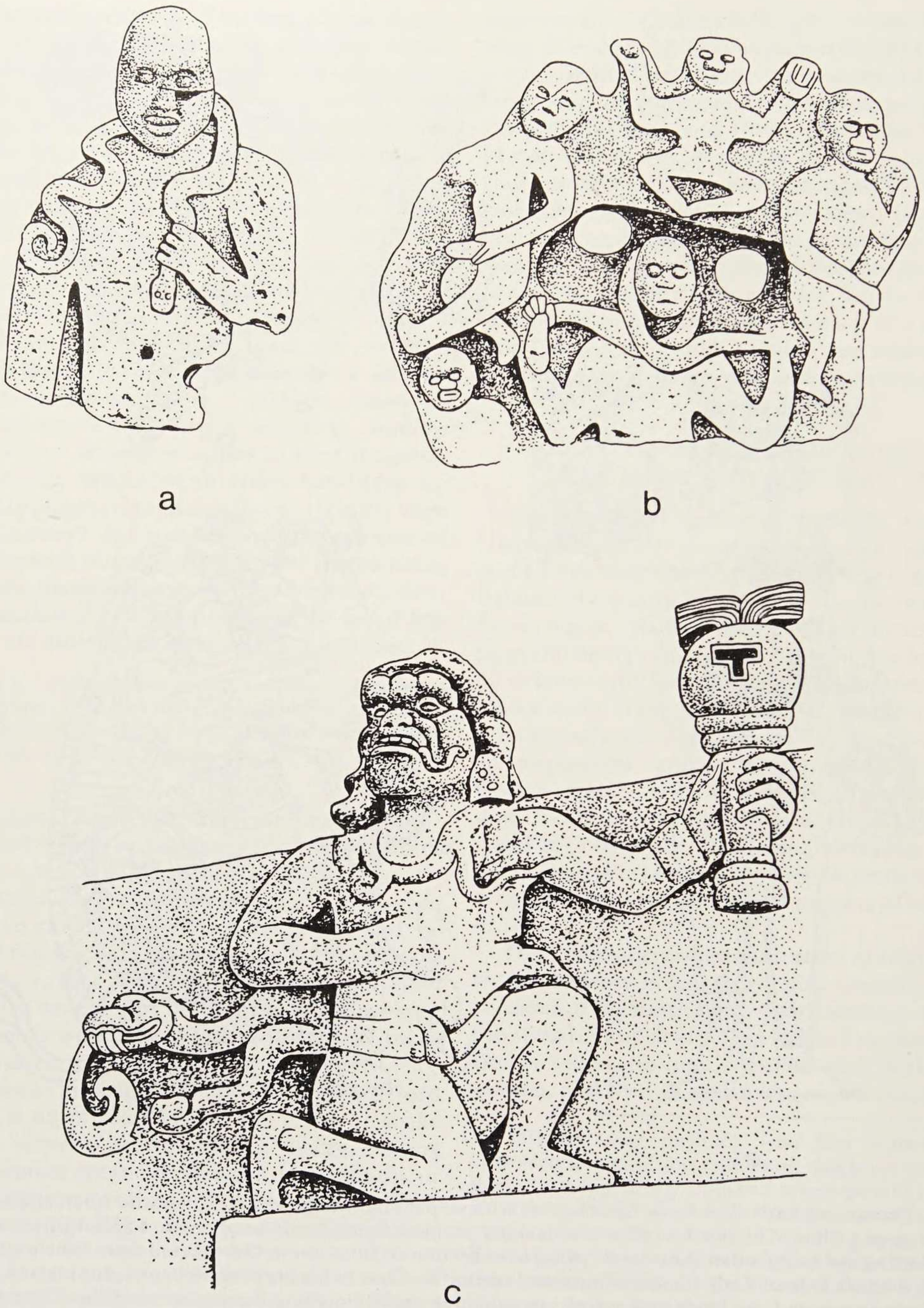


Figure 24-15. Classic and Early Postclassic Chac figures with serpent lightning axes. (a) Palencano ruler, either Pacal or Kan Xul, impersonating Chac. With one foot raised in dancing position, figure holds a serpent and Akbal jar in one hand and a burning lightning axe in the other. Limestone panel in collection of Dumbarton Oaks (detail from Schele and M. E. Miller 1986:fig. 7.3); (b) back side of Early Classic effigy vessel of God N. Chac holds burning serpent lightning axe in right hand. Smoke or flames emanate from blade and serpent mouth; note snake emerging from mouth of Chac (from Robicsek 1978: fig. 181); (c) Early Postclassic form of Chac impersonator from Temple of the Warriors, Chichen Itza. Figure wears Chac mask with serpent rising out of mouth and wields flaming, multibladed serpent axe in right hand (after Morris, Charlot, and Morris 1931:pl. 133).

