

Studies in Ancient Mesoamerican Art and Architecture

Selected Works by Karl Andreas Taube

Dedicated to
Rhonda Beth Taube,
dear wife and esteemed friend

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Studies in Ancient Mesoamerican Art and Architecture

Selected Works by Karl Andreas Taube
Volume 1

With a foreword by Stephen D. Houston



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Maize ear emerging from flowers, with jade necklace and quetzal plumes as silk. From an Aztec mold on a ceramic box (drawing by Karl Taube).

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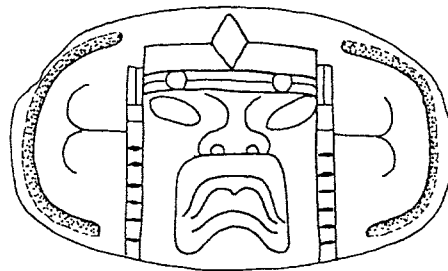
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The author at Bonampak, mid-1990s.

Foreword

Stephen D. Houston

Most forewords take a few days to mull over, then to compose. I have been writing this one for close to forty years. Karl Taube entered my life in the fall of 1980. We had arrived at Yale to study with Michael Coe, having been overwhelmed by the elegant writing and breakthroughs of Mike's *The Maya Scribe and His World*. Here was order in complexity, pattern, and meaning too, a way to plunge into the imagery that had so besotted us. Our dumb luck was, of course, to be there at the right time. Even as undergraduates, reacting separately to this absorbing, complex interplay of art and writing, Karl and I felt some dim intuition that things were about to crack open. Those years promised everything. Discoveries awaited.

Karl was like no one I had ever met before. More driven, more experienced in all ways, brighter, less plodding, more impassioned, a greater talent at drawing, more distinguished in his intellectual pedigree, firmer in his opinions than my insecurity allowed—yes, and far better looking too. He had a thin frame and blondish, tousled hair, seemingly a California surfer who was not anything of the sort. Liked to collect glass, ejecta, agatized whale bone, and to shape odd, knobby bits of wood while slowly sipping on Jameson or some other drink I could not stomach. There was that immense, flashy concha belt which I later rescued after he left it at Bonampak, Mexico. No scholar of his quality lacks for intensity, and I remember his fiery eagerness to “get to work.” I found, somewhat disconcertingly, that my own private universe of obsession was shared by someone else—for me, over some months, even cracks on the sidewalk began to look like Maya glyphs. Karl's brilliance soon led to my own conclusion, that I had best not compete with him. The prudent course was to focus on something else, Maya writing, a subset of related evidence. With time, I learned a bit of wisdom, that collaboration rather than competition makes for a happier career. Find the brightest colleagues, work with them, let them help you. The effort is not always symmetrical, for how can it be in absolute terms? But Karl always taught me more than I offered him.

At Yale, we quickly learned too that giving a competent talk and plodding to a bulleted summary was a snore. Absolutely beneath contempt. We had to look hard, make novel claims, be bold and big, not, for God's sake, even begin to think of boring Michael Coe while he read or listened to our papers. A certain arrogance arose from believing our ambitions lay within reach. (A comparison, noted with Ivy League snark: we were told that, in *their* seminar papers, Mayanist students at *another* university mostly vied over page length.) And then the performance, usually once a semester: our work needed strong visuals, the talks given without notes, every word of it involving a pretended spontaneity. That this elevated standard was seldom met, other than by Karl, hardly mattered. A few years before were some of the brightest young stars in Mesoamerican archaeology, from David Joralemon to Peter Mathews, Mary Miller, Jeff Kowalski, Janet Berlo, and many others. Yale was unusual in another respect. The hard line between art history and anthropology, so important to some, George Kubler (another professor) among them, was honored mostly in the breach. We were allowed to ask about what things looked like and why. We could also probe what they might mean. I never saw the need for zealous border guards between the two fields. "Visual culture" was a perfectly adequate description for our own version of the DMZ. Yale, for all the drifting we did—ours were idiosyncratic journeys—managed to supply the necessary passports.

It is difficult to explain what that world was like, prior to the works assembled here. Despite lots of enthusiastic pronouncements, we could barely read much of Maya writing. For me, thinking on it now, the striking breakthroughs lay ahead. No one spoke of central figures in Maya imagery such as the Maize God until Karl came along; no one looking at imagery was versed in a Mayan language or in deep ethnography (Karl was), attentive to Central Mexican evidence (Karl certainly a partisan here), inclined to link Mesoamerica to its broadest reaches in the US Southwest (Karl again, through the very personal connection described in his introduction). Slowly, in the 1980s, it became acceptable to discuss imagery and ideas as motivating forces, if filed away under the banal Marxianism of a term like "ideology." This was a godsend. Epigraphers and iconographers could now be hired by anthropology departments. Art historians had it easier, but I never assumed I would get a job. I do not know how hopeful Karl was either. Again, by sheer good fortune, positions materialized in the late 1980s, for the Maya had become a "hot" topic. We could now be said to study the religious mystifications of the hoi polloi. I had also pitched myself as an archaeologist, but it took many field projects and the mapping of countless mounds for that to stick. At present, it is safe to say, Karl and I do not care at all about our categorizing and packaging by others.

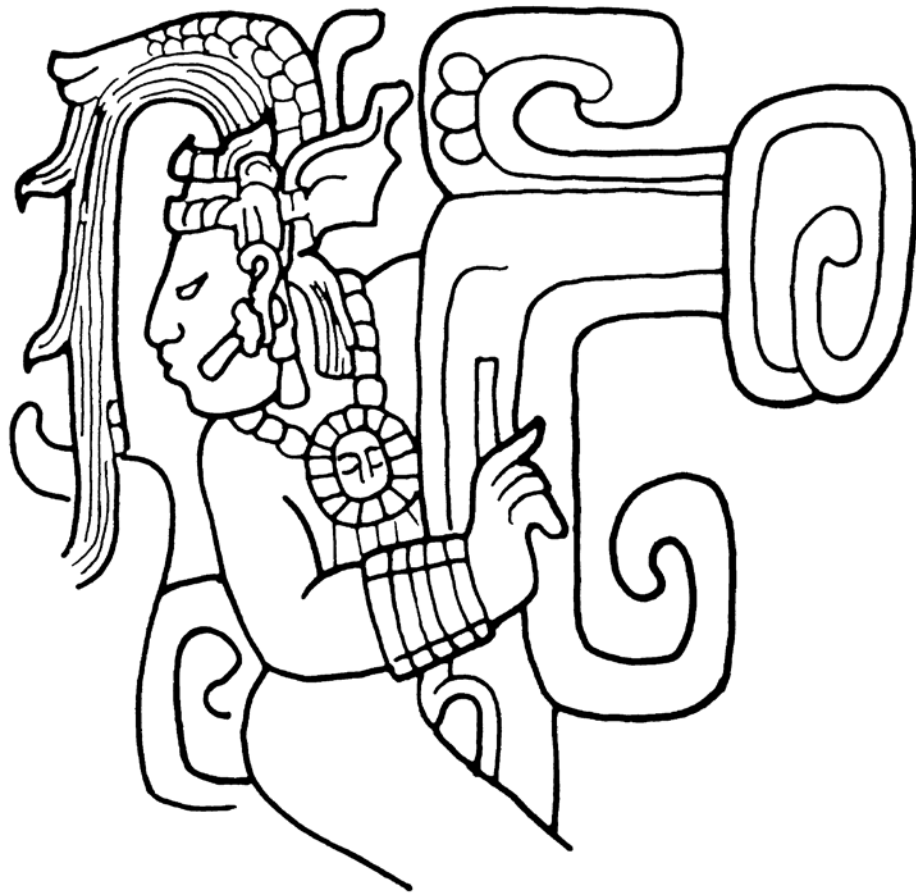
How to bottle Karl's magic? Not possible: his visual recall and interpretive talents have no peer. But one can list the ingredients, from methods to the greater mystery of how his insights operate. First and foremost, the directive is always to know your evidence. Collect every possible scrap of visual data. Karl would never put it this way, but this is how we explore graphic variance. This element is like that one and not like others. Their immediate visual context matters. A few feel it wrong, simply wrong, to have so many components to a single image. Only one should be permitted. They miss utterly the reason for such displays and their marshalling of graph-by-graph comparisons. Then, of equal importance, Karl would sort out what that element shows. Is that paper or a plume? Are those jewels, against all expectation, actually a string of earspools? One of Karl's great influences as an undergraduate was the incomparable folklorist Alan Dundes. Karl's research is in no small

measure about figuring out which stories—“foundational” or “etiological myths,” if you will—were displayed in the dense images and telling objects of ancient America. Who were their principals, the *dramatis personae*, and, above all, why were they so important as to be carved into stone and put on public exhibit in what must have been labor-intensive works? What parts of their cosmos were important to them (the maize, rain, the sun, the holders of knowledge, the energies of youth, the sapience of age), and how were they embodied and personified in beings who could be represented and supplicated?

And then there is the fact that ancient Mesoamericans did not sequester themselves in small hamlets. They talked to each other, over wide distances, shared explanations about why matters exist as they do, moved about, warred with each other in a form of grim but insistent communication. Often, exceedingly ancient ideas might pass with notable tenacity to generations that met the Spaniards and beyond, to the Yukatekos who befriended Karl in his youth. A hermetic approach sees the region purely in terms of localisms, the narrower the space and time the more trenchant the discussion. Yes, initially perhaps. But the astounding commonalities of this sprawling region demand respect and should factor into an accounting of what the patrons and artists wanted their images to mean.

These are examples of Karl’s craft, even cognitive wiring, a gift for detecting coherent stories. Then there is what can only be understood as an affinity to worldly beauty, the layered metaphors that enrich Mesoamerican imagery and give, still, powerfully, that punch that makes us whirl for the love of it. Karl is earthy, likes a good laugh, an exuberant dance or frolic. He admires and delights in stunning objects; he understands emotion and experience. These capacities equipped him to find, for the first time, ancient Maya clowns, catching on that certain scenes were meant to be riotously funny, and, more ethereally, that rushing clouds, ripe with rain, could be understood as feathered serpents showering us all with their westbound blessings. Karl discovered that objects pleasing to touch and rub, like jade, carried spirits within. He discerned a paradise full of flowery scent, buzzing bees, a flutter of birds, in the here, now, everywhere, in the impossibly distant past, in the future too.

It is at this level that Karl’s work acquires majestic sweep. Curiously, it is also at its most human. His writing has gone to that place beyond academic debate, beyond the dry armature of citations and intro-middle-conclusion. It has taken us to a land where people laughed, loved, lived, died, and lived again. That is the place he visits, where he has invited us to travel in the wonder-filled essays that follow.



Author's Introduction

The publishers have asked me to provide some background on the works in this collection. In response to my question as to how much background to provide, they said why not start at the beginning.

As a child, strange and ancient things enthralled me, such as rocks, fossils, hand-blown old bottles, or early varieties of barbed wire from nineteenth-century California. About age five I realized that I was going to die, and I thought this a pretty crappy deal. However, after a week or so of mulling, I was happy to acknowledge that dinosaurs are indeed dead but remain as lovely fossils and doing just fine in the long run. During my earliest years, my father was a chemistry professor at the University of Chicago and we lived on Dorchester Street, just a few blocks from campus. At about age three I was fascinated by the wonderful, ancient objects on display at the Oriental Institute, and I held this interest when we moved out west later the same year to Portola Valley, California. In the early 1960s, there was a major exhibition in San Francisco entitled "Treasures of Tutankhamun," displaying some of the most spectacular objects found in King Tut's tomb. About halfway through the exhibit I became agitated to such a degree that my mother took me outside to understand why I was crying, and I burst out with "They already found it all!" Thankfully, soon after our excursion to the Tutankhamun exhibition, my British aunt Marie Pepper stayed with us after a stint of volunteer work for the Red Cross in Yucatan. During her time in the Bay Area, she kindly gave me her guidebooks of major Maya sites in Mexico, including Palenque, Uxmal, and Tulum, to read while we were lying on the beach at San Gregorio. That was really it for me concerning future endeavors, and thus at about five I wanted to devote my life to the study

of the ancient and contemporary cultures of Mesoamerica.

Although my central focus of research concerns this cultural zone, I also have a deep interest in native traditions of the American Southwest. This may have come about because my mother Mary was a member of the Manhattan Project near Los Alamos, New Mexico, during World War II. Partly because of the time that my mother spent there, my maternal grandmother, Alice Wesche, moved to Santa Fe after retiring as a graphic illustrator for Sears in Chicago. While in Santa Fe, she worked as an illustrator for *El Palacio*, a quarterly journal of the Museum of New Mexico. My grandmother participated in other projects, including ethnographic fieldwork with the anthropologist Benjamin Colby in the Nebaj region of Guatemala. Although her primary role was as an illustrator, she also published a piece concerning Ixil Maya New Year ceremonies in *El Palacio* (Wesche 1967). After working for the journal for many years, my grandmother moved to the Amerind Foundation near Dagoon, Arizona, where she served as the primary artist and illustrator for the Casas Grandes Project. I spent several summers at the Amerind Foundation and met project director Charles Di Peso many times. I recall that his house had a pool at the back nestled into a granite outcrop and that he had macaws, not surprising considering the importance of these birds not only at Casas Grandes (now commonly referred to as Paquime) but among Puebloan peoples to this day. Unlike many other Southwestern researchers, Di Peso embraced the concept of direct and sustained contact between Paquime and the peoples of ancient Mesoamerica.

Alice Wesche was a very skilled illustrator—especially with line drawings—and while visiting her in Santa Fe in 1976, she taught me nuances with using pens, such as putting a heavier and bolder line for forms appearing further in the background to give a perception of depth, a technique I use in my published illustrations, especially for bas-relief sculpture. As it happens, virtually all of the images in my publications are my own line drawings, and I find that it is extremely important in iconographic and epigraphic research to draw the images firsthand, as this is by far the best way to focus and engage with very complex imagery, much like actually reading a newspaper page versus simply glancing at it. For that reason, it is no coincidence that the preeminent Maya epigraphers create their own glyph drawings of meticulous caliber, as is also true for their images of Maya iconography. In my view, this not only demonstrates technical virtuosity but also respect for the exquisite cultural material at hand.

Along with my mother Mary, my aunt Marie, and my grandmother Alice, my father was also very supportive of my interest in archaeology. Henry (or Heinrich) Taube was born in Neudorf, Saskatchewan, where his parents were hard-working farmers who escaped from the Ukraine during the Russian Revolution. According to one account of my father's history, his parents were virtually illiterate and went with a group of ethnically German Lutherans from the eastern European steppes to the similar but surely safer prairies of central Canada (Stevenson 1986:75). They spoke a form of Plattdeutsch, or "Low German," in which our family name is Doova, which refers to both pigeons and doves (I prefer the dove, thank you). When my father went to school in Saskatchewan, it was important that the kids declare that their background was High German, hence our current patronym of Taube rather than Doova. As kids, my brother Rick and I spent a summer with uncle Albert in Saskatchewan, and I still miss the fresh eggs (Figure 1).

Rather than wanting to be a farmer, my father devoted his efforts to schooling, with his best option being to secure a bachelor's degree in English at the University of Saskatchewan so that he could become a minister. However, he was immediately concerned that the line



Figure 1. Karl and Albert Taube at the farm in southern Saskatchewan, circa 1963 (photo: Marie Pepper).

for majoring in English was too long. Another student kindly pointed out that the line for chemistry was much shorter, and my father made the wise choice to sign up for this instead. He went on to receive the Nobel in 1983 for his research in inorganic chemistry and catalytics (Ford 2005). Serendipity happens all the time with academic research, such as reading a good piece or reencountering a well-known artifact at just the right time for another source of understanding. These sublime moments of lucky insight and direction are something to acknowledge, be grateful for, and enjoy.

During my undergraduate years, I attended two universities, the first being Stanford in the area where I was raised. While there, I had the good fortune to study with Professor James Fox, an expert linguist with a deep understanding of Maya languages and hieroglyphic writing. Although I learned a great deal from Professor Fox, I eventually realized that it would be good for me to find a campus farther from home. While attending UC Berkeley, I took several courses concerning the ancient Maya with professor John Graham, who for some years had been focusing on the remarkable early stone monuments of the Guatemalan piedmont, including sculptures from Takalik Abaj and La Democracia. For one class we had the good fortune to hear Robert Heizer discussing his field experiences excavating at La Venta in 1955, where crew members were occasionally locked up in the community jail, although we never heard why. A very special academic mentor of mine at UC Berkeley was the late professor Alan Dundes, a preeminent expert in folklore studies. He encouraged me to pursue folklore through an archaeological perspective, and due to the richness of ancient Mesoamerican art and writing as well as contemporary Mesoamerican ritual and belief, this has proved to be an excellent approach, beginning in my undergraduate years and continuing to the present.

While attending Stanford in the mid 1970s, I came across an impressive volume entitled *The Maya Scribe and His World*, by Michael D. Coe (1973). His profound insights into Maya iconography were truly inspirational. Before this, my closest access to experts exploring the exuberant iconography was J. Eric S. Thompson, a great scholar, though sadly he mistook the

cranial fire or smoke of K'awiil for vegetal growth and also suggested the translation "Iguana House" for the name of Itzamnaaj, associating the wizened deity with a wide range of unrelated reptilian imagery (Thompson 1970b:214-218, 226). When I first opened *Maya Scribe* in 1976, I realized that Mike Coe had "eyes" and presented whole new vistas in approaching this ancient and very alien complex, especially the dark and menacing underworld. In 1980, I was fortunate to begin graduate school at Yale University under Mike's tutelage. Although Professor Mary Miller was still a graduate student when I first came to Yale, she also was an excellent mentor during my years there and always provided sound advice, beginning with the first time I met her, in front of my new graduate student dormitory. As it happened, two other graduate students who came to Yale in 1980, Stephen Houston and Louise Burkhart, pursue very productive careers in their respective fields in Mesoamerican studies. Steve and I became the best of friends and colleagues, as can be readily seen in the many works that we have coauthored over the years.

When we arrived at Yale in 1980, there were a number of academic suppositions that we needed to acknowledge. One of these, championed by the Yale art historian George Kubler, was that there was little continuity of meaning in ancient Mesoamerican art. Instead, what we faced were "disjunctions" between the obvious continuity of images and their meanings, which theoretically might have changed in profound ways. In addition, in contrast to the more holistic approach of Eric Thompson, contemporary Mesoamerican religion and belief were of little or no use for studying the ancient cultures of Mexico. According to Kubler (1961:14) documenting and studying the beliefs and practices of contemporaneous Maya peoples to interpret the more ancient past was only performing an "autopsy," and he further noted that such research would be just a "prolonged dissection of the corpse of a civilization." As it happens, Mike followed Thompson in acknowledging that Colonial and contemporary Mesoamerican culture is critically important in interpreting the more ancient past, including not only the Classic period but even the Formative times of the Olmec. For example, he pointed out that the odd, lumpy anklets seen on Tlatilco figurines are virtually identical to the cocoon leg pieces worn by contemporary Yaqui deer dancers (Coe 1965b:26), and as of yet I am not aware of a better interpretation. Another widely held belief we faced in the early 1980s is that unlike the rest of Mesoamerica or the ancient world, the Classic Maya had no concept of gods. This was championed by the great artist and epigrapher Tatiana Proskouriakoff (1965), who saw no deities or mythology in ancient Maya art (see also Marcus 1978).

In response to both the assertions of little cultural continuity and the lack of deities among the ancient Maya, I published *The Major Gods of Ancient Yucatan* (Taube 1992b), in which I traced back as far as I could the gods of the Late Postclassic codices to their Classic and even Late Preclassic origins. With the subsequent discovery of the mural chamber at Pinturas Sub-1A at San Bartolo, Guatemala, it is obvious that as with the rest of the ancient world, there was a rich body of Maya mythology concerning gods at a very early date (see Saturno et al. 2005; Taube et al. 2010).

In the 1980s there were a number of technological advancements that greatly benefited Maya epigraphic and iconographic studies. One basic tool was the Xerox machine, which allowed texts and images to be readily shared by personal contact or mail. Although photocopiers had already been around for some time, an especially important advancement was the ability to reduce or enlarge images, which allowed them to be easily drawn to the scale needed. Although this might seem minor today, there was virtually no other means to



Figure 2. The author at his rented house in San Juan de Dios, Quintana Roo, 1984 (photo: Luis Nevaer).

do this before digital scanning, and perhaps for this reason quality line drawings of texts and images did not start to be common in ancient Maya research until the 1980s. A very important source of data disseminated through xeroxing at this time was the collection of unpublished field drawings of Classic Maya monuments created and compiled by the late Ian Graham at the Peabody Museum at Harvard University. Along with the volumes of the *Corpus of Maya Hieroglyphic Inscriptions* published by the Peabody, Ian's field drawings remain an invaluable source of information to this day concerning Classic Maya writing and iconography.

Another important advance at this time was the development of rollout photography championed by Justin Kerr, a process that allowed Classic Maya cylinder vases to be photographed as a single image. I first met Justin and his wife Barbara at their home and studio in Manhattan in the early 1980s, and they were both extremely hospitable and generous with their rollout photographs. I returned that first day to New Haven with a good many glossy prints that I still own today. The first major corpus of Classic Maya vases photographed by Justin were the "Codex Style" ceramics, which being largely black on white were also readily photocopied. A major body of Justin's photographs of Codex Style ceramics appeared in *The Maya Book of the Dead* (Robicsek and Hales 1981). Published in the second year that I was at Yale, this collection of Late Classic Maya material profoundly influenced my research and the direction of my studies. Without a doubt, I would not have been able to muster the visual and epigraph evidence to identify the Classic Maya maize god in my 1985 paper (Chapter 1 of this volume) without this book and Justin's photographs.

During my time at Yale, I engaged in anthropological fieldwork in 1983 and 1984 in the remote community of San Juan de Dios in northern Quintana Roo, where I gradually became conversant in spoken Yukatek (Figure 2). Living in a rural Yukatek community for about

a year surrounded by tall forest wilds, or *ka'anal k'áax*, was a unique experience that I am most grateful for. About twice a month I made brief visits to Mérida, where I often enjoyed the kind hospitality of both Joann Andrews and Edward Kurjack, including even a stay at Joann's house where I dealt with hepatitis, and yet another time with a staph infection from a *comoyote* grub that died and decayed in my shoulder, leaving a dime-sized hole for a couple of months. Thanks in part to the kind support of Joann and Ed, I pursued almost a year of fruitful field observation with Yukatek Mayan speakers—a true experience of a lifetime.

Although I had hopes of recording a litany of folk tales and myths in a remote Yukatek-speaking community, I quickly found that it really doesn't work that way. It would be much like a foreigner to the United States asking a local about the narrative meaning in stories of the founding of New York or San Francisco. Probably not going to happen. Instead, comments about the world of spirits came out casually in daily conversation. Thus during one of my first days in the community, some of the local boys mentioned that on September 15 every year, giant feathered serpents, the *noh kaan*, emerge from the sacred lakes of Coba to create havoc where they fly. I thought "riiight, you betcha..." The same afternoon I asked their father about this tall tale, and he responded by asking whether we had the same problem in the United States. Independent ethnographic fieldwork by Harriet de Jong (1999:156-158) roughly ten years later describes in detail this serpent belief in Quintana Roo:

This animal is a huge snake. At a certain time of year it burrows into the ground, wings and feathers start to grow from its body and it becomes the Feathered Serpent, *Kukulcan*. On the fifteenth of September, it takes to the air and starts heading for the sea.

In her research, de Jong puts this into the broader perspective of the *helep* or "change" of wild animals, who transform into other species if the flying serpent's shadow should fall over them on September 15 and 16. According to de Jong, this causes local people a great deal of worry and fear, with many preferring to remain at home during this time. Although de Jong does not mention Coba as a source of such serpents, when I went there I was repeatedly asked if I was concerned about them, as they are regarded as a matter of great reverence in northern Quintana Roo. When I did go there with a San Juan family in 1984, there were burnt candles at the base of an ancient stela that they told me were dedicated to the god of the hunt (Figure 3). They also casually pointed out that Spanish moss hanging from nearby trees was called *utzo'otzel chák* or the "hair of Chahk," which immediately brought to my mind the thick manes of bound hair seen in Classic images of the god of rain and lightning.

In another situation in San Juan, I was hiking on an old trail a good deal north of the town and came across an ancient site with well-preserved foundations of house walls and dry-stone border walls, or *koot* in Yukatek, along with a cave with pure and sweet water. On returning to town, I mentioned that there was a cave spring nearby, and there was much interest, especially on the part of a local *evangelico*. This neighbor of mine would regularly blast Christian-related music through a loudspeaker on what would be otherwise a quiet and peaceful night (or relatively so, because in remote rural villages there is no "white noise" and one continually hears dogs barking, roosters crowing, pigs squealing, and the random howler monkey). At one point I went to the evangelical's house to mention that his inspirational music was being played at 3:00 AM and was not conducive to sleep, and his gentle and completely affable response was to offer me a relaxing cup of coffee and Christian comics to read. At any rate, he expressed great interest in seeing the cave and so I took him there. Once



Figure 3. Stela with candle offerings for the god of the hunt at Coba, Quintana Roo, 1984 (photo: Karl Taube).

we descended by climbing down roots through the cave opening, he immediately started bathing with soap in the dark pool, despite the fact that its muddy bottom of decaying sticks, roots, leaves, and sharp rocks made it hardly inviting for a dip. It only occurred to me years later that he was probably polluting the water to make it unsuitable for Maya ritualists to use as *suhuy ha'* or "virgin water," central for the *ch'a' cháak* rainmaking ceremony and attendant offerings.

As far as I am aware, this ancient settlement north of San Juan de Dios has yet to be documented archaeologically, but thanks to casual conversations with locals during my year in San Juan, I did learn of sites that are now relatively well known. During my early stay in San Juan in 1983, there was a road crew putting down *sascab*, which is a form of degraded limestone used to create *caminos blancos* or "white roads" in rural areas in place of asphalt. A good many men on this crew were from San Juan and mentioned to me that near where they were quarrying there were ancient ruins. The road crew kindly took me out there and



Figure 4. The author at Naranjal, Quintana Roo, 1992.

showed me a most impressive Early Classic stepped vault at the town of Naranjal, which became the focus of an archaeological project directed by my colleague Scott Fedick and myself in 1993 (Figure 4) (see Fedick and Taube 1995). One afternoon, a woodcutter from north of K'antunilk'in visited the family that I ate with in San Juan and told us of ancient paintings (*úuchben tz'úib*) north of his town in the Yalahau savanna region. After visiting this area soon after, I realized that one structure had murals strikingly similar to those known for sites on the east coast of Quintana Roo, including Tulum and Tancah. In 1988, Tomás Gallareta Negrón and I engaged in an archaeological project documenting the two Late Postclassic plaza groups with murals from this region of the Yalahau area (Gallareta Negrón and Taube 2005). In addition, a number of people in San Juan originally from Yalcoba mentioned a cave north of Valladolid known as Dzibih Actun or Dzibih Chen, and although at that point I didn't get the chance to go there, I mentioned the place to Andrea Stone and she took it upon herself to follow up on this vague tip and actually visit the cave in 1986 (see Stone 1995a:74-86). Soon after, we returned there together, and while looking at the cave paintings I saw that some of the motifs featured the day name Ajaw atop swimming turtles, a theme that directly related to my research concerning turtles and the K'atun cycle published in my early study "A Prehispanic Maya Katun Wheel" (Taube 1988a) (Chapter 2 of this volume).

Aside from community daily life hanging around my rented place, the town's well, and the one local store, I spent many days following old paths through the forest. The locals considered this a pretty bad idea, as I could well meet *alux* forest spirits who would lead me astray and cause me to get lost and go crazy in the jungle. With local Maya walking such trails, I often went in front and when I chose the wrong path they would gently chide me with a nervous chuckle and *sa'atech?* or "Are you lost?" I also learned a good deal

about potentially harmful plants, such as *chéechem*, that although producing itching blisters like poison oak or sumac can be readily remedied by the sap of *chakah*, a softwood tree often referred to as *gumbo limbo* in the English-speaking Caribbean. My 1989 paper “A Classic Maya Entomological Observation” (Taube 1989a) (Chapter 6) concerns the bull-thorn acacia, or *subin* in Yukatek. It is based on too many painful attempts at cutting through this plant with a host of fire ants in the very sharp and hollow paired thorns—and angry wasps suddenly at face level as they emerge from their nests. Dating to roughly the seventh century AD, the Tepeu 1 vessel in Naranjo style discussed in the article is a very graphic depiction of this plant, including not only the spines but also a wasp nest at the top.

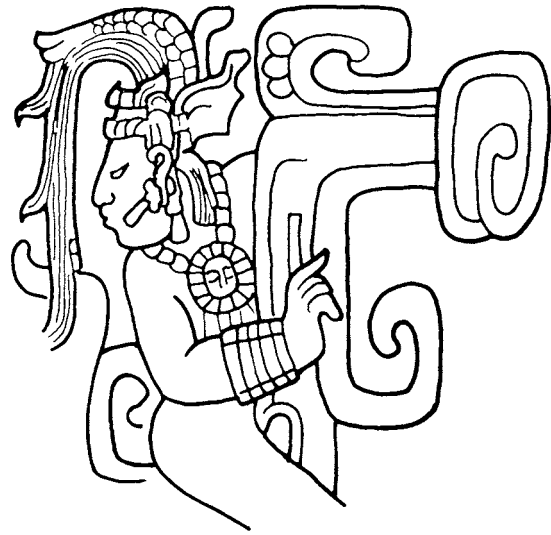


Figure 5. The Tonsured Maize God, Quirigua Stela H (drawing by author from Taube 1992b:Fig. 19c).

Arising out of my field work and academic studies was research that I first presented at the Fifth Palenque Round Table and published in the conference proceedings as “The Classic Maya Maize God: A Reappraisal” (Taube 1985) (Chapter 1). At the time, I considered this a reappraisal as many Maya specialists then regarded the maize deity as being entirely passé, partly through overdevelopment in Maya studies, including the popular volume *The Ancient Maya* by Sylvanus Griswold Morley, who gave this deity the odd and unfortunate name of Yum K’ax, meaning “Lord of the Forest,” a concept antithetical to the deity’s actual association with the carefully cultivated maize milpa, or *kool* in Yukatek. In this early paper, I noted that two forms of the maize god were present among the Classic Maya, one with a maize ear and foliation growing from the top of the head and the other having the entire cranium modified to resemble an ear of corn. The latter typically had the upper central portion of the brow shaved, creating two zones of hair, the top of the head alluding to the maize silk and the lower portion the embracing husk. Because of the shaved brow, I termed this being the Tonsured Maize God (Figure 5). In this work, I identified his nominal glyph, which typically has a number one before the face. Years later, David Stuart (2005:182) deciphered the name as Ixim, a widespread term for maize grain in Mayan languages (see also Zender 2014). When I was living at San Juan de Dios in the early 1980s, I was eating with a family while an infant idly played with maize grains on the floor. His mother gently but firmly told him *mun ba’axa yeteh Santo Iximi’*, meaning “Don’t play with the spirit of corn.”

In the late 1980s, after my Maya maize god study was published, the Red Temple at Cacaxtla was discovered, revealing remarkable murals flanking a broad stairway (see Brittenham 2015:145-182). The east wall mural features the Maya merchant deity facing a growing cacao tree and a maize plant with each ear of maize as the head of the Tonsured Maya God, even with maize grains above the horizontal band of hair (Figure 6a). Slightly later came a bowl from a royal burial at Calakmul featuring an incised image of the same head of the Tonsured Maize God atop a maize stalk, again identifying him as the god of corn



Figure 6. Portrayals of the maize god as an ear of corn in Late Classic Mesoamerica: (a) maize god as ear of corn, Cacaxtla (drawing by author from Taube 1992b:Fig. 19e); (b) maize deity emerging from growing maize plant appearing on Calakmul bowl (drawing by author after Carrasco Vargas 2000:19); (c–d) maize god heads with growing maize, detail of carved jade plaque from Nebaj (drawings by author after Smith and Kidder 1951:Fig. 59b).

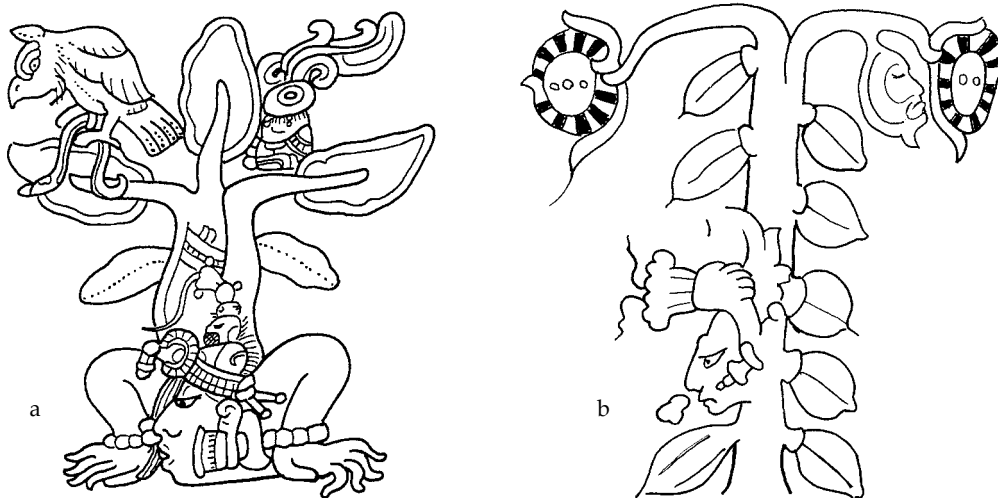


Figure 7. The Classic Maya maize god as a verdant tree: (a) Early Classic Maya portrayal of the maize deity as a cacao tree (drawing by author from Taube 2005b:Fig. 2f); (b) Late Classic depiction of the maize god on the trunk of a cacao tree (drawing by author from Taube 1985:Fig. 4c).

and sustenance (Figure 6b). This depiction is very similar to a pair of maize deities appearing on a massive jadeite plaque excavated at Nebaj, a site that also has many jadeite pendants of this deity (Figure 6c–d).

Whereas the foliated aspect of the maize deity alludes to green, growing corn, the Tonsured Maize God embodies the mature cob with its fertile seed. It is this form of the maize god that dominates Classic Maya iconography and myth (see Freidel et al. 1993), and in “The Classic Maya Maize God” I noted that he is an early version of Hun Hunahpu of the sixteenth-century K’ichean *Popol Vuh*, the father of the Hero Twins, who is decapitated in the underworld. Thus he appears frequently with the Hero Twins in Late Classic vessel scenes featuring him traveling through the watery underworld (Taube 1985; Quenon and Le Fort 1997). A remarkable vessel portrays his head growing from the trunk of a cacao tree, much like the *Popol Vuh* episode where the severed head of Hun Hunahpu is placed in a tree and

becomes a gourd (Figure 7b). In addition, an elaborately incised Early Classic vessel now known as the "Berlin Vase" features a stylized head with maize foliation in a cacao tree personified by the maize god, again a probable reference to the maize god's severed head (Figure 7a). Subsequent research has established a firm link between the maize god and cacao, surely in part because of the form of cacao pods, which resemble ears of corn (see Miller and Martin 2004; Martin 2006). In fact, the common Spanish term for a cacao pod is *mazorca*, which is the same as that for an ear of maize.

As it turns out, the Tonsured Maize God is essentially the culture hero of Classic Maya mythology and appears as the epitome of royal grace and beauty for both male and female elites; in fact, in subsequent years there has been a great deal of fruitful research concerning gender ambiguity in relation to the Maya maize deity (see Stone 1991; Bassie-Sweet 2000; Joyce 2001; Miller and Martin 2004:97). It is becoming increasingly clear that he is a dominant figure in Classic Maya creation episodes, as is discussed in *Maya Cosmos* (Friedel et al. 1993) and other studies (Quenon and Le Fort 1997; Miller and Martin 2004:56-62). Despite his prominence in Classic Maya art and myth, the Tonsured Maize God largely fell from view during the Terminal Classic Maya collapse, and the common Late Postclassic codical form is the Foliated Maize God appearing in the Dresden, Paris, and Madrid codices. In fact, this may constitute a deep conceptual change brought about by the collapse in the ninth century AD as regards the maize deity so closely related to Maya elite identity and physical appearance. In other words, although the Maya maize god of fertile grain has roots in the Classic period and even before, he abruptly disappears with the advent of the Early Postclassic in the Maya area following the collapse, just as Long Count monuments were no longer erected with the exception of the "Short Count" texts in Postclassic Yucatan. For a good many years, archaeologists have created lists concerning some of the striking phenomena concerning the Maya collapse, such as the rapid depopulation of the Central Maya lowlands and a cessation of major monumental architecture and Long Count monuments. Given our more nuanced understanding of Classic Maya belief, I would suggest that the sudden disappearance of the Tonsured Maize God is also a major element to acknowledge and consider for further research. A tenoned stone sculpture from Mayapan portrays a very rare Late Postclassic version of the Tonsured Maize God with the tabular erect form of cranial modification widely seen with the Classic Maya elite (Figure 8). So far as I am aware, there is only one other portrayal of this deity at Mayapan, in this case atop the back of a turtle (Figure 9c).

One of the most striking scenes of the Classic-period Tonsured Maize God is his emergence from a cleft turtle carapace (Figure 9b) (Taube 1985:174-175). Recent excavations

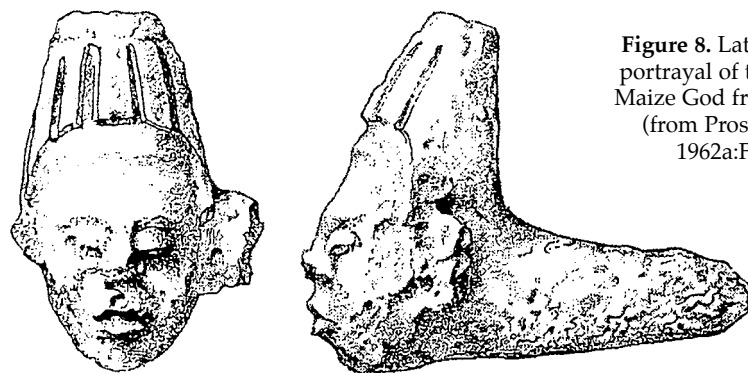


Figure 8. Late Postclassic portrayal of the Tonsured Maize God from Mayapan (from Proskouriakoff 1962a:Fig. 8g).

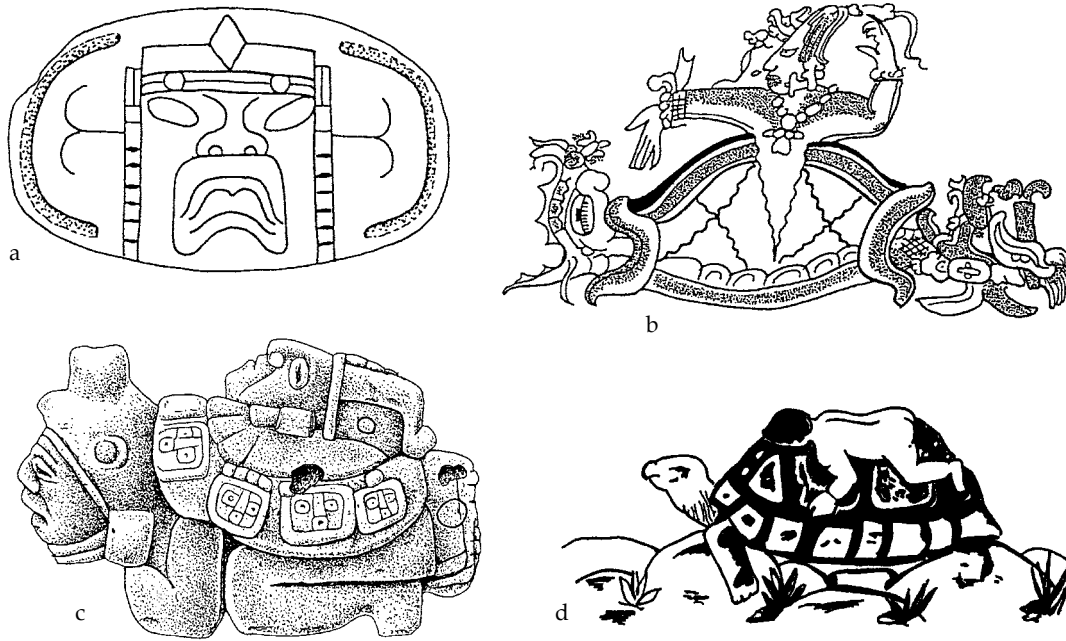


Figure 9. Portrayals of the maize deity atop turtles in ancient Mesoamerica: (a) Middle Formative Olmec plaque portraying maize deity atop turtle carapace (drawing by author from Taube 1996:Fig. 22d); (b) Late Classic Maya depiction of maize god emerging from turtle shell (drawing by author from Taube 1993a:66); (c) head of maize god atop turtle, Late Postclassic Mayapan (drawing by author from photograph courtesy of Clifford Brown); (d) illustration of contemporary Tepehua myth of infant maize god atop turtle (drawing by author from Taube and Saturno 2008:Fig. 13b).

directed by William Saturno at San Bartolo, Guatemala, have revealed a much earlier, Late Preclassic version of this episode, here with the dancing maize god within a turtle denoting the earth flanked by two enthroned deities, one being Chahk, the god of rain and lightning, and the other the god of terrestrial water (Taube et al. 2010:77-80). An even more ancient version is a Middle Formative Olmec serpentine pectoral with the head of the infant Olmec maize god atop a turtle carapace (Figure 9a). Dating from roughly the sixth century BC, this constitutes one of the earliest mythic episodes known for the New World. At the other end of the temporal scale is a small stone sculpture discovered in a cave at Late Postclassic Mayapan during a project directed by Clifford Brown in 1994. The carving portrays the elongated head of the Tonsured Maize God atop a turtle, suggesting a continuity of at least 2000 years (Figure 9c). Although wearing a jade collar, the god's eyes are shut, suggesting that he has been decapitated. Myths featuring a turtle supporting a corn deity continue to the present among the Tepehua, Popoluca, and other peoples of Veracruz, making a span from roughly the sixth century BC to the present day (Figure 9d).

In "The Classic Maya Maize God," I noted that the turtle represents the sustaining earth from which the corn god sprouts and grows, and several years later I presented a more detailed argument that the turtle does indeed constitute the earth in "A Prehispanic Maya Katun Wheel" (Taube 1988a; see also Taube 2013) (Chapter 2). Among contemporary and ancient Maya, there are a number of metaphors to describe the earth's surface. One model is the four-sided maize field, with the corners oriented to the intercardinal points and the sides representing east, north, west, and south framing the middle place. Clearly

this relates directly to humanly constructed space, including tables, houses, and temples as well as the milpa (see Taube 2013). In addition, there is the basic concept of the earth crocodile floating on the primordial sea, with its limbs pointing again to the intercardinal points. However, the ancient Maya had yet another metaphor, the domed back of a turtle also swimming atop the sea. Unlike the four-sided world or the extended limbs of an earth monster, the circular and domed model of the turtle best reflects the concept of centrality, much like a circular dartboard versus one that is square.

It was following my initial work on the maize god and the earth turtle that I came across a remarkable turtle sculpture published by Tatiana Proskouriakoff in her discussion of stone carvings from the Late Postclassic site of Mayapan. Perhaps because this was the last major enterprise in Maya archaeology engaged in by the Carnegie Institution of Washington, Proskouriakoff apparently had little interest in gleaning any meaning from Mayapan art and stone carving, as is reflected also in her 1955 paper entitled "The Death of a Civilization" in which she states in relation to Chen Mul effigy censers:

From the censer images we get a clear impression of the credulous, inartistic and militant nature of this age, which contrasts sharply with the scope and serenity of earlier Maya traditions. (Proskouriakoff 1955:86)

Despite Proskouriakoff's oddly negative view of the contact-period Maya of Yucatan, it is now clear that one of the finest screenfold books of ancient Mesoamerica, the *Codex Dresden*, dates to this very time, based on clear Late Postclassic Aztec conventions in the manuscript, including the sign for turquoise and elements pertaining to the wind god, Ehecatl-Quetzacoatl (Taube and Bade 1991). In her discussion of Mayapan sculpture, Proskouriakoff (1955:130, 1962b:331, Figs. 1-2) misidentifies old male deities in turtle shells as portrayals of Itzamnaaj or God D, despite the fact that Paul Schellhas (1904) classified such anthropomorphic turtle figures under the specific label of God N rather than God D (see also Taube 1992b:92-99).

For the Late Postclassic sculpture from Mayapan, Proskouriakoff briefly describes one turtle carving with thirteen Ajaw signs on the carapace rim. This immediately reminded me of the well-known "Short Count" of Postclassic Yucatan featuring thirteen Ajaw dates of every K'atun ending of twenty 360-day periods (or Tuns), equivalent roughly to 256 years. In other words, this simple monument constitutes a "Katun Wheel," as first mentioned and illustrated by Diego de Landa in the mid-sixteenth century. It is important to note that turtle carapaces typically have thirteen scutes, much like the thirteen K'atuns of the Short Count. A sculpture from the House of the Turtles at Uxmal has precisely the same number of thirteen scutes on its back (Figure 10). In the case of the small turtle sculptures at Mayapan, including the example rimmed with thirteen Ajaw glyphs, many were found within the rear recessed areas of elite domiciles, or "palaces," suggesting extremely private bloodletting events.

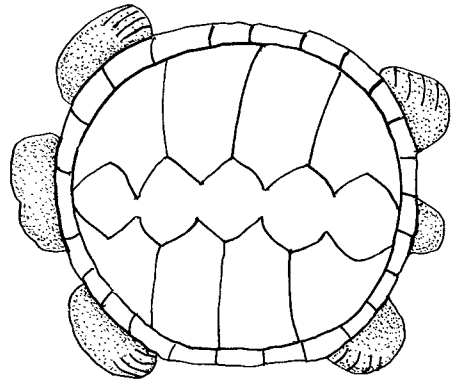


Figure 10. Turtle sculpture with thirteen scutes from the cornice of the House of the Turtles, Uxmal (drawing by author).

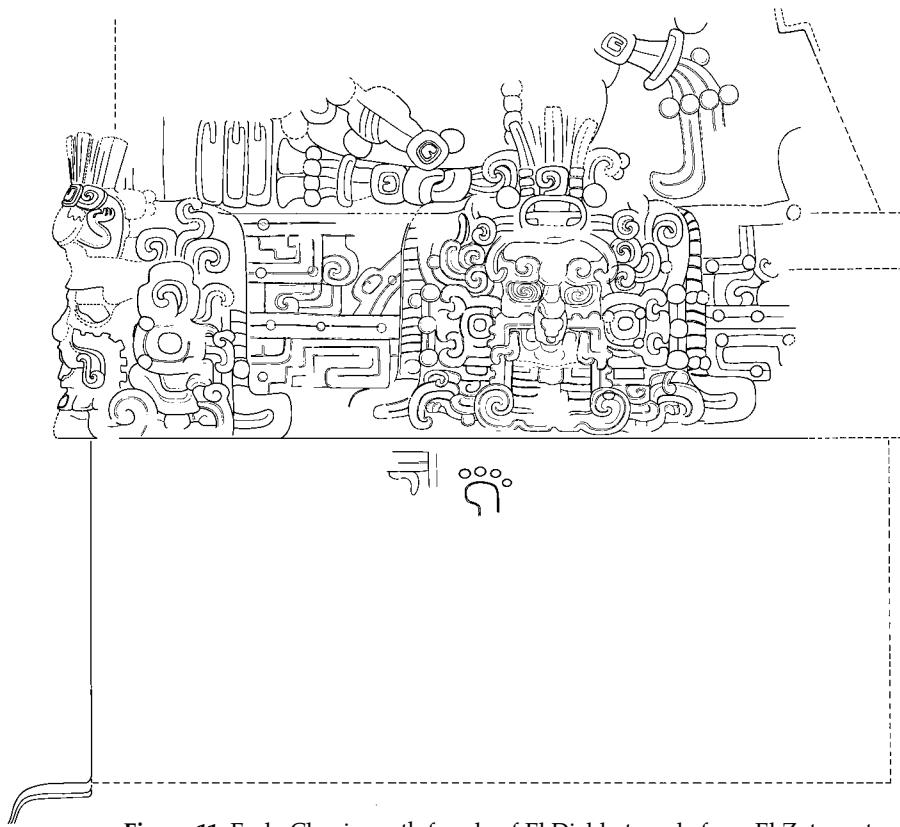


Figure 11. Early Classic north facade of El Diablo temple from El Zotz; note bamboo scaffolding and footprint on lower frieze (drawing by Mary Clarke).

Like the small turtle altar with thirteen Ajaw signs, others at Mayapan often have a central pit atop the carapace. One example contained bloodletting lancets, indicating that the central cavity provided sustenance to the earth from precious human blood. However, this could also relate to concepts of conjuring and emergence, such as the maize god rising out of the turtle earth. A series of reliefs from the House of the Phalli in the Initial Series Group at Chichen Itza features not only penis perforation by aged God N figures but also the emergence of plumed serpents from offering bowls (see Schmidt 2007:Fig. 17). These scenes clearly pertain to the concept of the “Vision Serpent” discussed by Schele and Miller (1986:175-208) for Classic Maya bloodletting scenes. Although it is impossible to determine whether the Maya elites who engaged in penitential bloodletting were actually *seeing* serpents, an early seventeenth-century account by Ruiz de Alarcón concerning Nahuatl rituals in highland Guerrero states that bloodletting did indeed produce visions: “They say that some fainted or fell asleep and in this ecstasy they either heard, or fancied that they heard, words which their idol spoke to them” (Coe and Whittaker 1982:81). Page 19 of the *Codex Madrid* features an elaborate scene of five gods engaged in penis perforation around a turtle image, quite clearly the same sort of turtle altar known for Mayapan and other sites of the northern Maya lowlands. Their pierced phalli are strung together by a single cord that also has a solar *k’in* sign attached to it, and it could well be that this scene illustrates the road of the sun and the dawning brought about through the release and offering of penitential blood.

Aside from the turtle altars from northern Yucatan, an excellent example was discovered

at Yaxha close to the contemporary town of Flores, Guatemala. This Late Postclassic monument displays the central orifice and has a great deal of original paint still adhering to the limestone surface (see Finamore and Houston 2010:158-159). Although the top of the carapace is divided into a series of elaborate triangles and dots, the limbs bear an undulating “net” of lines rendered in crisscross fashion with dots in the center of each quadrangle. This same “net” motif appears on Classic-period water lily pads and turtles, a basic metaphor for the earth floating atop the sustaining waters of the sea (see Miller and Taube 1993:184). As I recently noted (Taube 2010a), this Classic Maya motif can be seen on a toponymic sign from Cacaxtla and becomes widespread in Late Postclassic and early Colonial documents of highland Mexico. Remarkably, the “netted earth” motif seems to have continued in early nineteenth-century New Mexico in the religious paintings attributed to the *santero* painter Molleno (see Boyd 1974:364). How this striking convention may have been introduced into New Mexico remains unknown, although it could well have been brought by the Tlaxcaltecs who, as Spanish-sponsored mercenaries and colonists, began arriving in the American Southwest during the mid-sixteenth century (Simmons 1964).

In contrast to the small Mayapan sculpture, there are also Late Classic turtle altars of truly monumental scale, including Itsimte Altar 1. For this massive carving, the carapace was marked with prominent Kaban curls, the Kaban sign being a basic way to designate the earth, as can be seen on the sides of K'inich Janaab Pakal's sarcophagus at Palenque (see Stone and Zender 2011:136-137). The central surface of the monument displays a prominent day name cartouche, almost surely referring to the twentieth day name Ajaw, meaning king or lord. Machaquila Altar A is yet another example, and although eroded the center probably portrays the local ruler as a personification of Ajaw (for rulers as embodiments of Ajaw, see Stuart 1996). At the end of the “Katun Wheel” study, I call attention to a rather obscure passage from Fray Andrés de Avendaño concerning the K'atun cycle:

These ages are thirteen in number; each has its separate idol and its priest, with a separate prophecy of its events. These thirteen ages are divided into thirteen parts which divide this kingdom of Yucathan and each age, with its idol, priest and prophesy, rules in one of these thirteen parts of the land, according as they have divided it. (Means 1917:141)

In this regard, it is important to note that the K'atun pages in the *Codex Paris* feature the coronation of each K'atun lord receiving a jeweled headdress ornament while seated on a raised throne, a scene notably similar to the “niche stela” accession scaffold scenes at Late Classic Piedras Negras (see Taube 1988b). However there are still earlier examples from the Late Preclassic West Wall mural at San Bartolo, in which the maize god and a possible historic figure receive forms of the Jester God jewel on either side of the earth turtle (Taube et al. 2010). For San Bartolo, the two enthroned figures bracket and face into the central quatrefoil turtle marked with fine diagonal lines denoting stone, much as if the central turtle is a carved stone altar directly pertaining to the two accession events.

Recent excavations of the Diablo temple at El Zotz in the northwestern Peten of Guatemala have revealed an extraordinary series of stucco facades dating to the Early Classic period (see Taube and Houston 2015). The basal portion of the north facade features diagonal bamboo scaffolding as well as a central hanging sheet of paper or cloth bearing a prominent human footprint, providing an important link between the Late Preclassic scenes at San Bartolo and the Late Classic scaffold accession stelae at Piedras Negras (Figure 11).

In relation to enthronement and coronation, the Late Preclassic Mound Group B at Izapa,

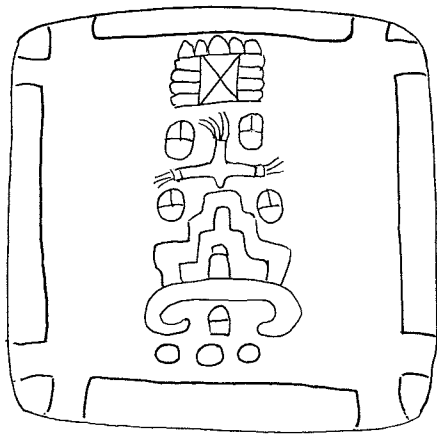


Figure 12. Olmec greenstone plaque portraying cosmological themes of directional symbolism in relation to world tree atop mountain (drawing by author after Guthrie 1995:Fig. 191).

Chiapas, features a stone throne backed by Stela 8, depicting the earth turtle with a quatrefoil body containing an enthroned figure, probably referring to the very throne behind which the stela is placed. Adjacent to and framing the throne are three stone spheres atop cylindrical columns, clearly relating to the three hearthstones in traditional Maya houses, the same stones mentioned for the creation date 4 Ajaw 8 Kumk'u, or August 13, 3114 BC (see Freidel et al. 1993:65-71; Taube 1998c:433-446). In terms of the common Maya metaphor of the world as a house, these hearthstones denote the pivotal *axis mundi*. One of the most developed architectural programs devoted to directions and centrality in the Classic Maya region is Structure A-3 at Ceibal, which features a radial pyramid with four stairways, each side having a stela and altar at its base. In addition, a fifth stela stands in the central floor of the radial

temple, which is unique in terms of known Classic Maya architectural arrangements. A cache under the central stela featured three large jadeite cobbles, clearly related to the concept of the three cosmic hearthstones denoting the cosmic center or *axis mundi* (Taube 1998c:441). The emblem glyph of Ceibal is a royal title stating that its kings are lords of the three-hearthstone place. Recent excavations by Takeshi Inomata and Daniela Triadan have uncovered an impressive series of Middle Formative Olmec-style celt caches, many of them oriented to the four directions and center. In addition, one contemporaneous cache dating to roughly 600 BC featured a group of three large limestone spheres arranged in a triangle, surely alluding to the hearthstones (see Inomata and Triadan 2015:86, Fig. 32). This immediately recalls an Olmec-style greenstone plaque in the Dallas Museum of Art featuring a stepped mountain and world tree with four directional elements at its corners, clearly a form of the Olmec bar and four dot motif with the stepped form and tree constituting the central vertical bar (Figure 12). At the base there are three spheres that for some years have been identified as the three cosmic hearthstones, a program notably similar to the Mound B Group at Izapa (see Lowe et al. 1982:Fig. 9.1). The very recent find at Ceibal demonstrates that the concept of the three-stone hearth is indeed of great antiquity in ancient Mesoamerica.