a harem of women (Mendelson 1965:132; Tarn and Prechtel 1981). Tarn and Prechtel mentioned that he is occasionally associated with spider monkeys. Moreover, whereas the exterior of the Maximon idol is of rags and cornhusks, the core is reputed to be of *pito* wood (Mendelson 1959:57). In the Popol Vuh, this is



a b c

Figure 24-16. Simian snake-dancers in ancient Maya art. (a) Kabah figure with monkey attributes holding serpent draped over shoulder (drawn after photograph in Andrews 1939:pl. 2a); (b) Telantunich Monument 3; figure in center with snake around neck; flanking figures at upper right and left hold one hand on phallus (genitalia of right figure not visible in photograph) (drawn after photograph in Andrews 1939:pl. 1e); (c) one of two personified *pa* figures on Reviewing Stand, Copan, Late Classic period. Dancing figure holds tasseled rattle and grasps small snake in teeth; another, larger serpent is at waist with flames curling out of mouth (after photograph in Anton 1970:pl. 33).

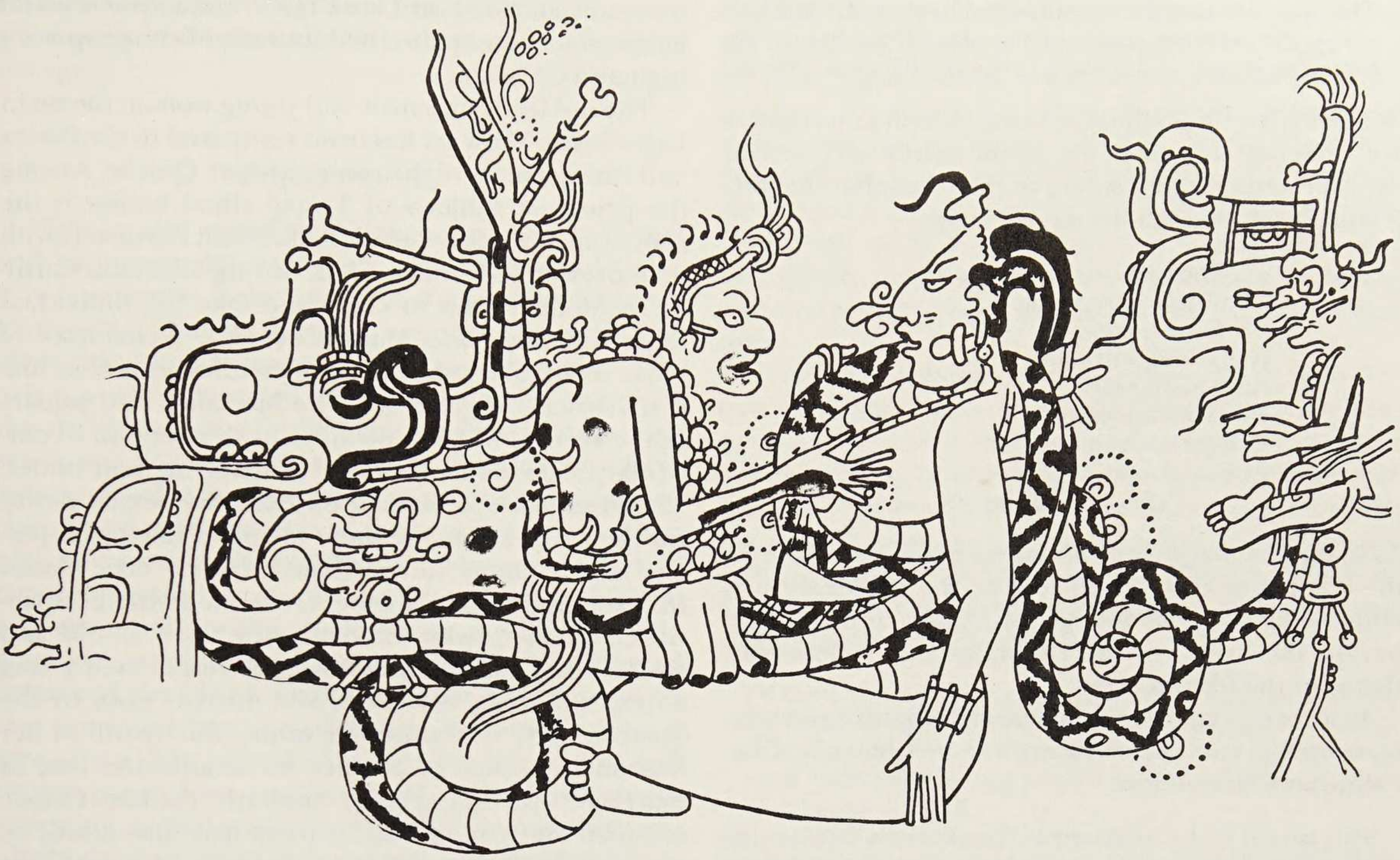


Figure 24-17. A possible symbolic correlate of the snake dance/copulation performance. God N rises out of Bearded Dragon serpent wrapped around upper torso of young woman. With one hand on her breast, he duplicates the position frequently adopted by the old man and young woman couples. The end of the serpent's tail is capped by God K, thus converting the Bearded Dragon into a Manikin Scepter lightning axe; note beaded sparks on serpent's body (after Robicsek and Hales, 1981:vessel 12a).

the same material (*Erythrina flabelliformis*) from which the race of wooden men were made, those turned into monkeys by the flood (Recinos 1950:88). And then there is the name Maximon. During Holy Week in the Pokomam community of Chinautla, there is a similar effigy that until recently was fed a liqueur and forced to dance. Made of banana leaves with a monkey mask, it is termed Mash Simon, *mash* meaning "spider monkey" (Reina 1966:161). In the Colonial Yucatec Motul dictionary, *maax katun* or *maax kin* are glossed as '*refino bellaco*', meaning 'clever rogue' (Martinez Hernandez 1929:621). Gossen (1974a:241) has noted that the last month of the Tzotzil Chamula calendar is *muš*, an adjective meaning 'bad' or 'evil', possibly alluding to the monkey: "*Muš* may also be an archaic form of *maš*, meaning 'monkey'." It will be recalled that among the Huastec, the principal Mam is termed Muxi'.