A Late Classic panel text concerning the 4 Ajaw 8 Kumk'u event refers to a turtle, and although the three hearthstones are not mentioned, they are present in a good many other contexts (Freidel et al. 1993:65-66; Taube 1998c). Page 71a of the *Codex Madrid* features a turtle with the three hearthstones centered on its back. Although this has been identified as the constellation Orion, a simpler interpretation is that the scene portrays rain falling from a darkened sky upon the earth turtle sustaining the three hearthstones. The aforementioned account by Andrés de Avendaño describing specific communities of the thirteen K'atuns also recalls Altar de los Reyes in southern Campeche, a site named after Altar 3, a monument originally bearing the emblem glyphs of thirteen major Classic-period polities, including Tikal, Palenque, and Calakmul (see Grube 2003). A short text on the upper surface of this small, round altar refers to *k'uhul kab* or "sacred earth" followed by another glyphic compound prefixed by the number thirteen, clearly a reference to the royal titles of major sites on

the altar side. Much like the Avendaño account, this Late Classic altar pertains to the rulers of particular polities, although there is no specific reference to K'atun celebrations.

Calendrics and cosmology are also reflected in my study entitled "Itzam Cab Ain: Caimans, Cosmology, and Calendrics in Postclassic Yucatan" (Taube 1989b) (Chapter 3), which discusses the earth crocodile in relation to cosmic calendrical events. In the aforementioned K'atun cycle of roughly 264 years, the final K'atun ends on 13 Ajaw, with the next day being 1 Imix, a day name equating to Cipactli or crocodile in highland Mexico, the first day in the twenty-day series. In addition, 1 Imix or Cipactli marks the beginning of the 260-day calendrical cycle related to creation and legendary beings in many Mesoamerican texts and monuments. As with the "Katun Wheel" paper discussing calendrical cycles and Ajaw period endings on the back of the earth turtle, this study examines them atop crocodiles, including a fascinating Late Postclassic mural from Coba, Quintana Roo, which although heavily damaged, features the series of day names in correct order beginning with Ben and then proceeding to Ix, Men, Kib, and Kaban. In more recent research, I have explored the relationship of the primordial flood crocodile with the beginning and end of the last Bak'tun cycle that began on August 13, 3114 BC and recently ended on December 21, 2012 (Taube 2010c, 2012a). For two ceramic vessels explicitly denoting the beginning of the past cycle in 3114 BC, gods convene in a dark room with the flood crocodile resting atop a temple devoted to God L, the aforementioned merchant deity.

Another topic that I explored during graduate studies led to the paper "Ritual Humor in Classic Maya Religion" (Taube 1989c) (Chapter 4). This was in large part inspired by Victoria Bricker's (1973, 1981) important work with annual festivals among the Tzotzil of highland Chiapas, a theme also addressed by Evon Vogt (1976) in his extensive research concerning the Tzotzil community of Zinacantan. During the Festival of San Sebastian, ritual clowns dressed as forest beings call attention to social misdeeds during the past year by publicly announcing them, calling to mind the ritual clowning among Puebloan peoples of the American Southwest, which often pointedly addresses inappropriate behavior by specific members of the community (see Wright 1994). In contrast to most known Classic Maya monuments portraying rulers, images of ancient clowns appear on smaller and more private objects, such as painted vases and figurines, where they are often smoking, drinking, and cavorting with alcoholic enemas. But one noteworthy exception in scale is the monumental kneeling figures on the south side of Temple 11 at Copan, who shake rattles and have serpents in their mouths and around their waists as a form of snake dance. A few years after this study was published, I happened to come across a contemporary wooden mask in the local market in Chichicastenango, Guatemala, that features an aged simian-appearing face biting a snake, remarkably similar to the pair of Late Classic monkey clowns at Copan. The same day, I eagerly took the mask to one of the two still-extant *morerias* in town, that is, the shops that rent traditional dance costumes for community festivals. I thought that this would be the perfect opportunity to ask the K'iche'-speaking owner the name of this being. He thought about it for a while and then told me "*chipasi*." As I started writing this down, however, I realized that he was simply saying "chimpanzee." Not particularly helpful. That noted, the mask does relate to contemporary highland Maya snake dances that I cite in this study.

In the same work, I suggest that festivities concerning ritual clowning may have been held at particular calendric events, such as during the Yukatek New Year ceremonies marking the end of the past year and the beginning of the present one. In the *Dresden* New Year pages, there are the four opossum god bearers, and these shambling beings could well be

ritual clowns, as opossum clowns do appear in Late Classic Maya art, including in vessel scenes and figurines. Among both the ancient and contemporary Maya, ritual clowns usually appear as anthropomorphized creatures of the wild, such as monkeys and jaguars as well as opossums. In state level societies, including the Classic Maya, ancient Mesopotamia, and Egypt as well as medieval Japan, animals behaving as people are often seen as humorous, as it brings into question human mores and what is considered to be acceptable human behavior versus quite the opposite (Taube and Taube 2009). What is striking for Mesoamerica is that ritual clowns are frequently old, which might not only allude to their primordial state but also directly question the authority of more elderly, established members of society.

How maize was consumed as a basic staple by the ancient Maya is explored in “The Maize Tamale in Classic Maya Diet, Epigraphy, and Art” (Taube 1989d) (Chapter 5). In most of rural Mesoamerica today, a favorite food is the maize tortilla typically prepared on a *comal* griddle of metal, but in Prehispanic times these cooking surfaces were ceramic, and the known archaeological record challenges the concept of tortillas as the dietary base of the ancient Maya. As they are today, Prehispanic ceramic *comales* were fashioned from coarse, heavily tempered clay, and with their broad and very shallow shield-like form they would be an obvious find in any ceramic analysis. Although I published my paper many years ago, the general lack of actual *comal* sherds in archaeological reports and representations of tortillas in artwork still holds true. Among contemporary highland Guatemalan K’iche’ today, a far more popular maize food is *paches*, steamed tamales wrapped in leaves. In addition, contemporary Yucatek Maya create large tamales for certain ceremonies, such as the *ch’a’ cháak* rain rituals during the summer canicula (see Love 1989). Such ritual tamales express concepts of the cosmos, including at times a central cross that is filled with *sikil*, a savory paste of ground-up squash seed (Figure 13). While there are virtually no Classic Maya representations of tortillas, there are abundant scenes of large tamales in ceramic bowls. In Late Classic Maya art, they often have a drippy darker substance on the upper portion, and quite possibly this denotes a *sikil* paste if not something sweeter, such as honey. The Classic Maya glyph for eating is a tamale sign inside a mouth, much as drinking is denoted by the sign for liquid also in a mouth; together they denote food and drink, or feasting (see Houston et al. 2006:Fig. 3.5). In addition, Early Classic mural fragments in Maya style from the Tetitla compound at Teotihuacan also feature couplets of drink and tamales (see Taube 2017a).

Appearing frequently in Late Classic vessel scenes, tamales also occur in Preclassic Maya art. Thus the North Wall mural in Pinturas Sub-1A at San Bartolo features a young woman holding a basket filled with tamales, with the maize deity holding a water gourd, once again the basic pairing of food and drink (see Saturno et al. 2005). Along with displaying chevron markings recalling woven basketry, the base is gently rounded, a feature more typical of baskets than ceramics. In this regard, the mold of an actual basket base impressed in *bajo* mud was discovered in the fill of the Ixim superstructure at Pinturas, roughly coeval with the mural chamber below (Figure 14).

Aside from matters maize, I have long been fascinated by the great city of Teotihuacan located in the northeastern portion of the Valley of Mexico, which I first visited with my parents when I was about age 5. That fascination led eventually to my 1992 paper “The Temple of Quetzalcoatl and the Cult of Sacred War at Teotihuacan” (Taube 1992c) (Chapter 7). In contrast to the Classic Maya with their strong influence from the earlier Olmec, Teotihuacan basically emerged *ex nihilo* in the Basin of Mexico during the first century BC. In terms of New World civilizations, Teotihuacan resembles in this regard the Moche culture of north coastal Peru,

which exhibits little influence from previous local cultures, such as Gallinazo. By the third century AD, Teotihuacan had fully flowered, and one of the most striking constructions at this early date is the Temple of Quetzalcoatl, also known by Teotihuacan specialists as the Feathered Serpent Pyramid (see Sugiyama 2005). Due to the placement of an adjoining structure on its western side in the mid-fifth century AD, the original sculptural program dating to a couple of centuries earlier remained largely intact. The west side of the Temple of Quetzalcoatl bears a remarkable scene of plumed serpents swimming in a primordial sea marked with mollusk shells. As with Xochicalco and the later Toltec and Aztec, the serpents are rattlesnakes with quetzal plumes covering their entire bodies. This is in direct contrast to the Classic Maya, who depicted the plumed serpent without a rattlesnake tail and simply a feathered crest on the head, much like that of the male quetzal (see Taube 2003b, 2010a).

Along with the undulating plumed serpent swimming in water on the sloping *taluds* of the original Temple of Quetzalcoatl, the *tableros* portray plumed serpents emerging from what appear to be massive blossoms (Taube 2004b). However, along with the serpent heads, there is another alternating image that for many years has been misidentified as Tlaloc, based largely on the pair of rings on the brow evocative of the “goggles” around Tlaloc’s eyes. However, there are clear serpent eyes directly below that have a similar back curl to those found with the feathered serpent heads. In terms of the “goggles,” rings made of shell were an important element of warrior dress at Teotihuacan (Taube 2000c). Not only would these protect much of the upper head, but they



Figure 13. Preparation of *noh waah* tamales during Yukatek *ch'a' cháak* rain ceremony, 1985 (photo: Karl Taube).



Figure 14. Mold of the base of a Late Preclassic Maya basket from the Ixim Temple, San Bartolo (photo: Karl Taube).

would be quite intimidating, with the face of the warrior largely masked by this shell armor. Similar shell goggles can also be seen in the battle mural at Cacaxtla, with the victorious Olmeca-Xicalanca wearing them on their brows, in direct contrast to the defeated Maya (see Brittenham 2015:Figs. 165, 167, 168). The alternating images on the Temple of Quetzalcoatl are helmet masks.

For these helmet masks on the Temple of Quetzalcoatl, the head has a broad muzzle quite unlike the generally anthropomorphic face of the rain god. In addition, it is covered by a mosaic surface that I have compared to shell mosaic helmets known for Teotihuacan as well as Classic Maya portrayals, such as at Piedras Negras and Tikal. A clear example excavated at the highland Maya site of Nebaj, Guatemala, has shark teeth along with the shell platelet armor. In addition, another shell platelet helmet was found in the probable tomb of K'inich Yax K'uk' Mo' in the Hunal structure at Copan, Honduras (see Bell et al. 2004:133). Among the Classic Maya, this creature is clearly a serpent, with one of the most vivid and developed scenes appearing on Lintel 2 of Temple I at Tikal, and in view of its militaristic role as a helmet, I termed this being the "War Serpent." Subsequent research determined that it was named Waxaklajuun Ubaah Kaan, or "Eighteen its Images Snake," including on the same lintel at Tikal (Freidel et al. 1993:308-312). It is probably no coincidence that reconstructions of the west side of the Temple of Quetzalcoatl have eighteen heads of this being on both sides of the central stairway. Oddly, however, there is little indication that this creature was a snake at Teotihuacan, and it appears to have feline rather than serpent attributes (see Taube 2000c, 2012b). Given the importance of butterfly imagery at Teotihuacan, it is conceivable that the "War Serpent" might have been based on the concept of a caterpillar (see Taube 2011, 2012b). In this regard, it is important to note that butterflies and caterpillars are entirely absent from Classic Maya art unless they pertain to the artistic canons of Teotihuacan.

Among the most striking artifacts known for Teotihuacan are iron pyrite mosaic mirrors, typically glued to a backing of slate or sandstone. These are explored in "The Iconography of Mirrors at Teotihuacan" (1992a) (Chapter 8). Although the original brilliant shining faces are usually oxidized to a dull sulfurous surface, they are remarkable examples of lapidary work, with the pyrite mosaics fitted perfectly onto the stone backing. The means by which these mirrors were fashioned has been examined recently by replicative lapidary work, and although the research is preliminary, the effort to cut, grind, and polish even a single pyrite tessera is clearly enormous (see Gallaga M. 2016). Using modern lapidary equipment, I recently fashioned one from a so-called "sun dollar," a thin pyrite disk found naturally in slate beds in the vicinity of Sparta, Illinois. In sunlight, the mirror reflects a blinding light, and it is readily possible to see one's face in its surface.

At Teotihuacan pyrite mirrors were an important component of military costume to be commonly worn on the small of the back, much like miniature shields to protect the kidneys. In the Temple of Quetzalcoatl excavations of mass burials, many of the individuals had these placed on their backs, and the two portrayals of Yax Nuun Ahiin on the sides of Stela 31 at Tikal feature both the front and back sides of a pyrite mirror worn on the lower back. As with circular glass mirrors among the contemporary Huichol of Jalisco, pyrite mirrors had a broad number of related meanings at Teotihuacan, including flowers, faces, cave-like portals, and surely the gleaming sun, although as yet no explicit solar sign has been identified at the site (see also Kindl 2016; Taube 2016).

Pyrite back mirrors continued to the Early Postclassic, with massive examples portrayed on the famed Atlantean columns at Tula. These feature four turquoise Xiuhcoatl serpents

on the rim, and actual examples of such mirrors are known from Chichen Itza in Yucatan and Paquime in northern Chihuahua as well as Tula (see Taube 2012c). In the case of the Toltec-style mirrors, much of the mosaic surface is turquoise, a material entirely absent from Early Classic Teotihuacan. By the Late Postclassic period of the Aztec and Mixtec of Oaxaca, pyrite mirrors appear to have been replaced by disks entirely covered by turquoise and shell mosaic, with some of the surviving examples displaying quite complex scenes (Taube 2016).

One of the most iconographically complex portable objects of the Aztec is the subject of "The Bilimek Pulque Vessel: Starlore, Calendrics, and Cosmology of Late Postclassic Central Mexico" (Taube 1993b) (Chapter 9). The entire surface of this stone vase pertains to alcohol, a prominent component of Aztec ritual behavior identified not only with festivities but also attendant danger and chaos. I note that the dominant image appears to be a three-dimensional representation of the day name Malinalli, the date 1 Malinalli being the thirteen-day *trecena* of the 260-day calendar dedicated to Mayahuel, the goddess of maguey from which the alcoholic beverage of pulque derives. In addition, the fleshless lower jaw probably alludes to alcohol as something rotting and fermented, as can be seen for the Classic Maya portrayals of their more ancient god of drink.

In a later groundbreaking study, Nikolai Grube (2004) identified the Maya god of alcohol and drunkenness, glyphically referred to as Akan, a name documented for early Colonial Yucatan. Following the Schellhas system of deity classification, Günter Zimmerman (1956:162-63) labeled him God A', in other words an aspect of the codical death deity, God A. Indeed, this is an unwholesome and deathly being who frequently appears with the Ak'bal sign for darkness on his brow, a horizontal human femur in his hair, the *cimi* death sign on his cheek, and a fleshless mandible as his jaw. In addition, he smokes excessively and cuts off his own head with an axe. Who wouldn't want to buy a six pack of that? There are probably a number of reasons why the god of drunkenness and alcohol appears to be such an unpleasant and morbid being. For one, excessive inebriation causes one to pass out, and the Yucatek term for fainting is *sak kiimil* or "false death." In addition, drunkenness embraces the realm of the ancestors, as is solidly documented for the Tzotzil Maya of highland Chiapas, where inebriation is identified with dreams, *wahy* spirit beings, and the numinous realm of the dead. Robert Laughlin (1976:3) graphically describes the importance of dreaming among contemporary Maya of Zinacantan:

Dogs dream, and cats dream. Horses dream, and even pigs, say the Zinacantecs. No one knows why; but there is no question in the mind of a Zinacantec why men dream. They dream to live a full life. They dream to save their lives.

A number of Late Classic Maya vessel palace scenes feature rulers holding drinks while staring into mirrors, clearly participating in moments of self-reflection and visionary experience (see Blainey 2016; Taube 2016).

Apart from the spiritual realm in which the liminal state of inebriation connects to gods, spirits, and ancestors is the consideration that alcohol is a beverage created by fermentation and decay. An Early Classic vessel lid portrays the Maya Akan with a bony mandible and an eyeball hanging from a femur in his hair (Figure 15a). In addition, he is smoking a cigar and a large tobacco leaf descends from the back of his headdress, an element also found with a still-earlier, Late Preclassic version at San Bartolo. Recent excavations in the Pinturas Sub-1A structure at San Bartolo revealed this deity in the East Wall mural program. In this case, he also has the femur ending with a bloody eyeball, and as with the Early Classic example he

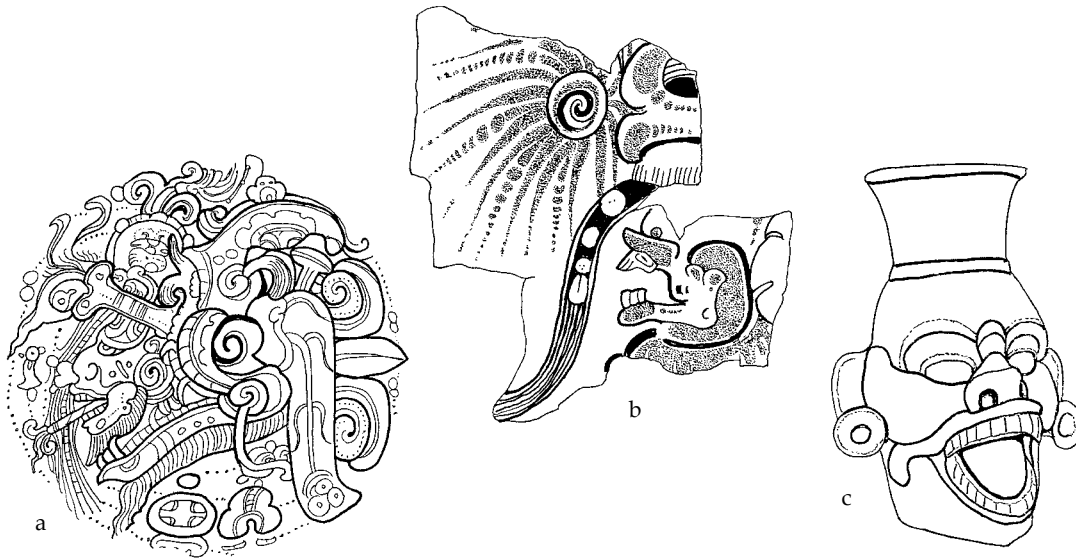


Figure 15. Early Maya portrayals of Akan, the ancient Maya deity of drink and inebriation: (a) lid of Early Classic cache vessel with Akan emerging out of open serpent mouth, note tobacco leaf hanging behind brow of serpent; (b) Late Preclassic portrayal of Akan from East Wall mural at San Bartolo with edge of tobacco leaf behind cheek; (c) Late Preclassic ceramic vessel from Izapa with probable version of Akan (drawings by author).

has a large forelock of hair hanging in front of his face (Figure 15b). For the East Wall figure, the forelock as well as the profile, cheek, and upper lip are essentially identical to images of the maize god from the North and West Walls of Pinturas Sub-1A. A text from Lintel 3 of Temple IV at Tikal features the glyphic name of Akan in a compound with the head of the maize god and a vertical celt (see Grube 2004:Fig. 15a). The lintel scene portrays a massive palanquin and platform with two central images of Akan on the stairway as well as maize gods emerging from the eyes of four Witz mountain heads, again merging the identity of these two beings (see Jones and Satterthwaite 1982:Fig. 74). Given that one of the more popular alcoholic beverages among ancient and contemporary peoples of the New World is *chicha* or maize beer, Akan could well embody the dead, rotten, and fermented maize god as an alcoholic beverage. A remarkable ceramic vessel from Late Preclassic Izapa portrays a human head with a fleshless mandible, and as in the case of the Aztec Bilimek Vessel, this vessel was probably intended to contain alcohol and may have been a form of Akan (Figure 15c). As in the case of the Bilimek vase, he displays a bony mandible. However, here his mouth is wide open—quite probably a graphic depiction from over two millennia ago of a god in gleeful drunken laughter. This is also the case with Akan from Pinturas Sub-1A at San Bartolo, this figure being the only one in the mural program with a broadly open mouth.

A Late Classic text appearing on Copan Altar U mentions Akan in relation to the drinking of pulque, or *chih*, with the glyph for pulque being a skull with stalks of maguey, the plant which provides pulque's fermented foamy sap (see Grube 2004:Fig. 7). Clearly fermentation and inebriation pertained to concepts of death and decay among the ancient Maya. In the case of the Aztec Bilimek vase, pulque is very much related to rotteness and death. In one of the most remarkable portrayals of alcohol known for the ancient New World, the back side of the stone vessel features a skeletal goddess with jaguar paws squirting two streams

of pulque from her breasts into a tripod pulque vessel placed at her feet, clearly denoting this fearsome being as the immediate source of the beverage, perhaps somewhat akin to our modern alcohol labels and advertisements urging us to “drink responsibly,” but here on a far more cosmic level. For the Bilimek Vessel scene, the tripod pulque vase has more liquid—perhaps pulque but also perhaps blood—coursing between the goddess’s legs and then turning sharply upward to the sides of her waist. At this upper crest, the fluid appears on both sides with heads of *Xiuhcoatl* fire serpents carrying burning bundles of the 52-year Aztec calendar round in their maws. The combination of the liquid with the burning wood bundles and the *Xiuhcoatl* serpents denotes the Aztec concept of war, or *ātl tlachinolli*.

For the Aztec Bilimek Vessel, one of the salient motifs is a cosmic battle between forces of the diurnal sun and primordial darkness.

Directly above the elaborate head of the day name Malinalli on the vessel front are paired images of the wind god *Ehecatl* and a pulque god menacing a partly darkened sun with stones and sticks, the Aztec *disfrasismo* for castigation, or *in tetl in cuahuil* in Nahuatl. In this regard, it is important to note that such forms of punishment with sticks and stones was very commonly meted out to drunkards and adulterers in ancient Mesoamerica. Moreover, when one looks at the other side of the vessel it is clear that there is a much larger contingent of deities joining in the central solar battle. Thus along with *Ehecatl* and the pulque god, there are two other pulque gods wielding stones and sticks. All three pulque deities appear to have maguey stalks sprouting from the tops of their heads, much as if they are embodiments of the living plant. This is also true for a fragmentary Aztec monument from Tepozteco, a pyramid dedicated to this very pulque deity on a ridge overlooking Tepoztlan (Figure 16). Other gods join the battle on the Bilimek vase: *Xiuhtecuhtli* wielding a *Xiuhcoatl* fire serpent, *Tlahuizcalpantecuhtli* with his spearthrower, and a diminutive diving couple also armed for war. Aside from the obvious pulque deities, the series of gods closely resembles four-directional year-bearer pages in the *Codex Borgia* (pages 49–52), which feature the four year bearers of the 52-year cycle beginning with *Acatl* (Reed) for the east, *Tecpatl* (Flint) for the north, *Calli* (House) for the west, and *Tochtli* (Rabbit) for the south. In addition, the middle right side of each directional page features a pair of small diving deities—beings virtually identical to the small pair below the *Xiuhtecuhtli* on the Bilimek Vessel.

The *Codex Borgia* year-bearer pages feature four supporting gods holding the night sky of the day name before the dawn of the new day, with page 49 being *Tlahuizcalpantecuhtli*, page 50 *Xiuhtecuhtli*, page 51 *Ehecatl*, and page 52 the god of death, *Mictlantecuhtli*. As noted by Thompson (1934) there were four sky bearers in Central Mexican thought who could descend as *tzitzimimeh* or star beings of darkness at critical junctures of astronomical or calendrical events, such as a solar eclipse or the drilling of new fire every 52 years at the

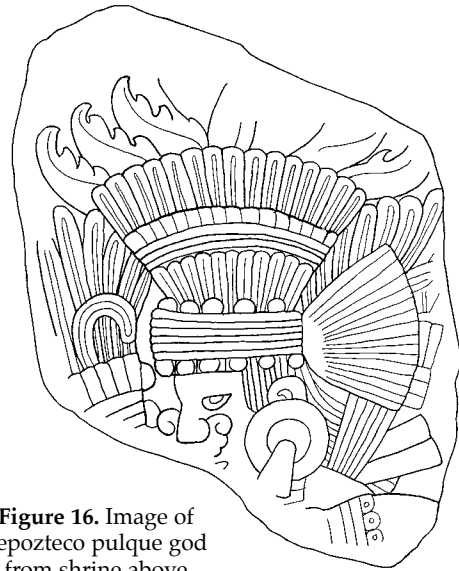


Figure 16. Image of Tepozteco pulque god from shrine above Tepoztlan (drawing by author after original line drawing by Ángel González López).

completion of a calendar round. As I noted in the Bilimek paper, it is very striking that the first three of these very gods in the *Codex Borgia* are depicted on the vase, along with the small diving figures pair. In this regard, I noted that the great death goddess creating pulque might well be a female equivalent of Mictlantecuhtli appearing on page 52 of the *Codex Borgia* with the year bearer Rabbit, rabbits being closely identified with pulque and drunkenness in Aztec thought (see Nicholson 1991).

In ancient Mesoamerica, one of the most intense interactions between the Basin of Mexico and the lowland Maya was during the Early Postclassic, that is, shortly after the fall of the great Classic Maya centers, including Copan, Palenque, Tikal, and Calakmul. For years, however, Maya archaeologists have acknowledged that at the same time to the north Chichen Itza exploded in terms of population, public monuments, and sculpture. The influence of Central Mexico at the end of the Classic Maya era is especially developed at Chichen Itza. Here quetzal-plumed rattlesnakes serving as flanking balustrades and columns are common, despite the fact that neither architectural device is known for earlier Teotihuacan, much less any Classic Maya site. Even more striking is that while quetzal-plumed rattlesnakes are prevalent in Central Mexican art since Early Classic Teotihuacan, they are virtually absent from Classic Maya art and architecture. In addition, certain ceramics of the Chichen Itza Sotuta complex, including Tohil plumbate ware and X Fine Orange, are virtually absent in Yucatan out of the immediate sphere of Chichen Itza but are found at Tula in Central Mexico. In my study “The Iconography of Toltec Period Chichen Itza” (Taube 1994b) (Chapter 10), I also point out that metal—especially copper and gold—is relatively common at Chichen Itza but notably rare at slightly earlier Late Classic Maya sites of the central and southern Lowlands. In fact, it is widely recognized that metal does not become widespread in Mesoamerica until the Early Postclassic period, in other words during the apogee of Chichen Itza and Tula. This also holds true for turquoise. While absent from Classic Maya centers, it occurs in some abundance at the two sites and commonly appears in the iconography as body ornaments, especially butterfly pectorals and large back mirrors (Taube 2012c). It is noteworthy that despite the fact that my study was published over twenty years ago, both turquoise and metal remain virtually undocumented at Classic Maya sites of the central and southern lowlands (for recent discussions of turquoise in Mesoamerica and the American Southwest, see King et al. 2012).

Although there was strong and sustained contact between Tula and Chichen Itza during the Early Postclassic, the nature of this exchange remains poorly understood. A major reason is that many archaeologists working in Yucatan consider Toltec influence at Chichen Itza to be negligible. This may well derive from an earlier simplistic view that there was a “Toltec Empire” that controlled Chichen Itza through military might. I doubt that there are many Mayanists or Toltec scholars who hold to this view today. Instead, the political and cultural relationships were surely more interesting and complex. In my own view, Chichen Itza reflects a major alliance between Tula and local Maya groups, and the remarkable art and architecture is a public celebration on a truly vast scale that was not replicated at other sites at this time in the northern Maya lowlands or even Tula. However, it is also clear that the development of Toltec imagery began in the Late Classic period in highland Mexico, that is, well before the Early Postclassic contact between Tula and Chichen Itza (Jordan 2016). In addition, the cultural exchange between the two sites was very much a two-way street, and a number of gods known for Postclassic Central Mexico may have derived from the Maya. In this and later studies I note that the Aztec sun god Tonatiuh may have come from

Early Postclassic concepts of a sun god from Chichen Itza, a being who wore the Jester God of Maya rulership and sat on a jaguar throne, another Maya trait. More recently, excavations in the Initial Series Group at Chichen Itza revealed remarkable facades of a duck-billed deity that is clearly an ancestor of Ehecatl-Quetzalcoatl (Figure 17). Rather than a being native to Central Mexico, the duck-billed wind god is of far greater antiquity in eastern Mesoamerica and appears in the art of the Classic and Late Preclassic Maya—including San Bartolo—as well as the Olmec, going back to a ceramic find dating to roughly 1200 BC in the Soconusco region of southern Chiapas (Figure 18) (Taube et al. 2014).



Figure 17. Early Postclassic Ehecatl dancing with rattle, Initial Series Group, Chichen Itza (drawing by author after Schmidt 2002:3:Fig. 31).

Recent excavations at Tula uncovered a carved panel of a diving bird with each wing bordered by a profile serpent head, a clear indication of avian deities in Late Preclassic and Classic Maya iconography, including aforementioned examples of Ehecatl from the Initial Series Group at Chichen Itza. Unfortunately, the tenoned head of the bird sculpture is missing, making it difficult to identify the specific nature of this Maya avian at distant Tula (Figure 19).

During the same year that the Chichen Itza study came out, I also published a piece concerning a remarkable four-sided Late Classic Maya vase, “The Birth Vase: Natal Imagery in Ancient Maya Myth and Ritual” (Taube 1994a). When the first images of this vessel were discussed, it was described as a “ceramic codex” due to the fact that the sides correspond quite closely to the dimensions of a codex page, especially the *Codex Dresden*. However, rather than a four-page codex, the vessel actually depicts a four-sided house, a basic metaphor for the world in ancient and contemporary Maya thought (see Taube 2013). Rim wear indicates that it originally had a lid, which would constitute the roof of a miniature house, as is the case with four-sided cache vessels from Guaytan and Quirigua, Guatemala. For the example from Guaytan, the doorway is carefully rendered while the one from Quirigua has a horizontal woven band denoting the thatched edge of the roof (see Stromsvik 1941). In terms of Maya houses, among the most symbolically charged rituals continuing to the present are those concerning birth, which in many cases today involves hanging a cord or hammock from the rafters to support the standing pregnant woman, who is commonly assisted by a *partera* or midwife who stands behind her and gently pressures the infant from the womb. Side 1 of the Birth Vase provides an explicit version of this birth event still performed on a daily basis among the contemporary Maya. In the scene, a young woman holds a pair of cords in the form of serpents in her upraised hands with an old woman embracing her from behind. Although corresponding to contemporary Maya birthing practices, this is clearly on the supernatural level of the gods, much like the birth of the triad of deities at Palenque. That noted, at Palenque there are only textual references to birth, which makes this image on the “Birth

Vase" even more remarkable.

A number of themes on the Birth Vase clearly allude to a cosmic realm rather than the birth of mortals and historic Maya figures. For one, the youthful goddess is standing atop a mountain which exhales two serpents from the corners of its mouth. Whereas one serpent is a clear version of the Bearded Dragon so well known in Maya studies, the other is a jaguar serpent. Here as well as in subsequent studies I have noted that in Classic Mesoamerica the Bearded Dragon was identified with the diurnal east and the feline serpent with darkness and

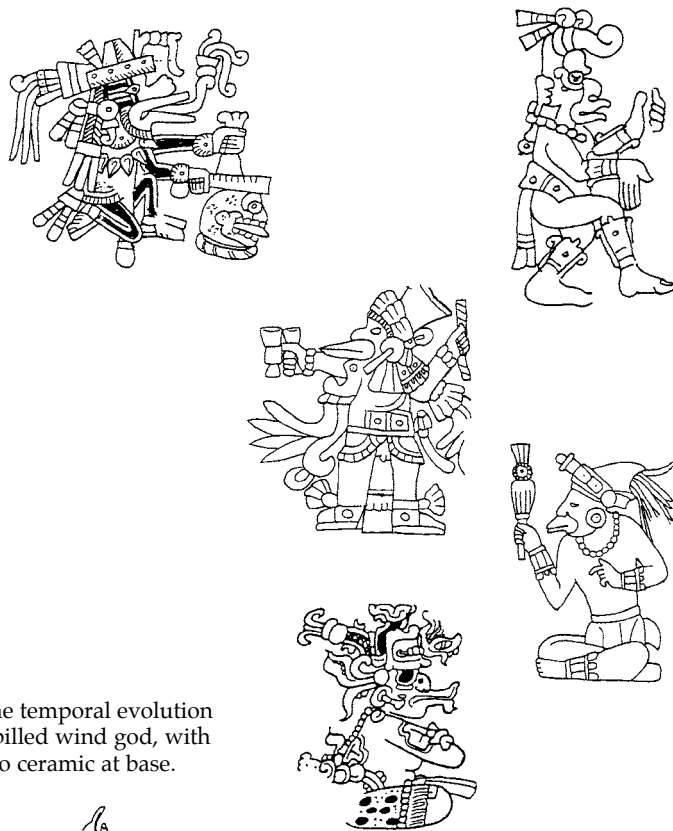
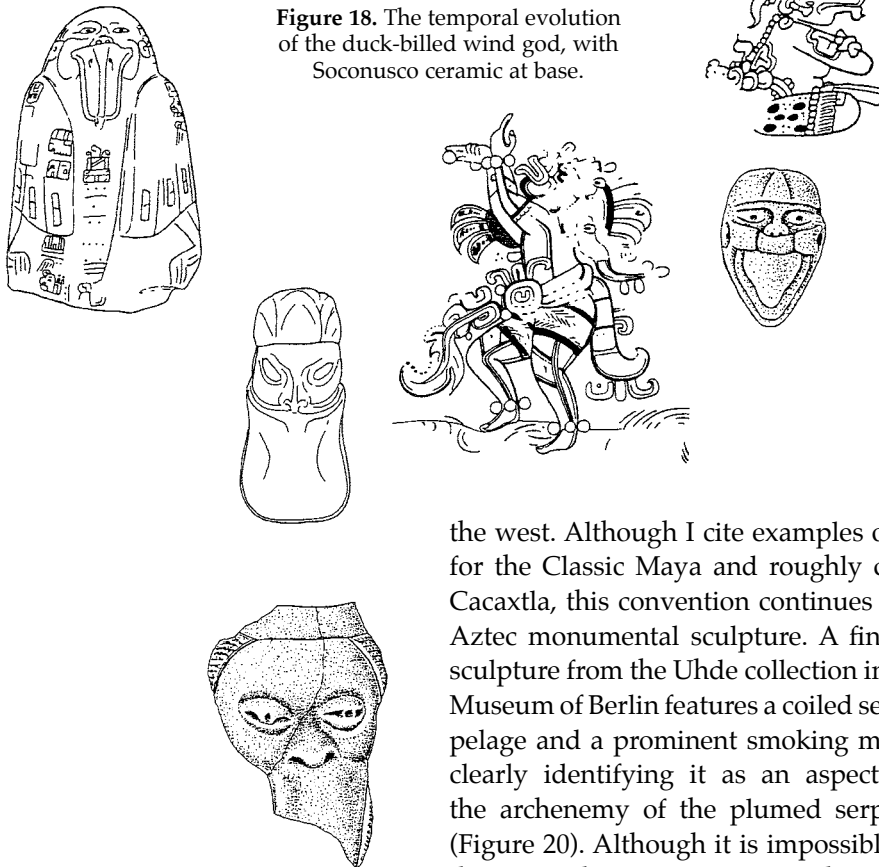


Figure 18. The temporal evolution of the duck-billed wind god, with Soconusco ceramic at base.



the west. Although I cite examples of jaguar serpents for the Classic Maya and roughly contemporaneous Cacaxtla, this convention continues to contact-period Aztec monumental sculpture. A finely carved Aztec sculpture from the Uhde collection in the Ethnological Museum of Berlin features a coiled serpent with jaguar pelage and a prominent smoking mirror on its head, clearly identifying it as an aspect of Tezcatlipoca, the archenemy of the plumed serpent Quetzalcoatl (Figure 20). Although it is impossible to determine at this point, this figure could well have been paired with

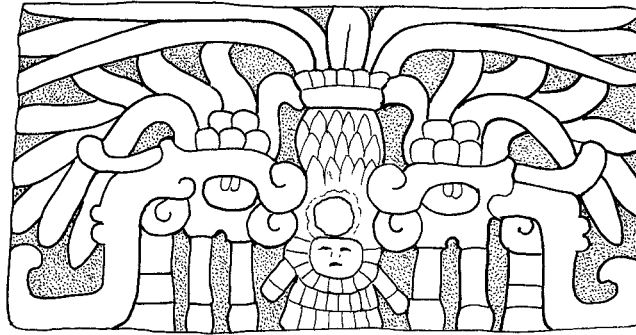


Figure 19. Early Postclassic avian figure with Maya-style serpent wings, Tula (drawing by author after Getino Granados 2007:58).

a coiled feathered serpent, which is a very a common motif in Aztec art. As of yet, this is the only example of a jaguar serpent sculpture known for the Aztec.

Corresponding to the sacred mountain and cosmic serpents, the aged woman behind the youthful maiden is clearly Goddess O in the Schellhas system of deity classification. As I mention in this and other publications, she is the goddess of curers and midwives (see also Taube 2010a:153-155). Among the contact-period Yukatek she was known as Ix Chel and was referred to as the “goddess of making children”—not as a fecund maiden but rather a post-menopausal woman who delivers the infant. Not surprisingly, there are numerous depictions of this goddess on the vase, with three examples alone on one side. However, there were probably four rather than three in ancient Maya thought, as a scene from the North Temple of the Great Ballcourt at Chichen Itza depicts four standing examples as evidenced by their advanced years and cross-boned skirts, as also worn by the same goddesses on the Birth Vase (see Wren and Schmidt 1991:Fig. 9.7). The same textile design appears in the early Colonial *Codex Tudela* from Central Mexico in a scene portraying an aged woman with such a textile in her outstretched arms and the accompanying gloss of *vieja hechicera* or “old witch.” Clearly Goddess O was as much a sorceress as a midwife and curer (see Taube 2010a:Fig. 6c).

On the four-sided Birth Vase, the opposite side concerns not birth but sacrifice, with an upper scene featuring a maiden—almost surely the same woman giving birth—facing an aged deity commonly referred to as God N, who holds a bowl containing flint and obsidian blades. The same sacrificial bowl appears in the scene below with three other God N figures. In this case the central scene features a censer containing what appears to be a human heart. As I note in the Birth Vase

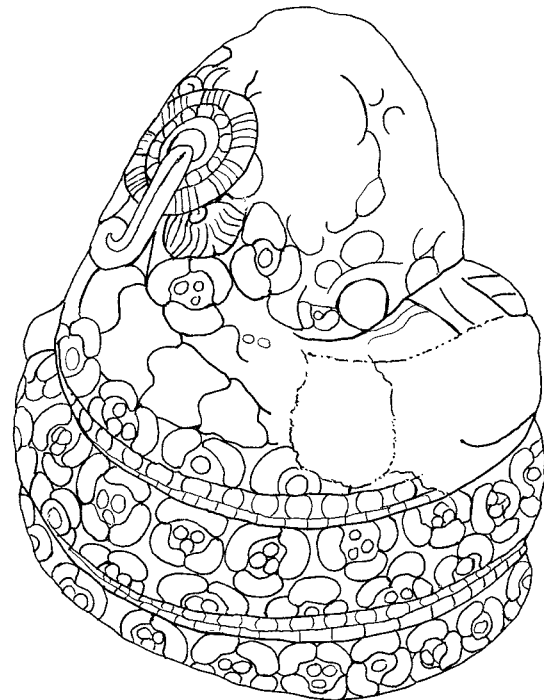


Figure 20. Aztec portrayal of jaguar serpent with smoking mirror of Tezcatlipoca (drawing by author after Solís 1992:66).

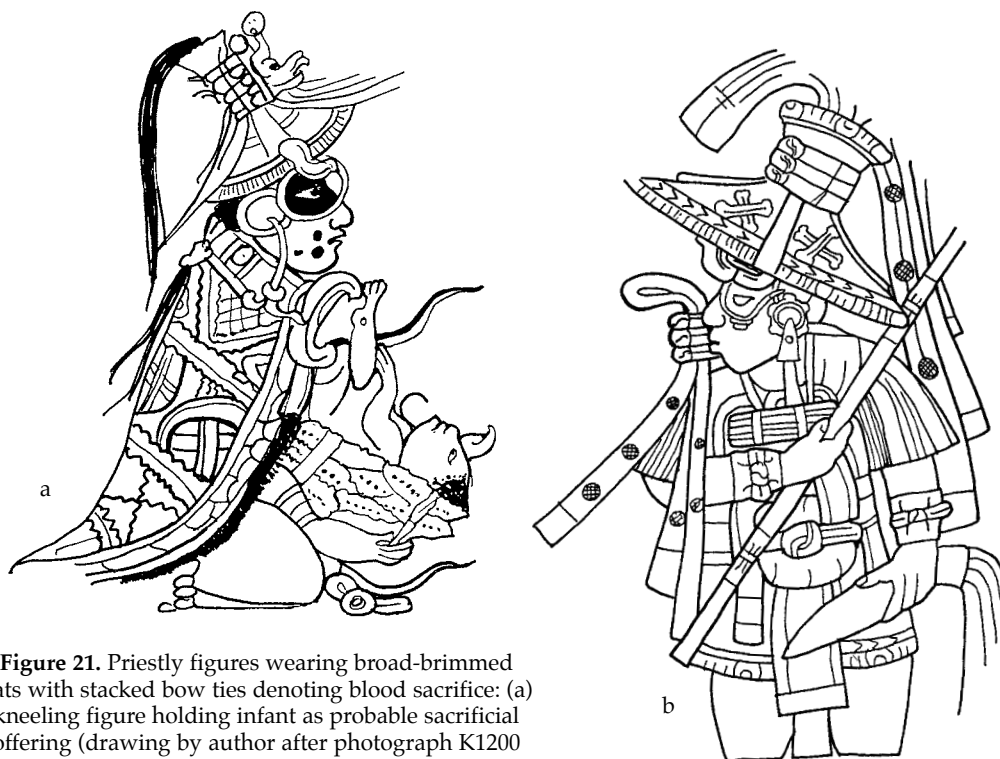


Figure 21. Priestly figures wearing broad-brimmed hats with stacked bow ties denoting blood sacrifice: (a) kneeling figure holding infant as probable sacrificial offering (drawing by author after photograph K1200 by Justin Kerr); (b) priestly figure wielding staff and sacrificial knife, note crossed bones on hat, Tikal Altar 5 (drawing by author).

paper, this scene may relate to the *Popol Vuh* episode when Xquik substitutes copal in place of her heart to placate the gods of death. I relate this to contemporary Maya curing traditions of *k'eex* offerings, in which something is offered to malevolent spiritual forces in place of the intended victim. This sort of curing readily overlaps with curses and witchcraft, which must have been of great significance to the Classic Maya. Recent work by David Stuart (in press) notes the importance of *wahy* spirits in Classic Maya rituals of sorcery, with specific *wahy* associated with particular nobles and royal courts. A number of Codex Style vessel scenes feature a figure with an elaborate cape and broad-brimmed hat presenting an infant to an enthroned lord, and rather than a celebration of birth these scenes probably concern infants as sacrificial *k'eex* offerings (Figure 21a). In fact, the Diablo tomb at El Zotz, Guatemala, featured a number of infants placed in bowls, which Andrew Scherer (2015:145) has interpreted as *k'eex* sacrifices for the spiritual well-being of the deceased king. Tikal Altar 5 features male figures with sacrificial weapons in a scene concerning exhumation and “cutting” of a noble woman’s bones. One of the figures wears the same broad-brimmed hat, in this case marked with crossed bones (Figure 21b). Just as crossed-bone skirts may denote women sorcerers and curers, the large hat may refer to sorcerers pertaining to the “dark arts” of witchcraft or *brujería*. Sorcery and witchcraft, such as *k'eex* offerings, were surely major components of Classic Maya religion, but until recently there has been relatively little interest in this aspect of ancient Mesoamerican religion (see Coltman and Pohl in press).

Aside from Classic Maya iconography, a major interest of mine has been Olmec religion. Over the years, there has been great debate as to whether the Olmec constituted a “Mother



Figure 22. Olmec figure with avian headdress within feather-rimmed niche, La Venta Altar 4 (drawing by author).

Culture” in Mesoamerica. The importance of Olmec influence can be overstated, especially if extended to political hegemony over highland Mexican cultures. However, there are aspects of Olmec religion that profoundly influenced contemporaneous peoples of Mesoamerica, especially regarding agricultural abundance and items of wealth, including jade and quetzal plumes. Certain items of Olmec wealth are known through buried caches of jade and serpentine, such as at La Venta and contemporary sites in the Maya region, including San Isidro in highland Chiapas and Cival and Ceibal in the Peten of Guatemala (see Drucker 1952; Drucker et al. 1959; Lowe 1981; Estrada-Belli 2006; Inomata and Triadan 2015). These buried offerings may partly account for the widespread concept that the major religious orientation of the Olmec was the earth and underworld rather than the sky, despite the fact that when Classic Maya caches are discovered they are rarely if ever considered by archaeologists as offerings to an “earth cult.” Similarly, although Olmec niche thrones at San Lorenzo and later La Venta have been interpreted as Olmec rulers emerging out of earthly caves, this is hardly secure, as there is abundant documentation of sky portals in ancient Mesoamerica, including sun gods emerging from solar disks (see Taube 2015). In the case of La Venta Altar 5, the emerging figure wears a bird headdress with flame-like feathers at his shoulders and back (Figure 22). Rather than portraying a cave, the feathered ring surrounding this being could well denote a floral, solar disk.

In “The Rainmakers: The Olmec and their Contribution to Mesoamerican Belief and Ritual” (Taube 1995), I address two distinct Olmec themes pertaining to the sky, the first being celestial symbolism and imagery and the other rain, a life-giving force falling from the sky. Just as with the later Classic Maya, the Olmec had skybands, at times segmented, with each section containing a related celestial motif. Although not mentioned in my “Rainmakers” study, there are also Olmec versions of star and sun signs going back to the Early Formative period of San Lorenzo. An Early Formative effigy vessel attributed to Las Bocas, Puebla, features a hunchback youth with a circular bowl on his side containing a four-lobed element closely resembling the later Maya *k’in* sun sign, which David Joralemon (1971:Motif 41, Fig. 135) has previously documented in Olmec iconography. This solar motif is superimposed over a four-pointed star sign, also found with the Olmec and the later Maya (Figure 23) (see Garton and Taube 2017). The celestial significance of both motifs is confirmed by the youth’s belt, which is a segmented skyband, resembling examples known for the Early Formative Olmec of San Lorenzo and even continuing to the early Colonial period in

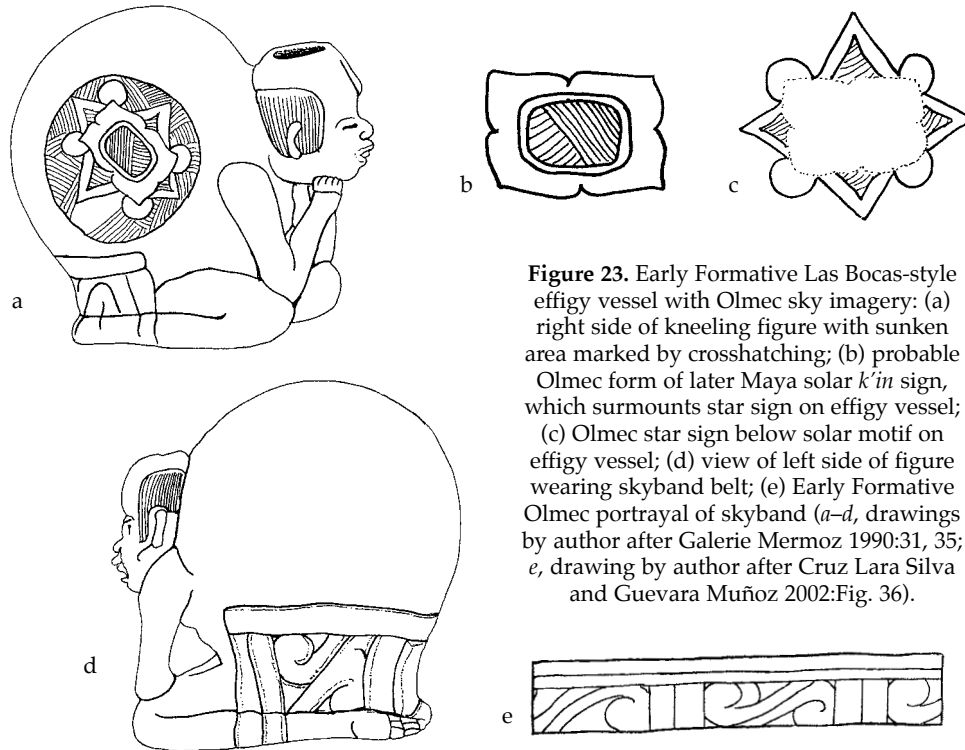


Figure 23. Early Formative Las Bocas-style effigy vessel with Olmec sky imagery: (a) right side of kneeling figure with sunken area marked by crosshatching; (b) probable Olmec form of later Maya solar *k'in* sign, which surmounts star sign on effigy vessel; (c) Olmec star sign below solar motif on effigy vessel; (d) view of left side of figure wearing skyband belt; (e) Early Formative Olmec portrayal of skyband (*a-d*, drawings by author after Galerie Mermoz 1990:31, 35; *e*, drawing by author after Cruz Lara Silva and Guevara Muñoz 2002:Fig. 36).

Central Mexico (see Houston et al. 2006:Fig. 4.20). The significance of this remarkable vessel remains unknown, but given the explicit sun and star and the skyband element, the figure may constitute the embodiment of the sky as a celestial deity. In Mesoamerican thought, the sky is often considered an inverted bowl (see Taube 2010c:213-214), and in this regard the ceramic figure is much like an anthropomorphized sky bowl containing the signs for stars and the sun as well as a skyband belt—in other words, this being may constitute an early Olmec “sky god.” Clearly enough, by the time of San Lorenzo there were already complex concepts and images concerning the sky.

Along with discussing skybands in the “Rainmakers” paper, I also defined a creature I termed the Avian Serpent, a celestial snake-like being with a feather crest, much like the aforementioned crested serpents of the Classic Maya, and a probable early form of Quetzalcoatl. A mural from Juxtlahuaca features a plumed serpent with a quetzal head (see Grove 1970), and Monument 19 from La Venta also depicts a serpent with a feather crest and bird beak. In the case of Juxtlahuaca, the serpent is placed opposite another painting featuring a jaguar, perhaps as a very early denotation of the dualistic contrast between these two beings as appears much later in the Structure A murals at Cacaxtla and in Aztec art as well. It should be noted that not all crested saurian heads are necessarily Avian Serpents, and the ceramic figure from Atlihuayan, Morelos, wears a starry pelt of what appears to be a crocodile with a head of what could be regarded as the Avian Serpent (see Joralemon 1971:Fig. 90). There are also stone portrayals of crocodilians with the same crested head (see Guthrie 1995:208). In other words, without an accompanying body, it remains difficult to determine whether a crested head is a serpent or a crocodile. However, it is also conceivable that the crested head on crocodilians is intended to evoke the Avian Serpent and denote such crocodilians

as all-encompassing beings of both earth and sky.

The second portion of the "Rainmakers" paper concerns the Olmec rain god, following the original insights provided by Miguel Covarrubias. His famous chart of the evolution of Mesoamerican rain gods, including Cocijo of the Zapotec, Tlaloc in Central Mexico, and the Maya Chahk is spot on, although he confused the Classic Maya form of Chahk with Witz heads, that is, zoomorphic mountains. In the "Rainmakers" study, I discuss and identify Classic Maya Chahks, building in part on an original glyphic decipherment by David Stuart based on the so-called Codex Style "Cosmic Plate" (see Schele and Miller 1986:49, n. 55). In addition, I illustrate Late Preclassic examples of the Maya rain deity, thereby providing a temporal link between the Classic Maya and the far-earlier Formative Olmec. Izapa Stela 1 is an especially important monument for the identification of the Late Preclassic Maya rain god. The scene is dominated by a powerful image of Chahk fishing and raising a net containing a fish, with another atop a creel slung over his back. A number of carved bones from Tikal Burial 116 also depict Chahk fishing, and a recently published Early Classic vessel portrays Chahk fishing with a net bound to a long pole (see Taube 2010c:Figs. 12-13). In Maya thought, fishing—the act of raising fish out of water—is a symbolic rain-making act. Thus streams of water fall from the net and creel on Izapa Stela 1. In addition, clouds and Chahk heads can also be discerned in the falling water, with two more in the basal band of water in which Chahk fishes. The rain god also wears another Chahk head on his brow, and for all of these examples, including the principal Chahk, the cranium is spiral. The two heads appearing in streams of falling water merge into cloud scrolls, much as if the head of Chahk is actually a rain cloud. Similar Chahk heads with cloud scrolls can also be seen at Kaminaljuyu, and I subsequently noticed another example, in this case inverted on Takalik Abaj Stela 3 (Taube 2009a:29). A recently excavated Late Preclassic stucco facade relief from El Mirador, Guatemala, depicts a series of Chahk heads as downwardly facing, personified S-shaped clouds, much like the S-shaped clouds known for Middle Formative Olmec-style art from Chalcatzingo, as well as the Late Postclassic Maya *Codex Dresden*. However, the Late Preclassic Chahk can also appear without the cloud scroll cranium, with an excellent example appearing in the West Wall mural at San Bartolo (see Taube et al. 2010).

Although not included in Covarrubias's original chart, an Olmec serpentine statuette in the American Museum of Natural History in New York provides an important link between the Olmec and the Maya and Zapotec rain gods (Figure 24). Unquestionably Olmec, the figure's bulging cranium also spirals, much like Late Preclassic examples of the Maya rain deity. In addition, his cheeks are marked with an upturned horizontal band with two vertical bands below, a facial trait found with early examples of the Zapotec rain god Cocijo. As for

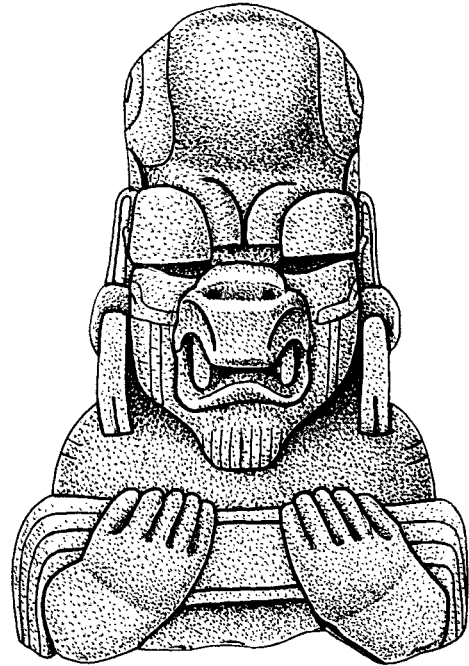


Figure 24. Middle Formative serpentine statuette portraying the Olmec rain god, American Museum of Natural History, New York (drawing by author).

the Olmec rain god, he typically has a snarling, fanged maw, a deeply furrowed brow, and slit or comma-shaped eyes that turn sharply downward at the outer corners. Although the earliest example supplied by Covarrubias dates to the Middle Formative, this being can be readily traced to the Early Formative, with examples including San Lorenzo Monument 10 as well as contemporaneous ceramic figurines, in many cases ballplayers (see Taube 2009a). In light of these observations, I presented a revised version of Covarrubias's evolutionary chart in *Olmec Art at Dumbarton Oaks* (Taube 2004c:Fig. 14), with the major change being the evolution of the Maya Chahk from the Late Preclassic period.

Following my interest in the Maya maize deity and Olmec iconography, in 1996 I published "The Olmec Maize God: The Face of Corn in Formative Mesoamerica." The Olmec maize god can be usually identified by maize motifs sprouting from his cleft cranium. Although this being was first identified by Michael Coe (1968:111) and David Joralemon (1971:159-166) decades before, there were few subsequent publications discussing Olmec maize symbolism, the one noteworthy exception being a study by Virginia Fields (1991), who compared Olmec maize imagery to a version of the Maya Jester God headband jewel of Classic Maya kingship. This work has been a very useful means to identify early maize gods of the Olmec and Maya (see Taube and Saturno 2008). Subsequent research has established that there are actually at least three distinct Jester Gods in the Classic, a foliated bird head and a piscine form as well as the corn god's decapitated head, which can be either a simple trident form or personified as the Maya maize deity with a triple-pointed cranium (see Stuart 2012; Taube and Ishihara 2012:Fig. 81). Aside from the cranial maize elements, the Olmec maize god typically has an extended upper lip and eyes that slant centrally downwards to the nose. The face of this deity often appears on jade and serpentine celts, identifying these green axes as ears of corn. On a number of incised celts, the maize god is flanked by four elements at the corners, forming the bar and four dots motif of the intercardinal points and world center, a cosmogram with the maize god in the middle as the pivotal *axis mundi*. At times, the four corner elements are celts, recalling the elaborate celt caches of the Middle Formative Olmec, as found at La Venta, Cival, and Ceibal. In my view, the cleft element appearing on the head of the maize god and at times on incised depictions of celts refers to the enveloping bracts or husk of a maize ear. At times there is no projecting element in the cleft, and I consider this a reference to green, growing corn with the ear not yet developed. In addition, there appears to be a specific aspect of the Olmec maize god as green corn who often appears with a sharply back-turned cranium resembling a modern "hammer claw," a convention probably referring to the pliant, bending nature of growing maize (Taube 2004c:94-99). In this regard, it is also noteworthy that Olmec maize leaves often end with a simple cleft, again alluding to green, growing maize.