The Colonial *Cantares de Dzitbalché* describes the Yucatec Uayeb as a dangerous, threatening period that eventually will mark the end of the world. The account by Cogolludo mentions wild beasts, and the pre-Hispanic Paris Codex Year Bearer pages are filled with jaguars and other creatures.[18] Several researchers have compared the Uayeb period to contemporary Tzotzil Carnival, during which demon entertainers come from the peripheries of the social world to take control for a period of five days (Bricker 1973; Gossen 1979; Ochiai 1984). In Chamula, the similarity is especially close; the calendrical equivalent of the Yucatec Uayeb, the five day *č'ay k'in*, is believed to fall either on or close to the actual days of Carnival (Bricker 1973:8; Gossen 1979:229–30). The theme of Chamula carnival is also world destruction, in that the demon characters represented as Monkeys (*mašetik*), enact the Passion, the killing of the solar-identified Christ:

[18] On page 20 of the Paris Codex, the scene corresponding to the year bearer Etz'nab contains a figure holding a staff of some sort, possibly either a spear or digging stick. The entity is covered by thin parallel lines transected by thick black bands. The thin lines strongly resemble grass or reeds, and it is quite possible that this figure represents a Postclassic form of the personified *pa*.

> The opposite of order is symbolized by the cold darkness which the demons, jews, and monkeys lived before the forced ascension of the sun into the sky. (Gossen 1974b:37)

At San Pedro Chenalho, the many demon entertainers are believed to come out of the earth at Carnival (Bricker 1973:9). The coming of the Chenalho demons is ritually announced the month before:

> . . . The monkeys are coming;
> The Turks are coming;
> *The* fiesta is coming;
> Everything will come.
> Animals, jaguars.
> Don't sin too much!
> Danger will come;
> Evil will come;
> (Bricker 1973:127–28)

As in the *Cantares de Dzitbalché* description of the Uayeb, the coming of the demons out of the Underworld is tantamount to world destruction. Again, antisocial behavior, the "sins" of the community, is a dominant theme of the festival event.

Bricker (1973:9) has summarized the nature and tone of contemporary Tzotzil Carnival in Chamula, Chenalho, and Zinacantan:

> This period is characterized by drunkenness, license, and obscenity. For five days any man in the community can assume the identity of a Monkey, Blackman, or woman, ignore the normative code which usually guides his behavior, and release his inhibitions in an orgy of drinking and obscene behavior.