In the "Olmec Maize God" study, I note that a central component of Olmec religion is wealth and agricultural abundance, which is personified by the Olmec maize god. Central components to this "cult of corn" were greenstone celts and feathered maize ear fetishes—ears of corn bundled with a surrounding "husk" of feathers. Quite frequently, the maize ear projects out of the top of the feathered bundle, explicitly identifying it as corn. Moreover, serpentine portrayals of the object are simply tipped with the head of the maize god with the ear of corn projecting from his cranium. An especially massive, fragmentary jade example is in the collection of the Peabody Museum at Harvard University. Corresponding to the upper portion of a maize ear fetish, the central lower part bears the eroded face of the Olmec maize god, including a maize ear in the cleft cranium (see Taube 2004c:Fig. 13).

In the same work, I trace the Olmec maize god to later corn deities of Mesoamerica, including Late Preclassic and Early Classic Gulf Coast peoples as well as the Zapotec and Classic Maya, much like Covarrubias did for the Olmec rain god. Like Covarrubias, I provide a chart tracing the evolution of these beings. However, it is noteworthy that the chart covers solely southeastern Mesoamerica, with Central Mexico not included. This is because the Early Classic maize deity of Teotihuacan derived squarely from the Maya maize god and not the Olmec. In other words, the Early Classic Teotihuacan “face of corn” was wholly Maya, including even the Maya-style modified cranium (Taube 2017a). More than likely this Teotihuacan being was the source of later maize gods of Late Classic and Postclassic highland Mexico, including the Aztec Cinteotl. In terms of the maize gods of the Red Temple at Cacaxtla, they are probably representations not only of the Maya maize god but the corn deity of Cacaxtla as well. In other words, just as in the case of Teotihuacan, the maize deity at Cacaxtla was an ethnically Maya being. It is noteworthy that in the abundant imagery of both Cacaxtla and Xochicalco, there are no clear examples of other maize deities, in contrast to the abundant corpus of Maya-style maize god figurines at Teotihuacan.

Given the strong cultural link between the Olmec and the neighboring Maya, the Late Preclassic period is critically important to document early Maya images of the corn deity. However, at the time that the “Olmec Maize God” was written, there were very few examples known. This limited corpus changed radically with the discovery of the murals in Pinturas Sub-1A at San Bartolo, with no less than six examples of the Maya maize god in the mural chamber (Saturno et al. 2005; Taube and Saturno 2008; Taube et al. 2010). In addition, other images of the Late Preclassic Maya corn god were subsequently discovered at Cival, also located in the northeastern Peten of Guatemala (see Estrada-Belli 2011:Figs. 5.22-5.24). Both the San Bartolo and Cival examples closely resemble the Olmec maize god, including the strongly protruding upper lip and slanted eyes. A still-earlier version of the Maya maize god was discovered in the Pinturas group at San Bartolo as a fragment from the structure known as Xbalanque, dating to the fourth century BC, that is, only slightly more than a hundred years after the Olmec demise, making this virtually the “missing link” in the evolution of the maize god from the Olmec to the early Maya (Taube and Saturno 2008). The facial features of this being are virtually identical to the examples of the Maya maize gods from Pinturas Sub-1A, which are also strongly Olmec in appearance. Thanks to the recent discoveries at San Bartolo, Cival, and other sites, the transition from the Olmec maize god to the Classic Maya deity is virtually seamless.

Mention has been made of ancient jade caches oriented to four directions at many Maya sites, typically buried on the central axis of temple foundations. In “The Jade Hearth: Centrality, Rulership, and the Classic Maya Temple” (Taube 1998c), I focus on the symbolism of Maya temples, including concepts of the temple as a cosmogram embodying the world directions and cosmic center, and the temple as a house not only in the sense of being a domicile for deities but also a model of the world (see also Taube 2013). Widely known for contemporary Maya peoples, the cosmic house model is also documented for the Jiquaque in the Montaña de Flor region of central Honduras. For the Jiquaque, there are four house beams (*horcones*)—two in the east and two in the west—that support the world much like pillars holding up a roof (Chapman 1978:105). In addition, following original insights by Linda Schele (see Freidel et al. 1993), I call attention to the symbolic importance of the three-stone hearth in Maya epigraphy, art, and architecture, including the three jade boulders cached under the central stela of Structure A-3 at Ceibal. As has been mentioned, a set of three

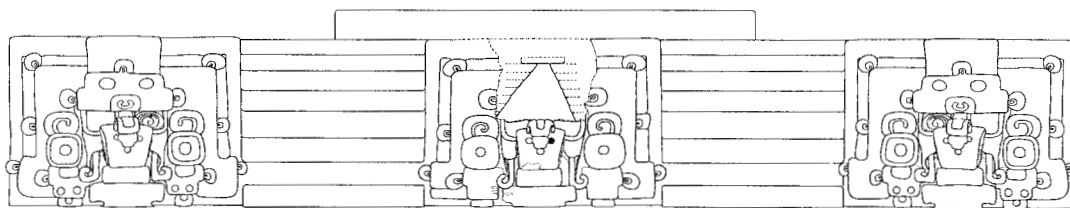


Figure 25. Early Classic platform at El Zotz with three avian Jester Gods sprouting foliation (drawing by Mary Clarke and Timothy Linden, courtesy of Thomas Garrison).

stone spheres was recently discovered in a Middle Formative cache at the same site. One particular jaguar *wahy* spirit is known to be of the three-hearthstone place, and one depiction of this being in the act of swimming shows his pelage marked with a pattern of four corner markings and three smaller spots in the middle, a clear portrayal of the cosmogram of four intercardinal points and the central three hearthstones (see Taube 2013). In a number of epigraphic examples, rising fire or smoke indicates that the three forms are indeed hearthstones. Moreover, the West Wall mural at Late Preclassic San Bartolo features braziers with burning offerings atop hearthstones (see Taube et al. 2010).

Along with serving as domiciles for the gods, temples were closely related to censers and fire offerings, with both urns and temple facades sharing much of the same iconographic format and imagery. As I note in “The Classic Maya Temple: Centrality, Cosmology, and Sacred Geography in Ancient Mesoamerica” (Taube 2013), there are four-sided cache vessels that clearly evoke the concept of a miniature house or temple. One form of the jade Jester God, the foliated avian head, often appears in groups of three, with the rulers wearing this assemblage serving as the pivotal *axis mundi* (see “The Jade Hearth,” Taube 1998c). In addition, this series of three deity heads also appears on monumental architecture. Aside from a painted tomb at Río Azul and major stucco sculpture at Altun Ha discussed in the “Jade Hearth” study, recent excavations by Thomas Garrison at El Zotz have uncovered an impressive Early Classic program in stucco sculpture of the same three forms of the Jester God extending across an entire platform (Figure 25).

“The Turquoise Hearth: Fire, Self-Sacrifice, and the Central Mexican Cult of War” (Taube 2000c) concerns a very different topic, this being the symbolism of fire and warfare in ancient Central Mexico and in particular the Early Classic site of Teotihuacan. The title derives from an early Colonial account in the *Florentine Codex* describing the self-sacrifice of Nanahuatzin and Tecuciztecatl in a fiery pit at Teotihuacan and their transformation into the sun and moon. In this passage, the place of sacrifice is referred to as the *xiuhtetzacualco*, or “turquoise enclosure,” a site also mentioned in connection with the Late Postclassic god of fire Xiuhtecuhtli (“turquoise lord”) as the world navel or center. Although virtually absent at Teotihuacan, turquoise symbolism was prominent in Central Mexican thought, as in the concept of the Xiuhcoatl—the meteoric turquoise fire serpent (see also Taube 2012c). Although it may seem strange to relate turquoise to fire, the blue color constitutes the heart of the flame. Despite the lack of turquoise at Teotihuacan, a great deal of related Late Postclassic fire and military symbolism can be found at this Early Classic site. Thus the ancestor of the Postclassic Xiuhcoatl fire serpent is the Teotihuacan being that I termed the War Serpent in my “Temple of Quetzalcoatl” paper (Taube 1992c). Oddly, although this being explicitly appears as a snake in Late Classic Maya iconography and is glyphically labeled “Eighteen Its Images Serpent,” it lacks a serpent body but still has a head resembling the Maya examples

(see also Taube 2011, 2012c). As has been noted, the Teotihuacan "War Serpent" appears to be more in the nature of a supernatural caterpillar, that is, a pupate being before its metamorphosis into a butterfly. In fact, Late Classic Maya depictions of the War Serpent incorporate butterfly attributes, including pairs of long, protruding nasal elements resembling antennae and, more importantly, a crenellated edging found with Classic and Postclassic portrayals of butterflies. At Teotihuacan, the War Serpent also has butterfly attributes, especially the large "feathered" eyes that are commonly found with this insect at Teotihuacan.

In Nahuatl, *xihuitl* means not only turquoise but also comet or meteor. In this regard, it is noteworthy that in Mesoamerican thought, caterpillars are widely identified with meteors and meteorites, including among the sixteenth-century Aztec and contemporary Nahua, Otomi, and Maya speakers, including Tojolabal and Mopan (see also Taube 2012c:130). During the Postclassic period, the Xiuhcoatl commonly appears with stars on its snout or body, as seen on an Early Postclassic wooden example from the Cenote of Sacrifice at Chichen Itza (Taube 2012c:Fig. 11b). The weapon of the Aztec tutelary god Huitzilopochtli, the Xiuhcoatl was a spearthrower that shot meteors as its flaming darts, and the *Codex Borbonicus* portrays Huitzilopochtli wielding a blue Xiuhcoatl spearthrower lined with stars, while Teotihuacan-style renderings of spearthrowers are marked with similar round forms, almost surely stars as well. Serpent spearthrowers are also known for the Classic period, including a War Serpent example from Bonampak and a Codex Style bowl illustrated in "The Turquoise Hearth."

The Nahuatl *xihuitl* also signifies both "herb" and "year," and quite often the Xiuhcoatl has a plant bundle at the end of its tail, while similar vegetal bundles appear with Classic Maya portrayals of the War Serpent as well as fire offerings, frequently bound with a knot identical to the Postclassic Mixtec year sign. For the massive back mirrors portrayed on the Atlantean columns at Tula, the bodies of the Xiuhcoatl serpents appear to be formed of the same material, also ending with small, spherical elements—quite probably flowers. In the "Turquoise Hearth" study, I note that this same motif also appears with Tlaloc priests wearing a year sign headdress in the *Codex Borbonicus*, and I suggest that the plant is *yauhtli* or sweet-scented marigold (*Tagetes lucida*). After this study was published, excavations at the Templo Mayor uncovered Offering 102, which contained a remarkably preserved Tlaloc priest costume which according to Leonardo López Luján (personal communication 2010) featured actual bundles of *yauhtli* (for Offering 102, see Gallandro Paradí 2011). In the "Turquoise Hearth," I illustrate an elaborately painted bowl featuring the same bundled plant motif with both the central War Serpent and Tlaloc heads on the rim, quite possibly a much earlier Late Classic reference to the same plant.

Clearly enough, peoples of ancient Mesoamerica were fully aware of the striking metamorphosis from caterpillar to moribund chrysalis to fully reborn butterfly, and as with the later Aztec, there is abundant evidence of the relationship of butterflies to warriors at Teotihuacan (Taube 2000c; Headrick 2007). The intervening period between Teotihuacan and the Aztec is the early Postclassic era of the Toltec. For the great Atlantean columns at Tula, in addition to the pupate Xiuhcoatl serpents on the rims of the back mirrors, the prominent breast pieces were turquoise mosaic plaques representing stylized butterflies (see Taube 2012c:126). Moreover there are monumental portrayals of butterflies at both Tula and contemporaneous Chichen Itza. At Chichen Itza such insects can also have feathers, indicating that they are supernatural beings, and Aztec warrior souls were described as both precious birds and butterflies.

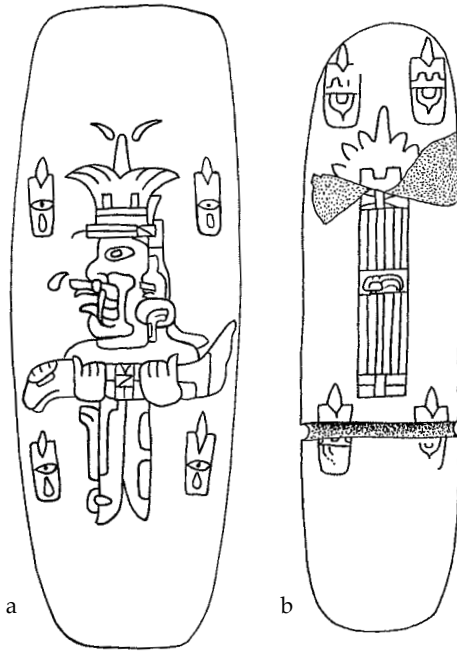


Figure 26. Olmec celts portraying maize images as the central bar of the bar and four dots motif: (a) jadeite celt attributed to Río Pesquero with Olmec maize god in center as the central element of the bar and four dots motif (drawing by author from Taube 2000a:Fig. 4b); (b) serpentine celt with maize ear fetish in center, Los Angeles County Museum of Art (drawing by author from Taube and Saturno 2008:Fig. 7d).

As a final discussion in the “Turquoise Hearth” study, I offer a new analysis of the great Calendar Stone, among the most preeminent monuments known for the Aztec. I note that the format is quite similar to the Toltec turquoise back mirror, but in this instance there are only two Xiuhcoatl caterpillars on the rim, not four. In addition, I suggest that the central image is of the present sun Tonatiuh as Nahui Ollin emerging from the turquoise enclosure mythically attributed to Teotihuacan, and here as a newly reborn butterfly rising from the fiery hearth.

In “The Olmec Maize God” (Taube 1996), I provide preliminary observations concerning the nature and appearance of this deity, along with his relation to such sacred and precious objects as greenstone celts and feathered maize fetishes. In a subsequent study, “Lightning Celts and Corn Fetishes: The Formative Olmec and the Development of Maize Symbolism in Mesoamerica and the American Southwest” (Taube 2000a), I am less concerned with identifying the Olmec maize god and concentrate instead on his historic significance in the development of maize ritual and symbolism in Mesoamerica and the American Southwest. Far more than simply an important staple, maize embodied basic concepts concerning the nature

of the cosmos, social identity, and human values. In this paper, I note that greenstone Olmec celts were an important component of a wealth economy strongly centered on maize, with these precious items embodying corn. In addition, as with later Mesoamerican peoples celts were probably also compared to lightning and by extension the four directions and intercardinal points, since beings of rain and lightning of both Mesoamerica and the American Southwest are associated with world directions. In this study, I focus on the Olmec and other cultures as well, these being the ancient and contemporary Maya, Late Postclassic Central Mexico, and Puebloan peoples of the American Southwest, especially the Hopi. I note the close relationship of celts to maize not only for the Olmec, but also the Classic Maya and the Aztec, as can be seen in the *Codex Borbonicus* portrayals of Chicomecoatl, the maize god. In Mesoamerica, maize was also closely related to the precious plumes of the quetzal bird from Olmec times to the contact-period Aztec. For the Southwest I discuss two ritual items that bear striking resemblance to the celts and maize ear fetishes of the Olmec—the feathered maize ear *tiponi* and the hornblende celts known as *chamahiya*, which rather than being functional tools have deep symbolic meaning in Hopi ritual and symbolize maize, world directions, and lightning. I argue that both the *tiponi* and *chamahiya* are historically related to the far more ancient celts and maize ear fetishes of the Olmec; during the Formative period when maize became widespread in Mesoamerica and the Southwest, they were part of a

basic symbolic complex pertaining to corn. In other words, far more than a basic staple, corn was imbued with complex ritual and belief by at least the Middle Formative period.

A good many years after this work was published, I came across a then-unpublished incised Olmec celt at the Los Angeles County Museum of Art (Figure 26b). As discussed in "Lightning Celts and Corn Fetishes" and elsewhere, a number of incised Olmec celts feature the Olmec maize god in the center of a quadripartite arrangement as an elaboration of the "bar and four dots" motif (Figure 26a). For the LACMA piece, a maize fetish substitutes for the maize deity, making it plain that these fetishes embody the Olmec spirit of corn, much like the *tiponi* of the American Southwest. In addition, there are serpentine carvings of maize ear fetishes that explicitly portray the head of the maize god with an ear of corn projecting from his cranium (see Taube 2000a:297).

In "The Breath of Life: The Symbolism of Wind in Mesoamerica and the American Southwest" (Taube 2001b), I again examine traditions shared between Mesoamerica and the American Southwest, in this case focusing on concepts pertaining to breath and wind. Rather than the negative winds that bring disease or powerful and destructive gales, the positive and life-giving aspects of wind, such as the breath spirit and cloud-carrying breezes, are the focus of this study. Much of this relates to the Flower World complex first defined by Jane Hill (1992) for Uto-Aztec peoples of Mesoamerica and the American Southwest including the Aztec and Hopi. A great deal of this floral symbolism is conveyed by song, as can be seen for the *Cantares mexicanos* of Central Mexico (Bierhorst 1985), Yaqui deer songs (Evers and Molina 1987), and the *katsina* songs of the Hopi (Sekaquaptewa et al. 2015). The following Hopi *katsina* song recorded in 1903 exemplifies some of the major themes of Flower World, including blossoms, bright colors, and flying supernatural beings, as well as growth and abundance:

The yellow butterfly maidens and the blue/green butterfly maidens, they will be fluttering along here in the flowery expanse of mariposa lilies and blue asters. The butterfly maidens of various colors will be fluttering colorfully along the flowery expanse of watermelon plants. The butterfly maidens of various colors will be fluttering colorfully along the flowery expanse of muskmelon plants. (Sekaquaptewa et al. 2015:68)

Along with blossoms, Flower World encompasses such concepts as the sun, colorful and shining objects, music, and an afterlife paradise of ancestral spirit beings.

As with my previous study of maize in relation to celts and feathered maize fetishes, I begin "The Breath of Life" with the Olmec and one of the most ambitious portrayals of wind known in ancient Mesoamerica, Monument 1 at Chalcatzingo. In this case, a zoomorphic cave in profile exhales symmetrical breath volutes amidst a background of rain clouds and a field of growing corn, vividly portraying the exhalation of moist clouds into the sky. This theme clearly relates to the fact that Monument 1 is below the main runoff channel on the mountain, with cupules to collect water directly under the relief (see Schaafsma and Taube 2006:Fig. 3b). Although depicted in profile, the Chalcatzingo cave is a quatrefoil, as can be readily seen in a face-on rendering (Figure 27a). In addition, a Late Postclassic Aztec relief from Huitzucó features a zoomorphic mountain cave exhaling a pair of blossoms from the corners of its mouth, with similar flowers in a portrayal of the ancestral mountain Culhuacán immediately below (Figure 27c). As for Chalcatzingo, the three known examples of the zoomorphic cave have blossoming plants at the sides of the face, surely relating to the widespread concept of Flower Mountain in Mesoamerica and the American Southwest. In

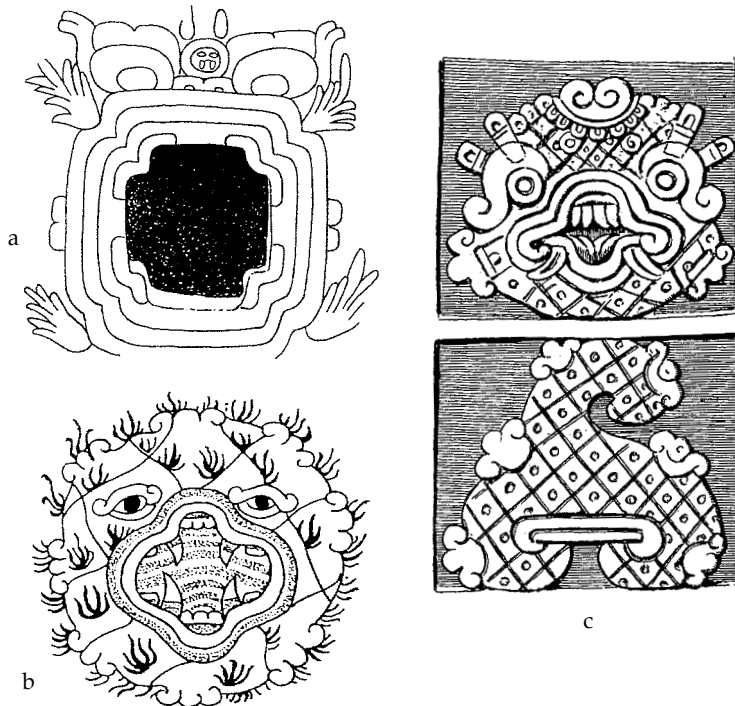


Figure 27. Ancient Mesoamerican portrayals of zoomorphic mountains with quatrefoil cave maws: (a) Middle Formative Olmec-style portrayal of zoomorphic mountain with cave maw, Chalcatzingo (drawing by author from Taube 2010:Fig. 5.5b); (b) Early Colonial portrayal of mountain with fanged cave maw, *Codex Kingsborough* (drawing by author from Taube 2010:Fig. 5.5a); (c) Late Postclassic Aztec monument from Huitzuc portraying zoomorphic mountain cave and the ancestral mountain of Culhuacan (from Selser 1902-1923:2:757).

addition, the early Colonial *Codex Kingsborough* depicts the community of Tepetlaoztoc, a zoomorphic hill displaying a quatrefoil maw first known in Middle Formative Olmec-style art from Chalcatzingo (Figure 27b).

Close to Monument 1 at Chalcatzingo, there are two other petroglyphs portraying the earth crocodile exhaling bifurcated breath scrolls with rain clouds, explicit portrayals of the earth breathing rain into the sky. In the study, I call attention to a similar scene from Tecaltzinco, Puebla, on a boulder relief adjacent to a pond at the base of a hill, recalling the Olmec site of El Manatí, a pool immediately below a hill with a constant spring of fresh water. There is another crocodilian relief at Ticuman, Puebla, also next to a pond, and in this case the creature appears to simply exhale a bifurcated, beaded stream of water, a theme that also appears with an Olmec maize deity Jester God on the Middle Formative Shook Panel from Guatemala (Figure 28). Clearly enough, concepts of wind, breath, and rainmaking were already highly developed by at least Middle Formative times in ancient Mesoamerica.

For the Olmec, flowers can also emit a symmetrical pair of outcurling elements, in this case alluding to the aroma or “breath” of the flower, a Mesoamerican theme also found with blossoms continuing to the sixteenth century. In “The Breath of Life” study, I first identify an anthropomorphic Maya wind god, who appears epigraphically as the day name Wind or Ik’, as the personified form of the number three, and as the patron of the Maya month Mak. In glyphic form, he typically appears with a prominent blossom on his brow emitting breath scrolls of aroma and with a wind sign either on his cheek or rendered as his earspool in profile (Figure 29). In many respects he seems to be closely related to or even an aspect of the maize god. Thus for one Early Classic example, his upper head ends in a tight curl, a well-known trait of the Maya maize god during the Early Classic (Figure 29a). In addition, a sculpted stucco glyph from Palenque portrays him with the *nal* maize sign atop his brow (Figure 29b). As of yet, the overlapping meanings of the two deities remain little studied, but

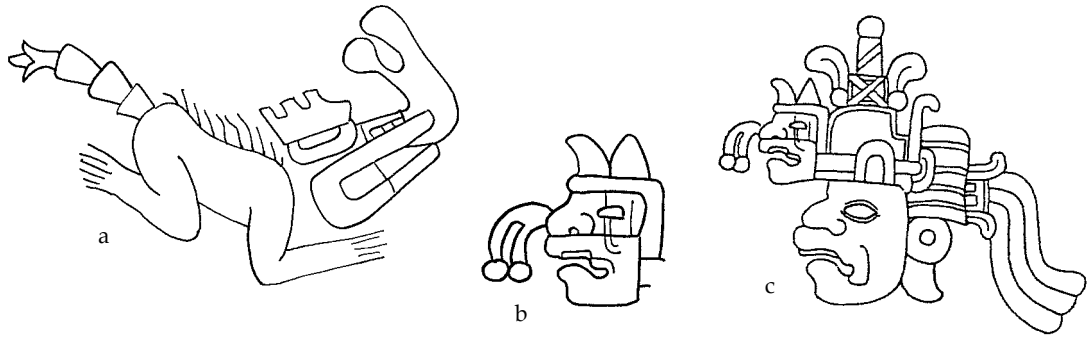


Figure 28. Portrayals of beaded breath elements in Middle Formative Olmec-style art: (a) crocodilian with bifurcated breath motif emerging from snout, petroglyph from Ticoman, Morelos (drawing by author after Córdova Tello 2008:Fig. 4); (b–c) maize deity “Jester God” brow piece with pendant bifurcated breath element, details of “Shook Panel” (drawing by author from Taube and Saturno 2008:Fig. 3b).

it could well be that as a sustaining embodiment of life and well-being the maize god and his symbolic complex overlaps with the personification of vital breath. Since the focus of the volume in which “The Breath of Life” was published primarily concerned contacts and exchange between highland Mexico and the Greater Southwest, it was not possible to include a more detailed account relating the Maya wind god to flowers, music, and the breath soul, but the general outlines are clear. Despite the great distance between the Maya region and the Southwest as well as striking differences in artistic style, many aspects of the ancient Maya complex pertaining to breath, wind, and flowers are remarkably similar to Puebloan belief and ritual (see Taube 2010b).

In Late Postclassic Central Mexico, there were two distinct deities pertaining to wind, one being Quetzalcoatl, a rattlesnake with quetzal plumes covering its body, and the other Ehecatl, a duck-billed deity. It is noteworthy that although early contact-period texts describe them as aspects of the same being, they only partially overlap in Prehispanic imagery. Thus, there are virtually no depictions of a plumed rattlesnake with the head of Ehecatl. In Central Mexico, Quetzalcoatl can be readily traced to the third century AD with the Temple of Quetzalcoatl at Teotihuacan, but Ehecatl does not appear widely in the region until the Late Postclassic period, with no known examples in Epiclassic Xochicalco, Cacaxtla, or Early Postclassic Tula. Rather than deriving from Central Mexico, Ehecatl originated in southeastern Mesoamerica, with versions commonly appearing in Classic Maya scenes as well as Late Preclassic art, such as the Tuxtla Statuette. This duck-billed being is also found in Formative Olmec art and even on a pre-Olmec Early Formative Mokaya vessel, dating to roughly the fourteenth century BC.

Among the Classic Maya, the anthropomorphic wind god is also the god of music, and in Central Mexico Ehecatl was also closely identified with music and musical instruments. In the “Breath of Life,” I note that pages 35 to 38 of the *Codex Borgia* concern the origin of

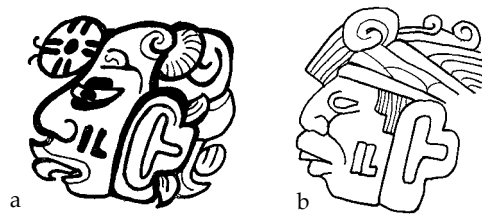


Figure 29. Classic Maya glyphic portrayals of the wind god: (a) Early Classic wind god displaying cranium of Maya maize deity, detail of painted vessel (drawing by author after photograph courtesy of Stephen Houston); (b) Late Classic stucco glyph of wind deity, Palenque (drawing by author after Miller and Martin 2004:Pl. 116).

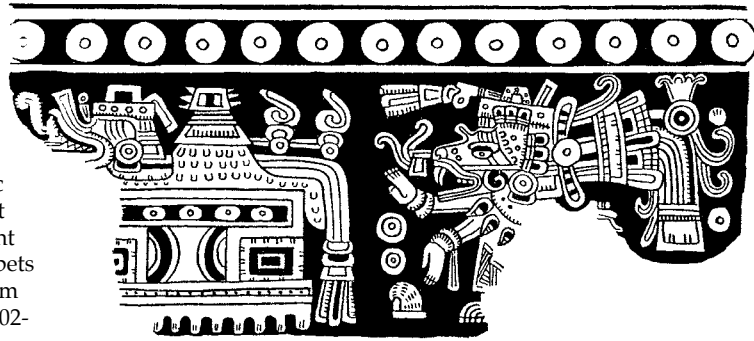


Figure 30. Late Postclassic portrayal of Xolotl in front of wind temple with serpent Ehecātl carrying conch trumpets on back, detail of mural from Mitla, Oaxaca (from Seler 1902-1923:2:347).

music based on two early Colonial accounts describing a priest of Tezcatlipoca or the wind journeying to the house of the sun, which appears on *Borgia* page 35 with Tezcatlipoca taking a bundle from a deity who is quite probably Tlalchitonatiuh, “Sun Earth,” a moribund aspect of the sun deity closely identified with the underworld. On the following page 36, this same bundle opens as a great spiral containing articles of music and dance—such as drums and flutes—as well as basic motifs of the Flower World complex, these being flowers, butterflies, and precious birds. On page 38, it can be seen that the entire spiral is personified by Ehecātl whose massive head terminates the stream of music. However, an especially important detail is page 37, where the god of music Xochipilli plays the flute and drum found atop the music bundle on page 36.

Along with the middle pages episode in the *Codex Borgia*, a Late Postclassic mural from the Zapotec site of Mitla also features the duck-billed wind god as the bringer of music (Figure 30). In the scene, the canine deity Xolotl stands before a wind temple, identifiable not only by the thatched conical roof but also by a prominent serpent with the head of Ehecātl. The serpent bears two conches on its body, almost surely conch trumpets, the instrument par excellence of Ehecātl-Quetzalcoatl. In one Aztec creation account, Quetzalcoatl bests the god of the underworld by sounding a conch, and in so doing is allowed to escape and create the current race of humans on the earth’s surface. As in the *Borgia* middle pages, the Ehecātl-headed serpent in the Zapotec mural is probably portrayed as the bringer of music. The prominent presence of Xolotl at Mitla is also noteworthy, as he appears no less than four times in the origins of music seen on pages 35 to 38 of the *Borgia*, including with the bundle emitting music on page 36 and enthroned in the conical wind temple on page 47. Although not mentioned in the two known Aztec accounts concerning the mythic origins of music, Xolotl plays a major part in the version appearing in the *Borgia*.

According to Diego Durán (1971:134), the round temple of the wind god Ehecātl at the Aztec capital was in the form of a giant resounding drum:

This drum was so big that its hoarse sound was heard throughout the city. Having heard it, the city was plunged into such silence that one would have thought it uninhabited. The markets were dismantled; the people went home. Everything remained in such quiet and peace that it was a wondrous thing. The signal for withdrawal was like the ringing of the curfew bell in cities so that the people will retire. Thus, when the Indians heard the sound of the drum, they said, “Let us retire, for Yecatl has sounded.”

It is quite likely that this structure featured one or more massive foot drums, which are known for ancient and contemporary ceremonial structures of the Greater Southwest,

including the *tukipa* temple of the contemporary Huichol as well as ancient kivas of the American Southwest (see Jáuregui 2008:94).

A Late Postclassic ceramic flute in the regional museum in Tapachula, Chiapas, features Ehecatl riding on the back of a flying bird (Figure 31). The distal bulbous end where the music would exit is marked by symmetrical scrolls, clearly denoting music in physical form. It is noteworthy that flying figures also appear on musical instruments as early as the Late Preclassic, with an especially striking example appearing on a Late Preclassic Zapotec bone flute from Yugüe in coastal Oaxaca (Figure 32a). In this carving, a supernatural skeletal being flies along the surface of the flute and emits a prominent breath or music scroll containing a buccal-masked deity head that could well be a version of the duck-billed wind god of southeastern Mesoamerica. Along with the deity head, the Zapotec flute volute has a pair of stepped elements that closely resemble the Ik' sign for breath and wind known for the ancient Maya as early as the Late Preclassic period (Figure 32b).

A Late Classic stela from the Puuc site of Huntichmul portrays a ruler with a breath scroll clearly marked with Ik' signs (Figure 32c). Although of slightly different form, it is

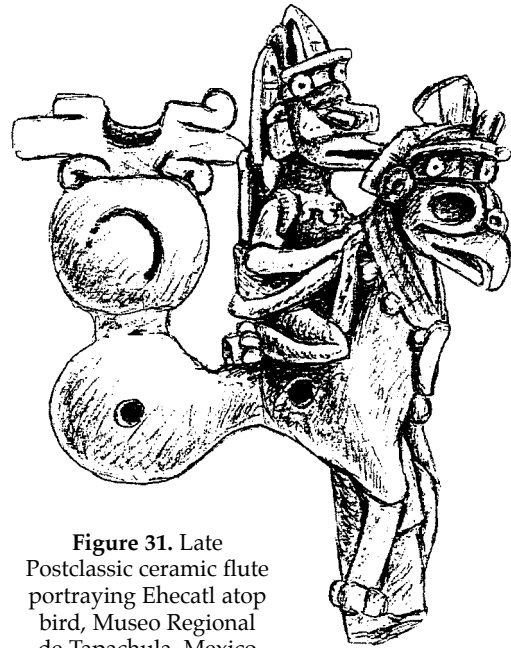


Figure 31. Late Postclassic ceramic flute portraying Ehecatl atop bird, Museo Regional de Tapachula, Mexico (drawing by author).

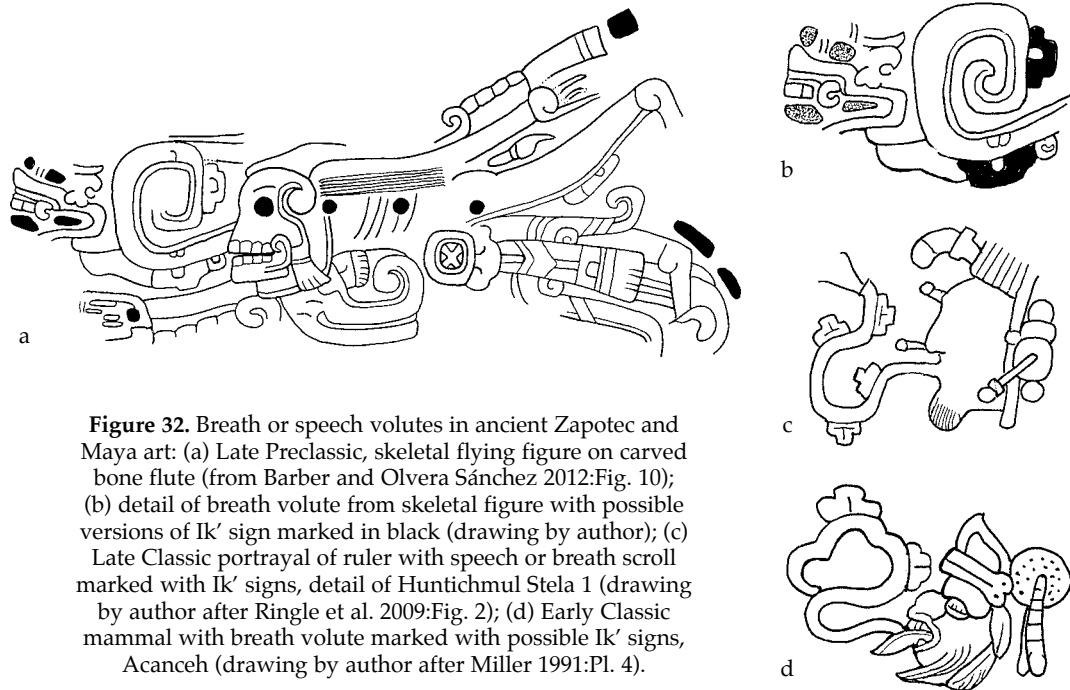


Figure 32. Breath or speech volutes in ancient Zapotec and Maya art: (a) Late Preclassic, skeletal flying figure on carved bone flute (from Barber and Olvera Sánchez 2012:Fig. 10); (b) detail of breath volute from skeletal figure with possible versions of Ik' sign marked in black (drawing by author); (c) Late Classic portrayal of ruler with speech or breath scroll marked with Ik' signs, detail of Huntichmul Stela 1 (drawing by author after Ringle et al. 2009:Fig. 2); (d) Early Classic mammal with breath volute marked with possible Ik' signs, Acanceh (drawing by author after Miller 1991:Pl. 4).

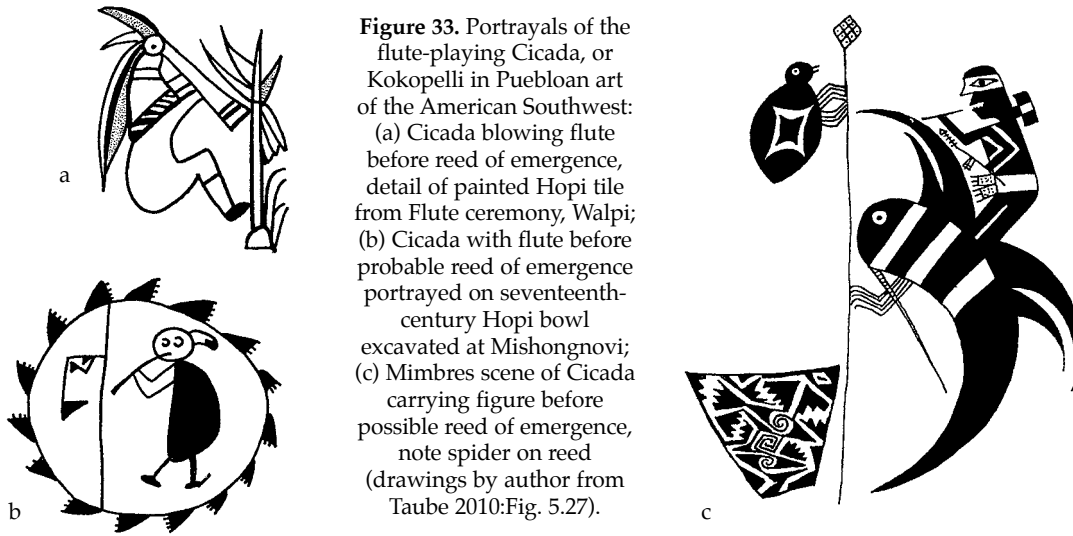


Figure 33. Portrayals of the flute-playing Cicada, or Kokopelli in Puebloan art of the American Southwest: (a) Cicada blowing flute before reed of emergence, detail of painted Hopi tile from Flute ceremony, Walpi; (b) Cicada with flute before probable reed of emergence portrayed on seventeenth-century Hopi bowl excavated at Mishongnovi; (c) Mimbres scene of Cicada carrying figure before possible reed of emergence, note spider on reed (drawings by author from Taube 2010:Fig. 5.27).

likely that the stepped elements appearing on speech volutes from Early Classic Acanceh are also Ik' elements (Figure 32d).

In terms of the American Southwest, breath also closely relates to the Flower World complex, including music, flowers, and ancestral souls, especially the *katsinam* rain spirits. Among the Hopi, breath or *hikwsi* is often denoted by a short cotton cord tipped with a small, downy feather. It often appears in the mouths of masked *katsinam* as well as emerging from effigy flowers held by *katsinam* dancers, denoting the breath-like aroma of the blossom. In addition, similar breath cords emerge from the sacred Hopi floral flutes of the summer Flute and Antelope Societies, thereby merging the concepts of breath, music, and flowers. In these summer ceremonies, both the theme of emergence and the flute-blowing Cicada figure prominently. Of course, cicadas are natural “musicians” who create a buzzing, throbbing hum when they emerge from the earth to propagate. In addition, as noted by Malotki (2000), the cicada’s prominent proboscis does indeed resemble a flute. In his nineteenth-century account of the Hopi Flute Society rites at Walpi, Fewkes illustrates a pair of tiles depicting Cicada blowing a flute before a vertical reed rising out of Sichomo, or Flower Mound, as a scene of the emergence (Figure 33a). Among the Navajo, Cicada is a major figure in the emergence, and in creation accounts cited in this paper the reed of emergence clearly overlaps with the flute, including one account even describing a cotton cord conduit within the reed. Aside from the two cited tiles from Walpi, a seventeenth-century bowl excavated at Mishongnovi depicts Cicada playing a flute before a vertical element with a wind spiral, quite probably the reed of emergence (Figure 33b). Far earlier, a Mimbres bowl dating to roughly 1100 AD depicts Cicada next to another thin, vertical element, surely the reed of emergence (Figure 33c). The reed also supports a spider near the top, Spider Grandmother being a major figure in Southwestern emergence mythology. In addition, Spider Woman is the patroness of the Blue Flute Society at Oraibi (Parsons 1939:1:193). Directly adjacent to the reed is a flying cicada, in this case carrying a youth atop its shoulders. The young male holds what may be a flute or bone whistle before his face, and clearly this scene depicts Cicada and music at the reed of emergence. As I note in this study “the reed of emergence is a great flute, and its music is the breath wind of the ancestors.”



Figure 34. Late Classic Maya portrayal of maize god scribe with centipede tail (drawing by Simon Martin).

In “Maws of Heaven and Hell: The Symbolism of the Centipede and Serpent in Classic Maya Religion” (Taube 2003b), I discuss serpent and centipede symbolism in Classic Maya art and epigraphy. One of the stranger motifs in Classic Maya iconography is what appears to be a “skeletal snake” with a fleshless head and a segmented body resembling a column of vertebrae with bony ribs. Based on a Late Classic polychrome vessel, Nikolai Grube and Werner Nahm (1994) noted that the term for this repulsive creature is *chapat*, the Maya word for centipede. Not only is the centipede widespread in Classic Maya art, it can also be traced to the Early Formative Olmec. In addition, centipede imagery is also common in the Late Postclassic Borgia Group of highland Mexico. Given its proclivity to dark places, it is not surprising that the centipede is widely identified with death and the underworld. As noted in this study, the entrance to the underworld is commonly portrayed as a centipede maw in Classic Maya iconography, with one of the most noteworthy examples being the Sarcophagus Lid from the Temple of the Inscriptions at Palenque. The maw recalls the common Borgia Group motif of the widely open mouth of Cipactli, the earth crocodile, serving as a cosmic cave entrance, although the centipede maw seems to bear more sinister connotations of death and decay. The meaning remains obscure, but Classic Maya artists are closely identified with the centipede and can even appear in its maw. In addition, the monkey scribe patron of artists can have a centipede tail (Figure 34). A recently excavated Early Classic royal tomb at El Zotz, Guatemala, contained a finely carved effigy vessel of the monkey scribe with a centipede tail emerging out of the beak of a bird, quite possibly an owl (see Newman et al. 2015:Fig. 3.6).

In contrast to the centipede with its strong relationship to death and the underworld, Classic Maya serpents are symbols of life, connected to the diurnal sky, rebirth, and the symbolism of breath and wind. Partly based on my previous work in the “Breath of Life” paper, in “Maws of Heaven and Hell” I discuss some of the basic conventions of breath in Classic Maya art, an important but little discussed theme in Maya iconographic research. I note that in Early Classic Maya art, heads of serpents can serve as more elaborate versions of breath beads appearing in front of faces. As the embodiment of breath, such serpents are strikingly similar to the plumed serpent Quetzalcoatl, a Central Mexican god of breath and wind. In addition, Classic Maya serpents can appear emerging out of conch shells, the conch being a basic symbol of wind in Central Mexico that appears as the pectoral of the wind god Ehecatl-Quetzalcoatl (for conchs and serpents, see also Houston and Taube 2011). In

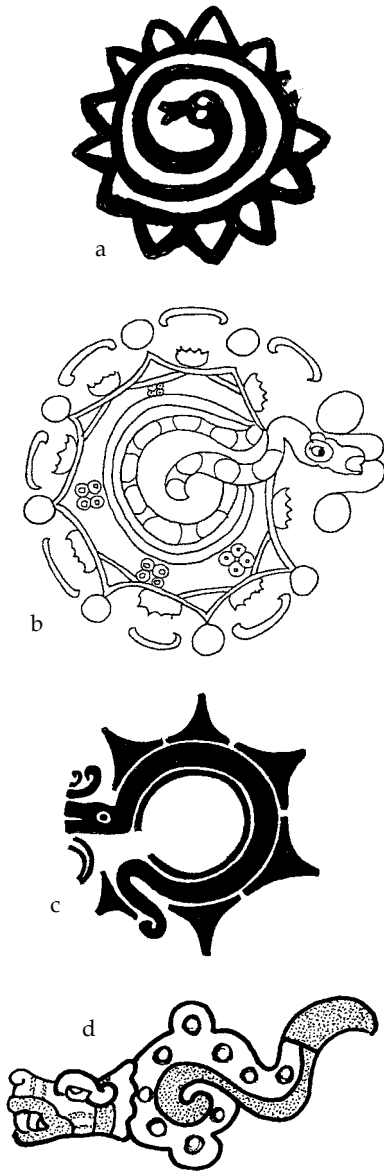


Figure 35. Portrayals of serpent and conch composites in ancient Mesoamerica: (a) Early Formative ceramic seal from Tlatilco depicting coiled serpent rimmed with spires of conch; (b) coiled serpent as conch, Tepeu 1 style bowl probably from Belize (from Houston and Taube 2011:Fig. 5e); (c) Classic-period Veracruz portrayal from painted bowl of serpent as cross-sectioned conch (from Houston and Taube 2011:Fig. 5f); (d) Late Postclassic serpent conflated with conch, *Vaticanus B* page 66 (drawings by author).

my “Breath of Life” paper, I mention examples of conch serpents, including one from Late Classic Veracruz that has the coiled body of the serpent rimmed with spikes to denote a conch (Figure 35c). This theme is of great antiquity and can be seen on an Early Formative ceramic seal excavated at Tlatilco in the Basin of Mexico (Figure 35a). It is also present among the Classic Maya and appears on a Tepeu 1 bowl from Belize (Figure 35b). In this case, the serpent exhales a bifurcated breath element, and the spiraling forms in front of the Veracruz example are surely breath as well (Figure 35c). The symbolic overlap between serpents and conchs continues in Late Postclassic Central Mexico, including an example from the *Vaticanus B* (Figure 35d). I suspect that along with being symbols of wind, conchs were inextricably linked to trumpets as a basic sign of music. When intact, these exotic coastal objects were almost invariably used as trumpets. The serpents appearing with conchs are not only wind but also the embodiment and vehicle of sound and music, much like the aforementioned Ehecatl serpents in the *Borgia* and the mural from Mitla.

In Classic Maya art, human faces with breath elements are typically rendered in profile, but when shown frontally they occur at the corners of the mouth. Although for human faces they are typically scrolls, they are far more elaborate for zoomorphic Witz heads, where they appear as a pair of breath serpents that extend out from the sides of the face and even pass through the flanking earspools. In other words, the Witz heads are portrayed as exhaling breath and wind, much like the Olmec-style, Middle Formative Monument 1 from Chalcatzingo. By far the most elaborate example of Witz heads exhaling breath serpents occurs on a recently excavated frieze at Holmul, with a pair of feathered serpents extending across almost the entire width of the cornice (Figure 36). Far from being mere ornamental embellishments, such serpents denote the dynamically vital and living aspect of sacred buildings, which is also true of zoomorphic temple doorways and flowers.

Beginning with the Carnegie Institution excavations of Mounds A and B at Kaminaljuyu in highland Guatemala, it has become increasingly evident that Teotihuacan was in strong and direct contact with the Early Classic Maya (see Kidder et al. 1946). This was further corroborated by the University of Pennsylvania excavations at Tikal, including the discovery of Stela

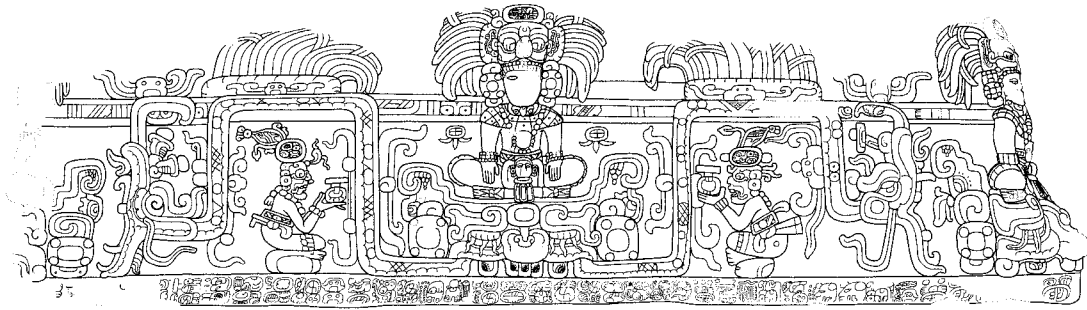


Figure 36. Late Classic Holmul frieze portraying serpents emerging as breath from mouth of zoomorphic Witz head (drawing by Alexandre Tokovinine, courtesy of Francisco Estrada-Belli).

31, which we now know concerns a Teotihuacan “entrada” to Tikal in AD 378 (Stuart 2000). However, although we currently have ample documentation of Teotihuacan influence in the Maya area, there has been little study of any Maya cultural presence at Teotihuacan. Thus Sigvald Linné (1934) excavated early Classic Maya sherds in his excavations in the Tlamimilolpa complex along with two-cylinder tripod vases with portrayals of Maya-style serpents in profile. The two vessels have been often used to illustrate Teotihuacan-style ceramics, despite the obvious fact that the serpent heads in profile are entirely Maya, with the lids topped by quetzal birds, creatures entirely foreign to Central Mexico. In fact, these vessels may well denote the quetzals “perching” atop the Maya realm marked by the serpent heads below. Subsequent research by Evelyn Rattray (1987, 1989) near Tlamimilolpa uncovered the Merchant’s Barrio, with Early Classic ceramics from both the Gulf Coast and the Maya Lowlands and round houses similar to domestic architecture from Central Veracruz and entirely unlike the apartment compounds of Teotihuacan.

In 1952, Agustín Villagra (1954) discovered a major corpus of mural fragments at the apartment compound of Tetitla, which he readily realized were in strong Maya style (Figure 37). These are discussed in my “Tetitla and the Maya Presence at Teotihuacan” (Taube 2003c). Although Villagra’s was a remarkably important discovery, Marta Foncerrada de Molina (1980) was one of the few scholars to subsequently discuss and illustrate some of the pieces. Based on her publication, I was able to note in my initial identification of the Classic Maya maize god that one fragment clearly showed this being (Taube 1985:Fig. 2a). Years later, I re-read her study, and I was struck that another mural fragment appeared to be a Maya text related to a then-recent decipherment of a glyphic clause naming specific deities (Houston and Stuart 1996, 1998; Taube 2003c). I realized that the fragment was a “reverse” text from what would have been the right side of the corridor as one enters. This is a convention known for Classic Maya structures, in which the texts from both sides of the chamber would face toward the viewer, with those on the right side opposite to the usual orientation (see Houston 1998:342).

Until recently, there have been less than fifty mural fragments of the Realistic Paintings available for study, but this has increased exponentially with the discovery in England of roughly one thousand watercolor renderings by Villagra (Staines Cicero and Helmke 2017). As it happens, many fragments portray the maize god, although it remains obscure at this point whether these scenes concern a local Teotihuacan version of this being, a Maya borrowing, or (more probably) both. That is, these scenes may well relate to both local and Maya conceptions of the maize deity. One of the more salient themes is the maize god fishing



Figure 37. Aerial view of Tetitla compound, Teotihuacan (photo: Karl Taube).

for marine shells, an event that obviously would be more fitting for the coastal Maya area than highland Mexico (Taube 2017a). Recent excavations at the Plaza of the Columns at Teotihuacan have uncovered other mural fragments in Maya style. The quality of execution seems to be finer than the Realistic Paintings, and they may well have been painted by courtly Maya artists (see Sugiyama et al. 2016).

Aside from the Realistic Paintings fragments from Tetitla, I also discussed Maya motifs appearing in the Teotihuacan ceramic record. In addition to Linné's 1934 publication of clearly Maya sherds from the Early Classic and two plano-relief vessels that show Maya-style serpent heads in profile, Eduard Seler (1902-1923:5:440, Fig. 36) many years earlier published a Teotihuacan ceramic *almena* of what basically amounts to a miniature rendering of an Early Classic Maya stucco facade featuring the face of a king (see also Michelet 2011:No. 308). Furthermore, the two vessels excavated by Linné at Tlamimilolpa are not Maya imports but locally made, and these are not the only examples. In "Tetitla and the Maya Presence at Teotihuacan," I identify a good many other locally made plano-relief vessels with Maya serpent heads in two other distinct styles. In addition, Maya-style molded serpent heads were also applied to ceramic censers, with one such mold in the personal collection of Hasso von Winning, who over the years collected many figurines and ceramic sherds at Teotihuacan (Figure 38) (see von Winning 1987). Clearly the Maya presence at Teotihuacan is a major topic of investigation and promises to be of increasing importance as other discoveries are made at the site.

In "Ancient and Contemporary Maya Conceptions about Field and Forest" (Taube 2003a), I discuss how the cultivated maize field is contrasted with the forest wilds in Maya thought. This is one of my more ethnographic studies and discusses contemporary Maya belief and conceptions concerning the forest—a source of valuable products but also a dangerous and threatening place. Unruly beings of drunkenness, disease, and chaos, the *wahy*

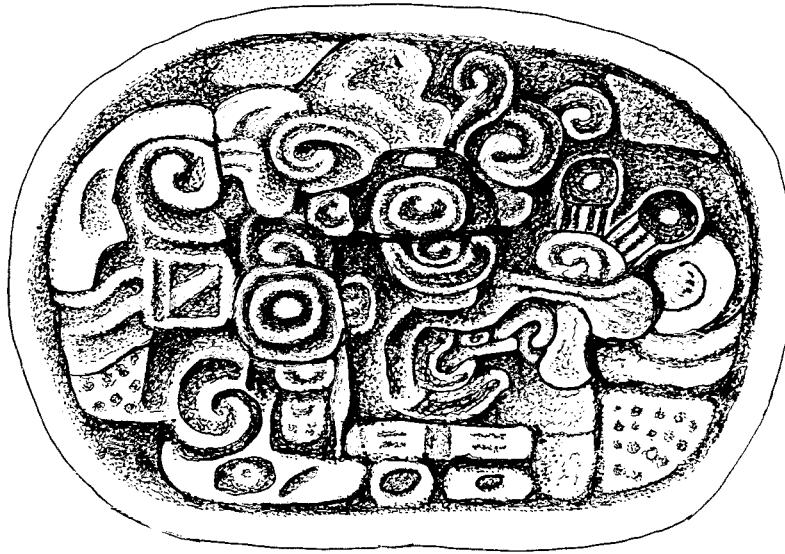


Figure 38. Ceramic mold of Maya-style serpent head in profile, formerly in collection of Hasso von Winning (drawing by author from photograph courtesy of Charles Kolb).

beings are spiritual embodiments of this strange, foreign place (for a recent discussion of *wahy* beings, see Stuart in press). As Andrea Stone (1995b) aptly noted, the symbolic realm of the forest overlaps considerably with that of caves, both being dangerous dark places with twisted paths and passages. In addition, both are logical places to engage in the “dark arts” of sorcery, which continues to be practiced in such locations to this day. In contrast, the four-sided maize field is fully open to receive the nourishing strength of the diurnal sun and provides broad vistas to repel potentially destructive forest creatures and spirits. On a symbolic level, it is also socially created human space and a basic metaphor for the created world, thematically related to tables, houses, and communities (see Taube 2013). In Yukatek, the term *toh* not only signifies “straight” but also relates to concepts of moral rectitude, with similar meanings in other Mayan languages. Laboriously cut out of the forest wilds with well-defined sides and corners, maize fields are quintessentially human spaces.