Bricker (1973:9) noted that in Zinacantan, the primary ceremony of this type is not Carnival, but the January Festival of Saint Sebastian. Here the demon impersonators enact not the death of Christ, but the execution of Saint Sebastian. Two sets of entertainers are involved, one being a pair of Spanish Gentlemen with their wives and special attendants, the other, a series of strange spooks, Lacandon (*kaʔbenal*), Jaguars (*bolom*), Plumed Serpents (*k'uk'ul čon*), Spanish Moss Wearers (*ɬon teʔ*), and the aforementioned Blackmen (*hʔik'al*). An evil cave-inhabiting demon, the Blackman is frequently mentioned in Tzotzil lore. In Zinacantan, Larrainzar, and Chamula the Blackman merges with the monkey (Bricker 1973:93; Blaffer 1972:77). In the Festival of Saint Sebastian, the *hʔik'al* may be either black or wear a cloth mask cut widely around the mouth and eyes (cf. Bricker 1973:pl. 9). This mask not only resembles the facial features of spider monkeys but also the personified *pa* mask found at nearby Palenque and other Classic Maya sites. Moreover, during the Festival of Saint Sebastian, the Blackmen are paired with the jaguar impersonators, vividly recalling the frequent scenes of jaguars and personified *pa* performers in Classic Maya art. The drunken processions of jaguars, *pa* characters, and other demons described on Late Classic Maya vessels could be quite at home in the cited festivals of contemporary highland Chiapas.

The old lecherous man and young woman theme in Late Classic Maya art has been compared to the Patzca and Patzaj dances of the contemporary Quiche. Among the principal subjects of Tzotzil ritual humor is the courtship or mock copulation of demon characters with men dressed as women. Thus, during Chamula Carnival, a Monkey tries to court and take the individual impersonating Nana Maria Cocorina, a character of loose reputation overly fond of candies and other luxuries (Bricker 1973:118–20). The Blackmen and Jaguars of the Festival of Saint Sebastian call attention to particular cargo-holders accused of ignoring their duties. The misdeeds are blamed on excessive sexual desire for their wives, causing them to spend money on jewelry and ribbons rather than on their civic duties (Bricker 1973:50). This theme is reiterated with the Spanish Gentlemen, who although described as old and pockmarked, have an inordinate interest in their young wives; "the rings, necklaces, and mirrors worn by the Spanish Lady symbolize her vanity, the wealth of her husband, and her preference for wealth over love in marriage" (Bricker 1973:64). Similarly, the Late Classic old man and young woman pairs may also allude to the more unpleasant, antisocial aspects of human sexuality—selfish greed as well as excessive lust.

It has been noted that both God N and the personified *pa* are often depicted in the context of political offices, the latter frequently found with the Ahau headband of rulership. The identification of respected offices with disreputable characters is in harmony with contemporary Maya humor, which frequently mocks political positions as well as individuals. This clowning is especially important during change-of-office ceremonies—that is, rites of passage into a new social status. During the New Year change of office at Santiago Chimaltenango, Guatemala, a pair of clowns whip and jeer the incumbent officials (Wagley 1949:90). At Chenalho Carnival, there are masked clowns named after particular offices, such as "*regidor*" and "*capitan*" (Bricker 1973:130, 135–36). During actual change-of-office ceremonies performed at Carnival, the masked clowns engage in mock copulation and other absurd acts. The Zinacanteco Festival of Saint Sebastian has a decidedly political message since it concerns the transfer of Zinacanteco cargo positions. Whereas the new incumbent officials are portrayed as young, serious, and responsible, the important officials of the past year are those that impersonate the demon clowns (Vogt 1971).[19]

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[19] Bricker (1973:206) noted that among the contemporary Tarascan of Michoacan, change-of-office ceremonies are often ridiculed by clowns portrayed as old men. In the town of

Like the young and old gods of lightning and thunder, youth is again contrasted with corrupt and malevolent old age.

CONCLUSIONS

With careful attention to dance positions, costume, and paraphernalia, especially fans, rattles, and staffs, it is possible to isolate specific characters of Classic Maya ritual dramas. However, to identify certain of these characters as clowns is quite another matter. Humor is a subtle thing, all the more when one interprets the ancient art of a foreign culture. The Classic characters may be interpreted through the direct historical approach—that is, comparing them to known festival clowns and performances of the protohistorical, Colonial, and contemporary periods. The correspondence between these later spoofs and Classic scenes is striking; examples are the snake dance and the old ugly man and pretty woman theme. The identification of certain of the Classic characters with spider monkeys also provides evidence of clowning, for these droll creatures are widely identified with humor in ancient and contemporary Mesoamerica. The Classic Maya were no exception, in that spider monkeys are frequently found wildly dancing, drinking, and even copulating in Late Classic vessel scenes (cf. Hellmuth 1978:183; Robicsek 1978:pl. 137).