Although one of the most sensationalized aspects of Aztec religion is the institution of human sacrifice, there is relatively little public understanding of the motivations and beliefs concerning this practice. In “Aztec Religion: Creation, Sacrifice, and Renewal” (Taube 2004a), I note that among the Aztec, sacrifice was strongly rooted in creation mythology and cosmology. Much as the Maya create the ordered space of houses, communities, and fields through concerted effort, the Aztec believed that the present world originated through a creative act of sacrifice, this being the dismemberment of the primordial earth monster to create the heavens and earth, recalling the Itzam Kab Ahiin myth of the Yukatek Maya. A similar theme appears on page 1 of the *Codex Fejérváry-Mayer*, where the bloody, dismembered body of Tezcatlipoca is cast literally to the four corners of the world. Along with the calendar, this page also illustrates directional world trees, and the relationship of trees to sacrifice appears as early as the Maya Late Preclassic murals at San Bartolo, which feature youths letting blood before four cosmic trees (see Taube et al. 2010). In addition, on pages 49 to 53 of the Late Postclassic *Codex Borgia*, directional world trees grow out of the skeletal bodies of supine earth goddesses, denoting their sacrificed bodies as sources of fertility and sustenance (for a recent discussion of tree symbolism, see Taube 2017b). A Maya scene from the roughly contemporaneous *Codex Dresden* depicts an obviously sacrificed male with a tree growing from

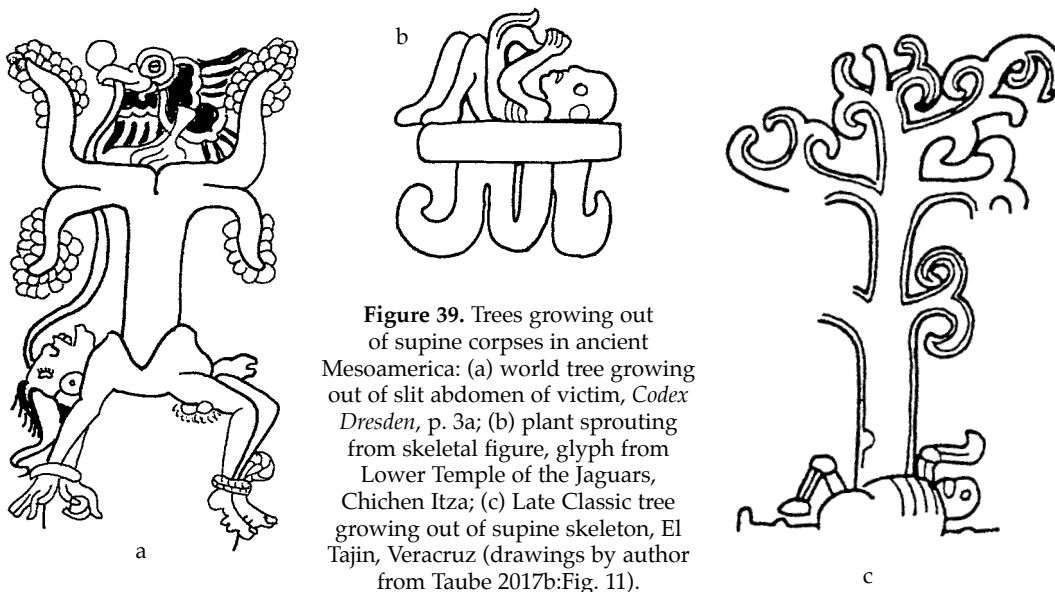


Figure 39. Trees growing out of supine corpses in ancient Mesoamerica: (a) world tree growing out of slit abdomen of victim, *Codex Dresden*, p. 3a; (b) plant sprouting from skeletal figure, glyph from Lower Temple of the Jaguars, Chichen Itza; (c) Late Classic tree growing out of supine skeleton, El Tajin, Veracruz (drawings by author from Taube 2017b:Fig. 11).

his widely slit-open abdomen (Figure 39a). At Late Postclassic Chichen Itza, a nominal glyph features a supine skeletal figure with vegetation sprouting out of its body, much as if it were a sprouting seed (Figure 39b). A still-earlier scene from Late Classic El Tajin depicts a supine skeleton with a great tree emerging from its torso, in a pose notably similar to the *Borgia* earth goddesses (Figure 39c). Not only do these cited examples concern the concept of the planting and nurturing of world trees, but also the creational act of foundation, whether it be cosmic directions, communities, or specific structures (for caching practices and symbolism see also Mock 1998; Taube 2010a).

The slaying of the primordial earth monster Cipactli is seen as a mythic battle resulting in a cosmogonic act of sacrifice. The myth of the five suns describes four previous worlds or creations previous to the present world of Nahui Ollin, the fifth sun, in terms of a cosmic battle between adversaries, Tezcatlipoca and Quetzalcoatl. The present sun was created through sacrifice, this being the self-immolation of a pair of competing deities to become the sun and moon at Teotihuacan. The theme of sacrifice does not stop there. In order for the newly born sun, Tonatiuh, to follow his path through the sky, the gods were sacrificed at Teotihuacan, with their hearts offered to the sun. In other words, heart sacrifice was a nourishing act, giving strength to the sun as well as other deities, and there are graphic Aztec portrayals of the sun drinking the blood of sacrificial victims, frequently through a dart or spearthrower as through a straw (Figure 40) (see Taube 2015). One of the important sacrificial vessels of the Aztec was the *cuāuhxīcalli*, which figured prominently in the spring solar rites of Tlacaxipehualiztli. The several surviving stone examples of these bowls contain a central image of Nahui Ollin, the calendric name of Tonatiuh, who is to be nourished by sacrificial hearts and blood. It appears that such a vessel constituted the symbolic womb of the earth deity, Tlaltecuhli, as the birth conduit for the dawning sun. Similar symbolism is known for sacrificial vessels of the contemporary Huichol and Classic Maya (see also Taube 2009c). The Aztec *cuāuhxīcalli* can be readily traced to Late Postclassic Toltec iconography of Tula and Chichen Itza, where it strongly resembles an open blossom (Figure 41). This allusion was surely intentional, with gods and revenant ancestors symbolically compared to birds and

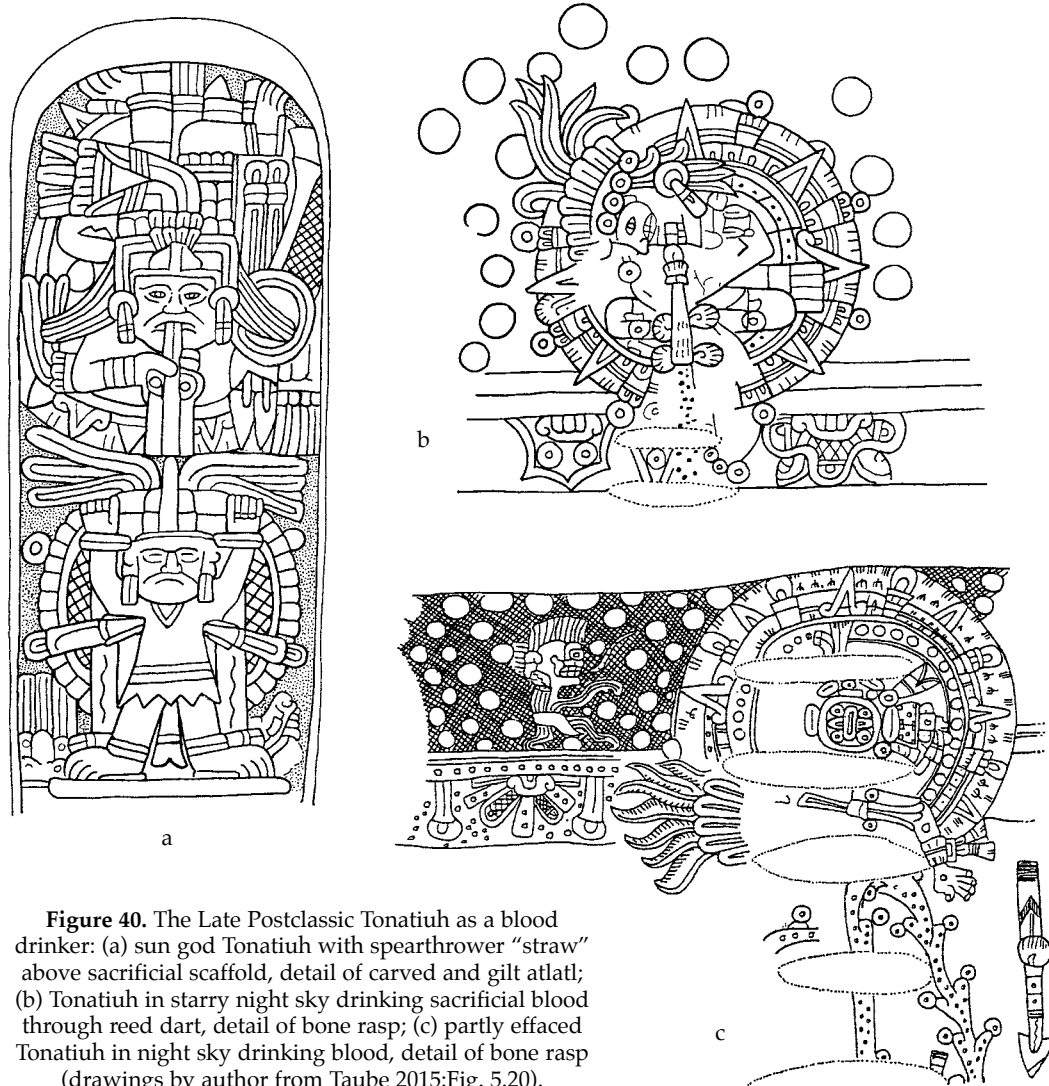


Figure 40. The Late Postclassic Tonatiuh as a blood drinker: (a) sun god Tonatiuh with spearthrower “straw” above sacrificial scaffold, detail of carved and gilt atlatl; (b) Tonatiuh in starry night sky drinking sacrificial blood through reed dart, detail of bone rasp; (c) partly effaced Tonatiuh in night sky drinking blood, detail of bone rasp (drawings by author from Taube 2015:Fig. 5.20).

butterflies sucking the life “nectar” of these sacrificial bowls (Taube 2009c, 2015).

Aside from blood offerings, music and dance were other means to communicate with the numinous realm of gods and ancestors. In my “Breath of Life” paper I note that pages 35 to 38 of the *Codex Borgia* concern an Aztec myth pertaining to the origins of music. This is further corroborated by the spiraling band of wind emerging from the flute bundle on page 36. In the stream, Quetzalcoatl is shown flying with eyes shut as if dead or in a trance, and I note that this is very similar to a figure appearing on an Aztec drum, including even the shell necklace. In addition, other drums also portray flying figures, including a wooden *teponāztli* discussed in the study, as well as others (see Saville 1925:Pl. 33b-c). Moreover, a number of Late Postclassic drums have bands of connected flowers encircling both ends, and in Mixtec carved bones these same “daisy chains” contain the heads of supernatural beings, again denoting a floral road of music and revenant ancestors (see Taube 2010a). In subsequent work, I note that in Early Classic Maya art, the maize god is often shown dancing with avian

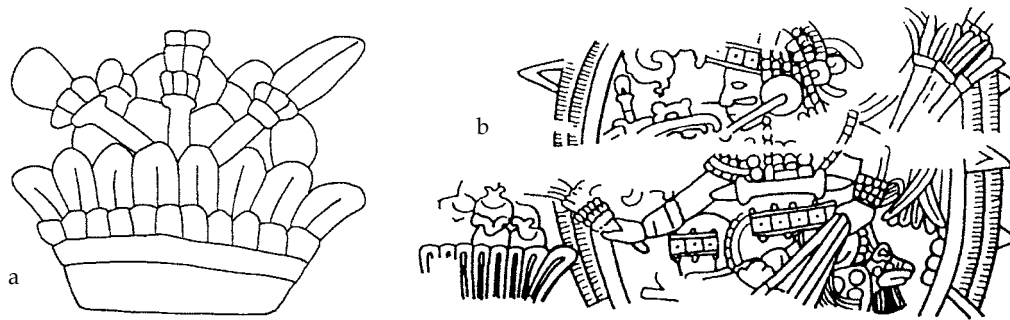


Figure 41. Early Postclassic *cuauhxicalli* at Tula and Chichen Itza: (a) *cuauhxicalli* bowl containing hearts and darts, panel from the Palacio Quemado, Tula; (b) sun god apparently touching *cuauhxicalli* containing human hearts with spearthrower, detail of wooden lintel from Upper Temple of the Jaguars, Chichen Itza (drawings by author from Taube 2015:Fig. 5.19b-c).

attributes, including wings and a feathered tail, much as if he were in symbolic flight (Taube 2009b). Still earlier, the West Wall mural at San Bartolo portrays the duck-billed wind deity singing and dancing to the accompaniment of flying and singing birds. Yet another example of this musical complex in early Mesoamerica is the aforementioned Zapotec flute with the skeletal flying and singing figure (Figure 32a).

In 1995, I was invited by Ricardo Agurcia Fasquelle and Barbara Fash to participate in the reconstruction of Temple 16 at Copan, which had a major effect on my life and academic career. Not only was I involved in the study of one of the site's most important structures, but this is where I met my future wife Rhonda in 1996. Temple 16 is the last of a series of six superimposed temples beginning with Hunal, which contains a royal tomb believed to be that of the founder of the Copan dynasty, K'inich Yax K'uk' Mo' (see Bell et al. 2004). This remarkable series of temple constructions is fittingly referred to as the Copan Axis since it constitutes the central, pivotal architecture of the Acropolis. The third temple construction known as Margarita bore massive stucco representations of the name of K'inich Yax K'uk' Mo' and in addition contained the probable tomb of his royal wife. Dating to the mid-sixth century, the best-preserved building in the sequence is Rosalila, a virtually intact temple covered in elaborate stucco friezes, including massive images of winged sun gods (see Agurcia Fasquelle 2004; Agurcia et al. 2016). The lower walls of the temple featured other supernatural birds, here again bearing the face of the sun deity. While examining these in 1995, I realized the significance of the fact that the sun god wears a quetzal headdress, the sun deity (K'inich) and the quetzal (*k'uk'*) being major components of the name of K'inich Yax K'uk' Mo'. I then looked for any trace of the macaw (or *mo'*) on these avian figures, and sure enough it is present as massive pairs of open macaw beaks on the wings.

During the 1995 season, our primary goal with the architectural sculpture of Temple 16 was to bring the structure's massive stairway sculptures into the new sculpture museum for reassembly and installation. One of the most striking sculptural programs on Temple 16 is Stairway Block 1 which has a series of massive human skulls, some of which were still on the stairway and others nearby on the plaza below. In view of their pierced foramen, they were assumed to have represented a *tzompantli*, a wall of human skulls known for the contact-period Aztec. However, there was a detail that was hard to account for, as two of the skulls were matched with a device consisting of a K'an cross and a globular, pearl-like element immediately below (Figure 42a). When we brought the entire corpus of skull blocks

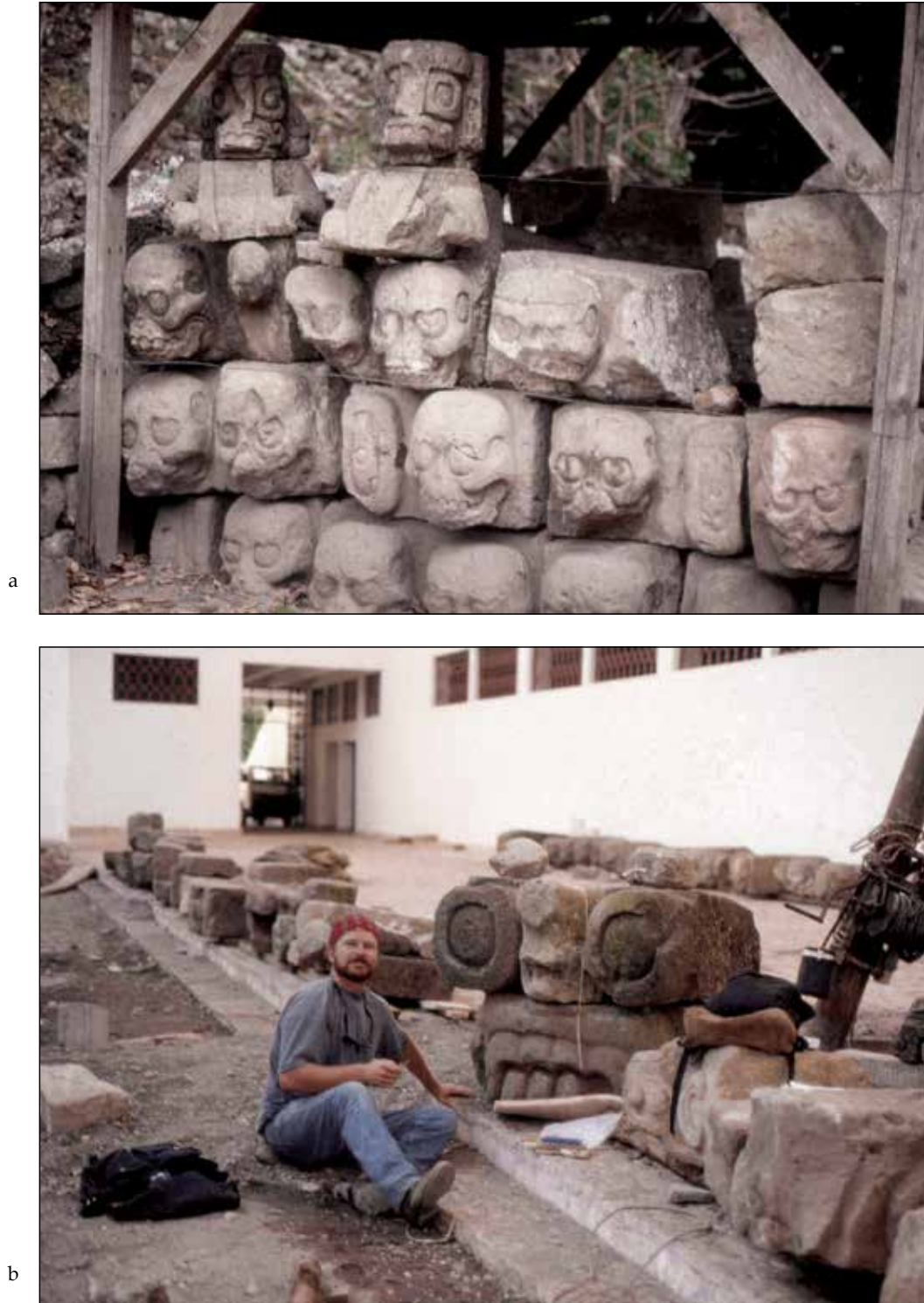


Figure 42. The 1995 assembly of Stairway Block 1 of Temple 16, Copan: (a) skull sculpture stacked on site before assembly, note two blocks with oval K'an crosses (photo: Karl Taube); (b) skull Tlaloc mask as center of skull assembly of Stairway Block 1, Temple 16 (photo: Barbara Fash).



Figure 43. The 1995 fitting of the quetzal macaw headdress onto the head of K'inich Yax K'uk' Mo' as solar deity, Stairway Block 2 of Temple 16 (photo: Karl Taube).

of proportions and then it dawned on me that it was a quetzal-macaw headdress having a quetzal crest and beaded macaw eyes; in other words, this solar figure was none other than K'inich Yax K'uk' Mo' (Figure 43). Rather than being simply the sun god, this was the founder apotheosized as a local aspect of this being, a theme appearing still earlier on the Early Classic facades of Rosalila and clearly related to his remains buried in the Hunal tomb. Simply put, the series of temples on the Copan Axis are a centuries-old sequence directly referring to the founder. In my mind, the closest parallel to this in ancient Mesoamerica is the great Templo Mayor of the Aztec, which from its earliest stage to Spanish contact in the sixteenth century entailed a dual temple structure devoted to Tlaloc and Huitzilopochtli (see Matos Moctezuma 1988).

In my paper on Temple 16 and the Copan Axis, "Structure 10L-16 and Its Early Classic Antecedents: Fire and the Evocation and Resurrection of K'inich Yax K'uk' Mo'" (Taube 2004d), I note that one of the salient themes is fire, a theme partly based on my earlier "Turquoise Hearth" paper, in which I discuss the transformative quality of fire in sacrificial and funerary ceremonies at Teotihuacan and in later Central Mexico. Thus in Aztec funerary ceremonies, the moribund mortuary bundle metamorphizes into a butterfly through the transformational agency of fire. In addition, as noted in "An Archaeology of the Senses:

into the museum we faced another immediate dilemma: there were simply not enough skulls to fill the known dimensions of Stairway Block 1. I asked Barbara Fash if there was anything to fill the vacant space, and she pointed out a massive Tlaloc skull (Figure 42b). As it turns out, the dimensions matched perfectly, and Barb soon noticed that the mysterious K'an cross and pendant balls were simply the earpieces of this great and fearsome mask. When we were assembling the facade, I casually mentioned to the museum workers that this was the Central Mexican god of rain and lightning, and literally within half an hour we experienced the most powerful lightning storm of the season.

In 1995, Barb and I also worked on the next sculptural facade above, Stairway Block 2, much of which she had reconstructed previously. This featured a massive rectangular feathered shield with skeletal centipede heads at the corners. In the center was a human figure of the sun deity, K'inich Ajaw. While moving the sculpture pieces looking for the upper part of his headdress, I found a reasonably good fit in terms

Perception and Cultural Expression in Ancient Mesoamerica" (Houston and Taube 2000), aroma is closely related to the ethereal soul, a concept that can readily relate to fire offerings.

In terms of the Copan Axis, one of the most vivid portrayals of the importance of fire is the so-called "Dazzler" vessel from the Margarita royal tomb, which features an anthropomorphic temple with a fiery roof, quite probably a reference to the Hunal platform and its temple superstructure. In addition, the Rosalila temple has vertical slits flanking the sculptured stucco faces on three sides of the structure that not only served as windows but also virtual chimneys for fire offerings emanating from the interior, which bears a great deal of evidence of burning. The smoke emanating from the vents would have constituted the symbolic breath of K'inich Yax K'uk' Mo', making Rosalila a giant, architectonic censer. The aroma of the smoke would permeate Copan as the breath soul of the founder buried deep in the foundations below. As for Temple 16, at the base of its stairway Altar Q's central pivotal scene portrays K'inich Yax K'uk' Mo' sharing fire by means of a burning dart with the sixteenth Copan king, Yax Pasaj Chan Yopaat, who holds a torch bundle. The text above refers to a structure designated glyphically by a pair of crossed bundles, which I interpreted as bound faggots of firewood. Both David Stuart (2004) and I (Taube 2004d) identified this glyph as a specific reference to Temple 16 at Copan, and Stuart provided the reading of *wite' naah* for the sign. Subsequent research has further enhanced its significance in relation to fire, Temple 16, and Teotihuacan, including the very real possibility that the designation Wite' Naah also refers to a specific building at this great metropolis, perhaps the Temple of the Sun with its Adosada platform (Fash et al. 2009).

Along with the Maya maize god paper published in 1985, I consider "Flower Mountain: Concepts of Life, Beauty and Paradise Among the Classic Maya" (Taube 2004b) to be one of my more important works. It directly derives from past research beginning with the "Archaeology of the Senses" paper published with Steve Houston (Houston and Taube 2000), a study that we first agreed to work on over tapas in a plaza in Santiago de Compostela, Spain. For some reason, I immediately became focused on breath and speech, and how readily they become enmeshed with flowers, sweet aroma, music, and the breath soul, the last aspect encompassing all of these, although not a conventionally classified "sense" at all. Synesthesia became readily apparent, with floral flutes and trumpets emitting music as their sweet aroma. For the contact-period Maya, ceremonies pertaining to dying and deceased kings concerned such items as precious jade and aromatic flowers. The breath soul was captured through precious stones or anointing the corpse with sweet-smelling unguents, as in this account of the corpse of a Pokom Maya king: "They bathed it and purified it with decoctions of aromatic herbs and flowers" (Miles 1957:749). Although this strongly suggests the paradisaical Flower World complex defined by Jane Hill (1992), research pertaining to Classic Maya studies of the afterlife has been dominated by the dark and unwholesome realm of Xibalba, the "place of fright." In large part, this is probably due to Mike Coe's brilliant insights concerning death and the afterlife beginning with *The Maya Scribe and His World* (1973). However, since this monumental work, we have been slowly unpeeling the nuances of death imagery, including our understanding of the *wahy* spirits as malignant aspects of human souls and sorcery rather than denizens of the underworld.

In the "Flower Mountain" paper, I argue that in common with other Mesoamerican cultures, including the Aztec, the Classic Maya had very developed concepts of paradise, and in no way was the dark, unwholesome underworld the afterlife realm of Maya nobles—as if a soon-departing Maya king would say, "Thanks so much, now I am going down the

toilet.” This is hardly a rousing legacy and contrary to what we are increasingly learning of royal ancestor worship and veneration. Classic Maya royal burials are affirmations of the riches and beauty of paradise, including the floating precious jewels painted on the wall of Burial 48 at Early Classic Tikal or on the Sarcophagus Lid of K’inich Janaab Pakal. Similarly, the Mixtec *Codex Bodley* depicts the mummy bundle of Lord 8 Deer in his tomb with three aromatic flowers on the wall. In addition, Mixtec art is filled with portrayals of flowers, birds, and butterflies, themes clearly pertaining to the afterlife realm of paradise.

For the Classic Maya, paradise was closely related to the sun deity, K’inich Ajaw, recalling the floral afterlife realm of Aztec nobles and heroic warriors who follow the path of the sun from dawn to its zenith at noon. Scenes from Palenque and Yaxchilan show noble ancestors in solar cartouches, and Maya rulers can appear as apotheosized aspects of the sun deity, including Yax Nuun Ahiin on Tikal Stela 31 and K’inich Yax K’uk’ Mo’ at Copan. However, ancestral Maya kings can also appear as the maize god, as in the case of Chak Tok Ich’aak at Tikal, Yax Pasaj Chan Yopaat at Copan, and K’inich Janaab Pakal at Palenque. Oddly enough, the greatest king of Ek Balam, Ukit Kan Lehk Took’, appears apotheosized as an enthroned sun god on Ek Balam Stela 1 and also the maize god on his tomb capstone (see Grube et al. 2003:26, 36). The sun, maize god, and ancestral souls are all closely related to Flower Mountain, a symbol of the celestial paradise realm of gods and ancestors. This supernatural realm is usually portrayed as a zoomorphic Witz head marked with a prominent blossom on the brow, a place that appears not only on Maya vessels but also monumental architecture, including Chenes and Puuc structures. In the Chenes region, temples appear as personified Witz heads with their open maws denoting a cave while also serving as the doorway (see also Taube 2013). Although the brow region spanning the door is often destroyed, in a number of intact examples it has a prominent blossom. In addition, the temple from Ek Balam containing the tomb of Ukit Kan Lehk Took’ features a series of flowers across the Witz facade, clearly identifying it as Flower Mountain (Coe and Houston 2015:194-195).

As I first noted in a presentation at the British Museum (Taube 2002a), portrayals of Flower Mountain are especially common in the Puuc region of Yucatan, where they commonly occur on the corners and main facades of buildings, marking such stone structures as “mountain houses.” However, many researchers still prefer to see these heads as portrayals of Chahk, despite the fact that contemporaneous Puuc depictions of this being portray him with a short muzzle-like snout, quite like Classic Maya examples from the Central Maya lowlands but not at all like the masks seen on Puuc buildings, which far more resemble Classic Maya Witz heads—that is, mountains.

Almost ten years after my “Flower Mountain” paper was published, Bill Saturno excavated the North Wall mural at San Bartolo, featuring an elaborate scene of Flower Mountain dating to the first century BC (Saturno et al. 2005). The flowering mountain is covered with creatures of the wild and exhales a massive plumed serpent—immediately recalling the pairs of breath serpents seen on Early Classic Maya frontal depictions of zoomorphic mountains, such as the recently excavated facade at Holmul (Figure 36). The central figure in this scene is the Maya maize god, who commonly appears with Flower Mountain in Classic Maya art. The North Wall scene probably concerns a version of the aforementioned origin myth of Mesoamerica and the American Southwest in which people emerge out of the earth to populate the present world. In the case of the North Wall mural the maize god and his assistants are conveying food and water out of Flower Mountain. The San Bartolo mountain is inhabited by wild animals, including an iguana, a jaguar, snakes, and birds. The jaguar and

one of the snakes appear to be attacking and devouring the birds, behaving in stark contrast to the calm and methodical behavior of the human figures below.

For the contact-period peoples of Central Mexico, the place of emergence was known as Chicomoztoc, or "seven caves." According to a sixteenth-century account by Chimalpahin, this place teems with wild animals, strikingly similar to the far more ancient San Bartolo scene:

And the reason why this place is so frightful, there where it is named Chicomoztoc, is that there are not a few beasts that guard and inhabit this place, the jaguars, the serpents as well as many other varieties of little known beasts, well there are many that there guard the Chicomoztoc. (Chimalpahin Cuauhtlehuanitzin 1991:27, 29, my translation)

Some of the most elaborate scenes pertaining to the emergence appear in the early Colonial, Central Mexican *Historia tolteca-chichimeca* (see Kirchhoff et al. 1976:Folios 5-r, 16-r). In the two scenes, the ancestral Chichimec emerge out of the seven-lobed cave of Chicomoztoc portrayed within the curving mountain of Culhuacan, signifying the "place of those who have ancestors." The two mountains are covered with flowering cacti and other blossoming plants of the Gran Chichimeca to denote Flower Mountain. The aforementioned monument from Huitzuc indicates that the allusion to flowers is clearly intentional (Figure 27c). Aside from the frontally facing mountain cave exhaling a pair of breath blossoms, the lower portion depicts the curving mountain of Culhuacan with six blossoms, clearly indicating it as Flower Mountain. As has been mentioned, the Middle Formative Chalcatzingo mountain cave is probably also an early version of Flower Mountain, with blossoming plants at the corners of the cave maw, more than likely an explicit reference to Cerro Chalcatzingo itself (Figure 27a).