The case for Classic ritual humor is far stronger when one views the suggested clowns in the broader context of Classic Maya art—most notably, monumental carving. The criteria for identifying Classic clowns are many. Among the most important are ugliness, old age, drunkenness, wanton sexuality, animal impersonation, and shabbiness. These traits provide a striking contrast to Classic Maya representations of rulership. Although anthropomorphic, Classic clowns are often grotesquely ugly, at times almost diametrically opposed to the canons of Classic Maya beauty. The characters are also frequently old and wrinkled, in contrast to the rulers portrayed on Classic monuments. In many instances, the buffoons are depicted with alcohol, either vomiting on themselves or taking draughts by cup or enema. Although this could perhaps be interpreted as a general practice of elite Maya life, depictions of drinking are extremely rare in Classic monumental art. The same could be said of sexuality; the old man and young woman couples represented as figurines and on vases are among the most explicit sexual scenes known in Classic Maya art. Classic Maya clowns frequently impersonate particular animals; usually this is not simply donning an animal headdress, but wearing a mask and suit—in effect, becoming the beast. In terms of shabbiness, the suit and mask of the personified *pa* is especially coarse, and seems to be usually made of simple grass, rough cloth, or tied rags. Aside from the masks and body suits, the dress of Classic clowns is very simple, quite unlike the elaborate feathers, beads, and complex iconographic assemblages of elite ritual dress.

The ritual buffoons of Mesoamerica have been frequently compared to the Pueblo clowns of the contemporary American Southwest (cf. Steward 1931; Parsons and Beals 1934; Bricker 1973). Ortiz (1972:147) has noted that the Pueblo clowns are especially important during rites of passage, either seasonal or of social states. According to Ortiz (1972:147), the absurd nature of Pueblo clowns provides vivid insights into native social perceptions and cosmology:

> Of burlesque and caricature generally, it can be said that they best permit insights into Pueblo modes of conception since they reveal what the Pueblos find serious or absurd, baffling or wrong, fearful or comical about life and about other people.

The same could be said of Classic Maya clowns; through inversion and antisocial behavior, these characters sharply define what is correct and what is not. Like the contrast of light and shadow, the clowns provide definition and depth to important social values and behavior. Together with the monumental portrayals of rulers, they serve as a foil for understanding Classic Maya conceptions of rulership and authority. Simply put, whereas the monuments illustrate how a public figure should behave, the clowns demonstrate how one should not. This contrast is only in the sense of the ideal, not the real. Like the early Colonial Baldzam and the characters of contemporary Tzotzil festivals, the ancient clowns may have called attention to actual vices found with positions of authority.

It has been noted that the ancient Maya clowns were identified with calendrical period endings, and seem to correlate with the cross-cultural phenomena of clowning during rites of passage. Festival humor may have defined structural categories and also served as social commentary, perhaps even as a sort of cathartic "ritual rebellion" (cf. Gluckman 1954). However, to the ancient Maya, the presence of these sacred clowns may have had a powerful rejuvenating effect. In many cases, the Maya clowns seem to come from and embody the chaotic time, or timelessness, of creation. The Quichean Patzca clowns emerged out of the Underworld just before the first dawning; and similarly, the characters of Tzotzil Carnival are frequently identified with

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Ihuatzio, the clowning is especially similar to the Zinacanteco festival. A particular cargo-holder of the past year, the Ureti becomes an old decrepit man. He goes through the community ringing a bell and stamping a staff loudly on the ground (van Zantwijk 1967:150–51).

the primordial period before the sun. The Tzutuhil Maximon effigy is believed to have been created "in the beginning of the world" (Mendelson 1959:58). According to Mendelson (1959:59) sterile women traditionally drank the water used in washing the clothes of Maximon. The Chic, or *pisote* clown of contemporary Yucatan, has a prominent role in the setting up of the *yaš che? cieba*, the sacred *axis mundi* within the town plaza (Redfield 1936). In Colonial Yucatan, the Bacab actors credited with supporting the sky are believed to have escaped the flood ending the last creation. The pre-Hispanic God N, the Classic period world bearer, had a particularly important role with festival clowns and period endings. His copulation with a young woman, the suggested underlying theme of the serpent dance, may have had an intensely fertile significance. It is this god, more than any other, that seems to embody the sacred, liminal time of ending and renewal.

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