As I mentioned in the beginning of this introduction, I have always been drawn to beautiful objects of the material world, including jade. Since high school in the San Francisco Bay Area, I have been taking regular trips to Big Sur, where I look for nephrite jade at Jade Cove and Willow Creek. While directing tours to Quirigua and Copan in the 1990s, I often traveled through the Middle Motagua Valley in areas that I knew were sources of jadeite, but I had no idea where they were or how the jade was being procured. My perspective changed radically during a time at Copan when David Stuart mentioned that he knew an associate at Harvard, Russell Seitz, who had actually been to an "Olmec blue" jade outcrop, or *yacimiento*, in the Sierra de la Minas, recently discovered by a local *jadero* or jade prospector after the devastating landslides and flooding of Hurricane Mitch in 1998. Soon after, I visited this source with Russell and Virginia Sisson, and it was readily apparent that its jadeite was entirely like pieces known to the ancient Olmec (see Seitz et al. 2001; Taube et al. 2004). In 2004, I initiated a project with my former student Zachary Hruby and Guatemalan archaeologist Luis Romero documenting jadeite sources and ancient workshops on the opposite side of the Motagua, in the Río El Tambor drainage system (Taube et al. 2011). As it turns out, this area was probably the major source of translucent Olmec-style jadeite in the Middle Motagua Valley, although the sites that we documented appear to be Classic lithic reduction areas for preparing celt preforms, with virtually no evidence of Olmec occupation (Figure 44).

Along with documenting jadeite sources in Guatemala, I am also interested in jade symbolism in ancient Mesoamerica. Although much of my earlier work focused on the Olmec, in 2005 I published "The Symbolism of Jade in Classic Maya Religion" (Taube 2005b), a study concerning Classic Maya jade symbolism, a topic that I also discuss in subsequent research



Figure 44. Río Motagua in background, with Río El Tambor, source of Olmec blue jade, in foreground (photo: Karl Taube).

(Taube 2012b; Taube and Ishihara 2012). Among the Classic Maya this precious stone was closely related to concepts of abundance and life, including its very close relationship to the maize god, a tradition that can be readily traced back to the Middle Formative Olmec. For both the Olmec and Classic Maya, jade and the maize god are closely related to concepts of centrality, and for the Classic Maya a relatively common jade motif is the maize god in a contortionist position to denote the world tree as the *axis mundi*. In addition, as I mentioned in my “Jade Hearth” study, the head of the Principal Bird Deity merges with the cosmic tree, as seen in the recent excavation of the massive Early Classic facade at El Zotz portraying three heads of the Foliated Jester God (Figure 25). In terms of jade carvings, the most impressive example is the jade head from Altun Ha, which remains the largest jade carving known for the Classic Maya.

Aside from being related to maize, centrality, and world trees, Classic Maya jade also symbolized breath, and in the case of the Maya wind god, a prominent Ik’ sign can appear on the cheek or as an earspool rendered in profile, clearly indicating jade’s significance as a sign of wind (Figure 29). In addition there are Ik’ sign pectorals, which are portrayed not only in Classic Maya art but also known archaeologically as jadeite artifacts. Along with examples found in the Sacred Cenote at Chichen Itza, a remarkable Ik’ sign pectoral was recently excavated at Nimli Punit, Belize (Prager and Braswell 2016). This jade is noteworthy in terms of its size and the lengthy inscription on its back, and for the fact that it is probably portrayed on Stelae 2 and 15 at the same site, indicating that important carved jades were publicly recognized in Classic Maya courts. This is also true for the piscine Jester God appearing on the

Oval Palace Tablet at Palenque in a scene portraying the accession of K'inich Janaab Pakal. A virtually identical jade was discovered in Pakal's royal sarcophagus, almost surely the same jewel. In view of early Colonial documents of Central Mexico, this is hardly surprising, as the *Codex Kingsborough* carefully lists, illustrates, and labels specific gold jewelry, including jeweled crosses, taken by the Spanish in the town of Tepetlaoztoc.

In terms of Maya jade jewelry, I believe that the most symbolically charged aspect of personal adornment was earspools. The sheer effort of coring, drilling, and polishing these items is virtually unparalleled in Mesoamerican lapidary, with the one possible exception being the remarkable obsidian and rock crystal earspools from Postclassic Michoacan. However, as someone who has worked with all three materials, I can state that jadeite is by far the most exacting, being approximately 6.7 on the Mohs scale of hardness, versus volcanic glass at 6. During the Early Classic period, Maya kings proudly wore massive chains of earspools hanging as pendant assemblages or collars as signs of wealth, as measured not only in terms of the precious stone but also the sheer amount of human effort in carving it (e.g., Tikal Stelae 1, 2, 31). Although this striking exhibition of wealth largely disappeared in the Late Classic, one noteworthy exception is at Coba in Quintana Roo, where a massive jade collar appears on such a number of Late Classic stelae that one wonders if it is the same item of regalia.

In ancient Maya art, breath serpents often appear emerging from earspools. Although there may well be actual jadeite examples of such earpool serpents, they have yet to be documented in the archaeological record. A number of such serpent heads are impossibly long and are clearly symbolic in nature. The convention of earspools with projecting serpent heads continues in Late Postclassic Mexico as worn by Quetzalcoatl and Tlaloc, deities closely identified with wind and rain. An Aztec oversize greenstone earpool in the Frida Kahlo Museum in Mexico City depicts a plumed serpent emerging from the center of the disk, a convention also appearing in depictions of Quetzalcoatl (Taube 2005b:Fig. 19b, f). In the beginning of "The Symbolism of Jade in Classic Maya Religion" (Taube 2005b), I note that in Classic Maya art, prisoners are frequently shown with paper pulled through their ears, probably to denote their tenuous, fleeting, and even "valueless" status as war captives. However, the placement of earspools and other items through the ears is far more developed than this. Thus in Late Classic Maya art, individuals wearing trappings of Teotihuacan identity can have earspools with a curious hooked element projecting from the center (see Taube 2005b:Fig 11b-c, e). A recently excavated stone panel from Temple XIX at Palenque clearly demonstrates that this curving device is an obsidian sacrificial blade dripping blood, which provides a whole new perspective on humans and gods wearing such elements on the sides of the face as a sign of their basic identity (Figure 45a). In addition, at Teotihuacan, Tlaloc can have water falling from his earspools to indicate that he embodies rain (see Taube 2005b:Fig. 11a). The focus on ears and earspools to denote the inherent nature of beings continues in Late Postclassic Central Mexico. Thus while Ehecatl-Quetzalcoatl typically wears the central spire of conch as his earpiece, the death god Mictlantecuhtli usually has a severed hand, cut femur, or eyeball pulled through his ear. This dualistic contrast of life and death appears in very graphic form on pages 56 and 73 of the *Codex Borgia* where the two gods are portrayed back to back. Thus while the wind god wears the conch spire earpiece of breath and life, Mictlantecuhtli's ear has a severed hand to denote death and sacrifice. Similarly, the Classic Maya death god can appear with extruded eyeballs strung through the ears, as seen in the elaborate stucco scene from Tonina (Figure 45c). For the Classic Maya, spider monkeys

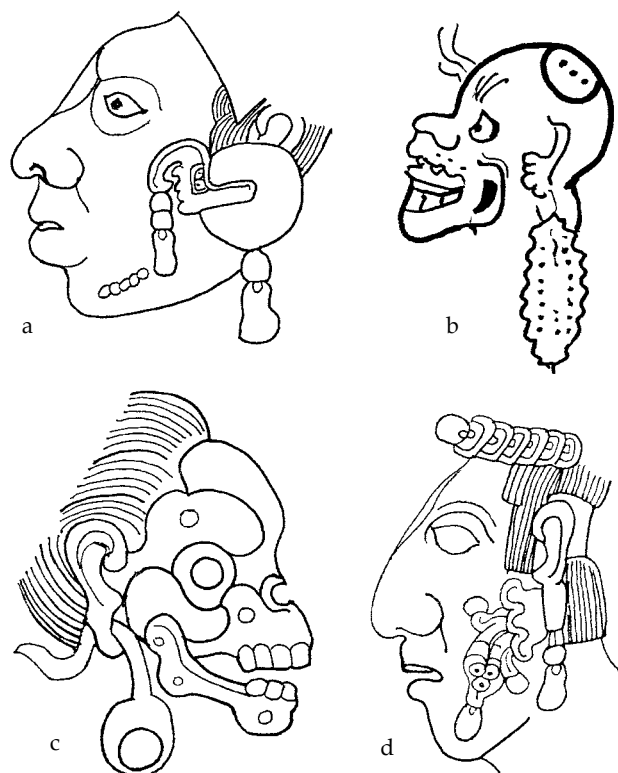


Figure 45. Earspool and related elements in Late Classic Maya iconography: (a) figure with dripping obsidian blade element projecting from earspool, detail of carved panel, Temple XIX, Palenque; (b) monkey with cacao pod earpiece, detail of Codex Style vase (after Coe 1982:58); (c) death god with eyeball strung through ear, detail of Tonina stucco facade; (d) K'inich Janaab Pakal with tobacco leaf in earspool, detail of Dumbarton Oaks Panel (drawings by author).

at the Museo Nacional de Antropología in Mexico City (Taube 2012b). During the same year, my former graduate student Reiko Ishihara-Brito and I co-authored a chapter concerning Maya jade craftsmanship and symbolism for the catalog *Maya Art at Dumbarton Oaks* (Taube and Ishihara-Brito 2012).

Along with the use of jadeite among the Classic Maya, I recently addressed the symbolism of turquoise, especially in terms of the Early Postclassic Toltec and later contact-period Aztec, in "The Symbolism of Turquoise in Postclassic Mexico" (Taube 2012c). For the Early Postclassic Toltec, there was essentially a "cult of turquoise," where it frequently appears in mosaic form on back mirrors, butterfly pectorals, and the pointed *xiuhuitzoll*i turquoise crown known for later Aztec royalty. It appears that the later Aztec closely related turquoise to the Toltec as a precious stone embodying ancient traditions of heroic warriors and nobility.

For the Toltec, the preeminent turquoise object seems to have been the back mirror formed of a central pyrite mosaic disk rimmed by a broad and elaborate turquoise mosaic band portraying four Xiuhcoatl fire serpents. On actual examples of such mosaics from Tula and Chichen Itza, the serpents have prominent forelimbs and in this regard resemble frontal depictions of the Classic-period War Serpent, which I have argued is the immediate

are often depicted with cacao pods hanging from their ears, indicating cacao as an essential part of their nature (Figure 45b). In the case of the Dumbarton Oaks Panel, K'inich Janaab Pakal has a tobacco leaf protruding from his earspool, the meaning of which remains obscure (Figure 45d).

Given the fact that earspools have intense significance in Maya art, what does the virtually ubiquitous projecting bar and bead element signify? Aside from "preciousness," it surely indicated more, including esteemed thought and speech. In addition, the jade bar and bead element may allude to concepts of value in relation to truth and permanence, much like medieval European concepts of gold. As will be recalled, Classic Maya captives have only paper in place of the jade finery worn by Maya kings who in their many stone monuments proclaim their lasting legacies.

In a study published in 2012, I contributed to a volume concerning Maya and Chinese jade that coincided with an exhibit of this material

antecedent to the Xiuhcoatl (Taube 1992c, 2000c, 2012c). For the Toltec-style turquoise mosaic examples, the serpents have a feather crest atop their heads (Figure 46c). However, rather than simply depicting a single crest in the center of the brow, it is more than likely that these allude to a pair of feather crests that would be above the eyes of the creature, much like roughly contemporaneous frontal portrayals of the War Serpent at Chichen Itza and Tula, as well as Classic-period forms of this being. Dating to roughly the ninth century AD, a stela from Cola de Palma in western coastal Oaxaca depicts a pair of War Serpents split by a third descending from a starry sky (Figure 46a–b). Although Javier Urcid (2011:134) suggests that the diving snake represents a comet, I would argue that it is actually a meteor, that is, a shooting star. Joined together, the two profile War Serpents constitute a frontal portrayal of the same creature, much like Early Postclassic depictions of this being with clawed forelimbs at Tula and Chichen Itza. In addition, with their upturned snouts, feathered crests, and forelimbs, the profile images are essentially identical to the Xiuhcoatl serpents on Early Postclassic back mirrors (Figure 46c).

In “The Symbolism of Turquoise,” I revisit my previous argument in “The Turquoise Hearth” (Taube 2000c) that the turquoise fire serpent, or Xiuhcoatl, is based on the concept of a meteoric supernatural caterpillar. In the early Colonial *Codex Cozcatzin*, the Xiuhcoatl appears as a personal name glyph with the Nahuatl gloss *xihuitl temōc*, which can be translated as “(the) meteor descended” (Figure 47b). The body of this Xiuhcoatl is essentially identical to glyphic signs for caterpillars in the *Codex Mendoza* (Figure 47a). The Xiuhcoatl is the weapon par excellence of Huitzilopochtli, the tutelary god of the Aztec who slays Coyolxauhqui with his meteoric spearthrower. A fragmentary version of the circular Coyolxauhqui monument of the Templo Mayor (Coyolxauhqui 5) features a Xiuhcoatl serpent piercing the chest of the goddess (Figure 47d), clearly the mythic charter for the actual acts of heart sacrifice performed atop the Templo Mayor (Taube 1993a:50). In fact, I have recently noted that one of the most celebrated images of the Xiuhcoatl, a stone sculpture in the British Museum, depicts the serpent atop a prismatic sacrificial stone, quite like the actual example from the early Phase II

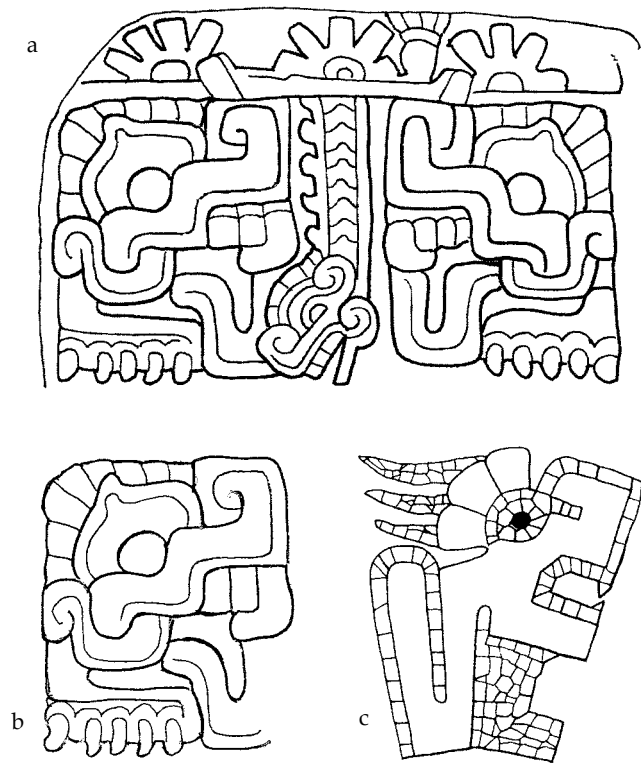


Figure 46. War Serpent imagery appearing on Late Classic Cola de Palma Stela 3: (a) upper portion of Cola de Palma Stela 3 portraying two War Serpent creatures in profile separated by descending meteoric War Serpent; (b) detail of War Serpent, Cola de Palma Stela 3; (c) detail of Xiuhcoatl appearing on Toltec-style turquoise *tezcacuitlapilli* back mirror (a–b, drawing by author after Urcid 2015:Fig. 6.15; c, drawing by Andrew Turner from Turner 2017:Fig. 7c).

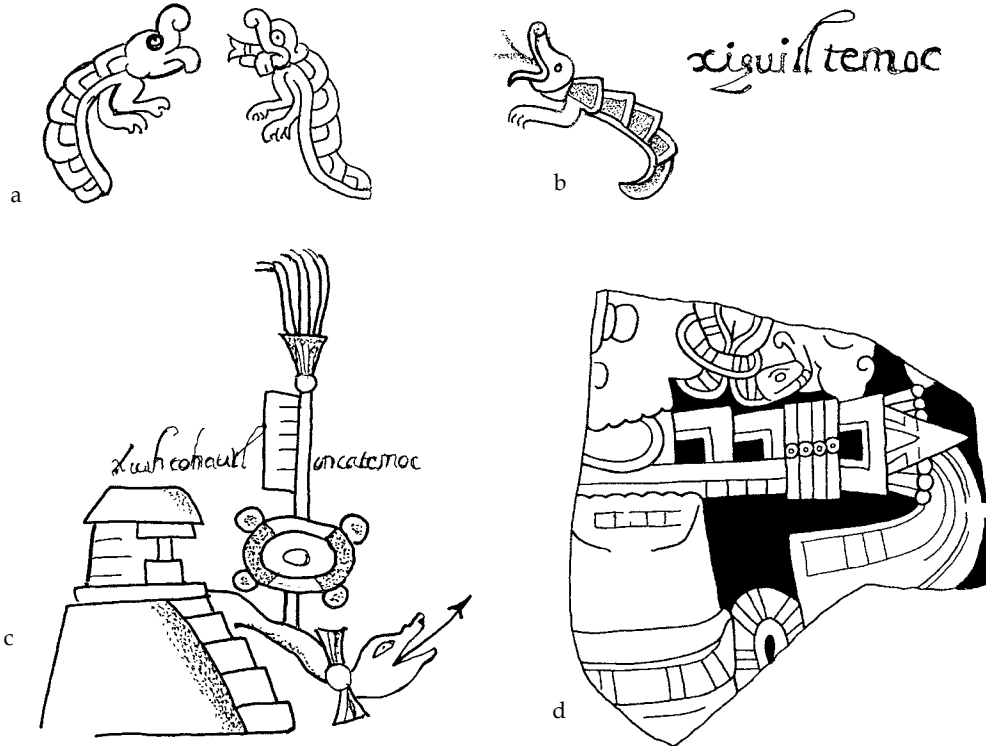


Figure 47. Caterpillars and the Aztec Xiuhcoatl: (a) glyphic signs for caterpillar, *Codex Mendoza*, pp. 65 recto, 10 verso; (b) glyphic sign of Xiuhcoatl with accompanying gloss *xiquitltemoc* (i.e., *xihuitl temōc*), or “(the) meteor descended,” *Codex Cozcatzin*, fol. 4 verso; (c) Xiuhcoatl descending temple stairway with accompanying gloss *xiuhcohuatl oncatemoc* (i.e., *xihcōātl onca[n] temōc*), or “Xiuhcoatl descended there,” *Codex Azcatitlan*; (d) fragmentary Aztec monument portraying Xiuhcoatl penetrating chest of Coyolxauhqui (drawing by author from Taube 1983:50).

Huitzilopochtli temple of the Templo Mayor (Figure 48) (Taube 2017c). The British Museum monument depicts the Xiuhcoatl descending or diving down the sacrificial stone, much like a falling star. In a scene from the *Codex Azcatitlan* featuring Huitzilopochtli atop the Templo Mayor, there is a smaller platform with a descending Xiuhcoatl, with an accompanying text stating that the Xiuhcoatl “descended there” (Figure 47c). For the Aztec *veintena* month of Panquetzalli, a burning Xiuhcoatl effigy descended the Templo Mayor, reenacting the victory of Huitzilopochtli over Coyolxauhqui and his other siblings (see Sahagún 1950-1982:Book 2:147).

In other work I have explored human sacrifice and blood symbolism. A study of Mesoamerican sacrificial bowls, “The Womb of the World: The Cuauhxicalli and Other Offering Bowls in Ancient and Contemporary Mesoamerica” (Taube 2009c), concerns the Aztec *cuauhxicalli* vessels for human hearts, the ritual offering bowls of the contemporary Huichol and Cora, and those of the Classic Maya. In “The Huastec Sun God: Portrayals of Solar Imagery, Sacrifice, and War in Postclassic Huastec Iconography” (Taube 2015), I note that such bowls are intended to feed the gods, especially the sun, who is a preeminent consumer of sacrificial blood in Postclassic Central Mexican thought, a theme also present among the Postclassic Huastec. As in the case of the Aztec sun god Tonatiuh, the Huastec sun deity can appear sipping sacrificial blood with his spearthrower, a theme that can be readily traced



Figure 48. Aztec sculpture portraying Xiuhtecuhtli atop prismatic sacrificial stone, British Museum (photo: Karl Taube).



Figure 49. Vestigial text on center line of Teotihuacan monument (photo: Karl Taube).

concepts of souls and paradise in relation to Flower Mountain, which was very much present in Teotihuacan thought (see Taube 2005a, 2006). In addition, I have reexamined the presence of writing at Teotihuacan and on Teotihuacan-related monuments outside the Valley of Mexico in “Teotihuacan and the Development of Writing in Early Classic Central Mexico” (Taube 2011). In this study, I note that the largest Teotihuacan monument known, the unfinished sculpture at the entrance of the Museo Nacional de Antropología in Mexico City, bears a vestigial text in the center of the body, probably representing day names with a horizontal bar denoting the number 5 (Figure 49). More recently, I have been involved in a collaborative project concerning recently discovered watercolor renderings of the mural fragments from the Realistic Paintings of the Tetitla compound at Teotihuacan (Taube 2017a). I discuss the presence of the Maya maize god not only in the Realistic Paintings but Teotihuacan as a whole and note that one of the most common figurine types at the site depicts the maize deity, who is portrayed as ethnically Maya. At Teotihuacan the maize god can appear decapitated as well as fishing for marine shells, themes also present in Classic Maya portrayals of this being.

In my recent work, I continue to explore ancient Mesoamerican concepts of the soul and paradise, especially in relation to flowers. In a study published in Guatemala, I discuss the motif of Flower Mountain in Early Classic censers from the Escuintla region (Taube 2005a). A number of censer lids portray human butterfly figures in front of a hill ornamented with blossoms, clearly the souls of the dead in front of Flower Mountain. It is probably no coincidence that Escuintla is very close to the department of Suchitepequez, Guatemala. Derived

to Early Postclassic Chichen Itza, where the sun deity and the souls of warriors can be seen drinking blood from their weapons dipped into floral *cuāuhxīcalli* vessels, much like butterflies and birds sucking the nectar of open flowers (Taube 2005a).

In a co-authored study with Marc Zender, we discuss boxing in ancient Mesoamerica and note that as with the rubber ballgame it had a ritual component concerning human sacrifice and blood (Taube and Zender 2009). However, rather than the act of decapitation common to the ballgame, sacrificial blood in this case pertains to that shed in ritual combat, with the blood corresponding to fertile rain. More recently, in “The Ballgame, Boxing and Ritual Bloodsport in Ancient Mesoamerica” (Taube 2018), I return to the topic of ritual boxing and blood symbolism and also consider ballcourts. The ritual flooding of these courts also relates to sacrificial blood, as these places were also arenas for decapitation and human sacrifice.

Teotihuacan remains a major area of interest for me, including Teotihuacan

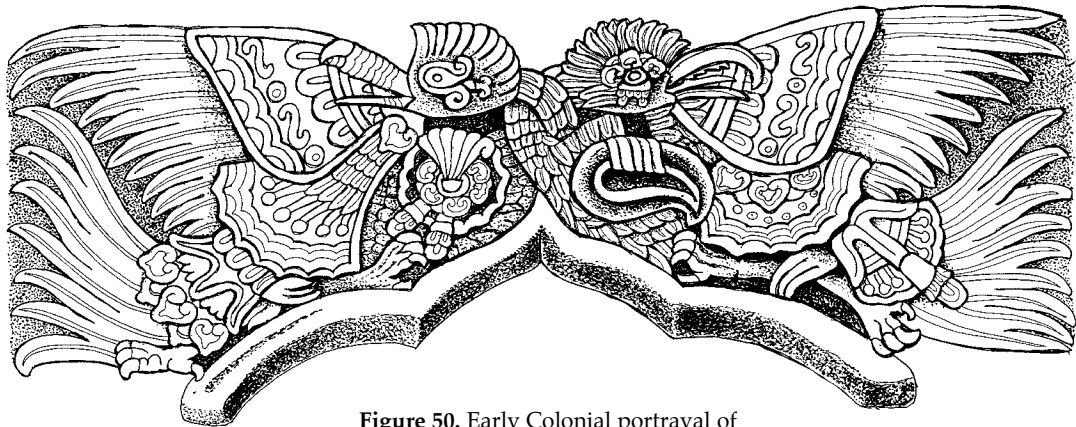
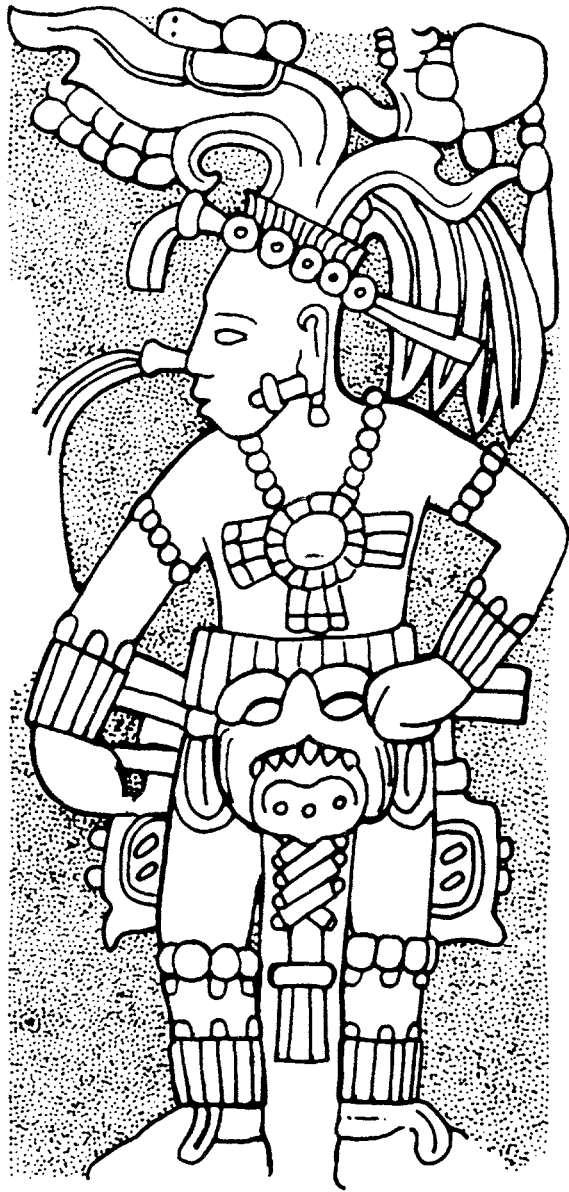


Figure 50. Early Colonial portrayal of water birds with butterfly wings and floral tails, arch in the Parroquia de San José, Tlaxcala (drawing by author).

from the Nahuatl term *Xochitepec*, meaning “Flower Mountain,” this place name is documented in the region since the contact-period sixteenth century (see Universidad Francisco Marroquín 2007:49, no. 30). Although Flower Mountain symbolism is well documented for the ancient Maya, the Early Classic ceramics of Escuintla have stronger affinities with more distant Teotihuacan. In another study I discuss Flower Mountain at Teotihuacan and note that the Temple of Quetzalcoatl was the preeminent “Flower Mountain” at the site, a concept probably relating to the many sacrificed individuals buried in the foundation of the structure, that is, heroic warriors who would reside in the floral paradise (Taube 2006). The presence of quetzal birds in Teotihuacan portrayals of Flower Mountain suggests that this paradise realm pertains to the east, the place of the dawning sun and the Maya area.

In a subsequent work, “At Dawn’s Edge: Tulum, Santa Rita, and Floral Symbolism in the International Style of Late Postclassic Mesoamerica” (Taube 2010a), I discuss floral symbolism in Late Postclassic Mesoamerica, especially its relation to souls, paradise, and the eastern Maya region. In contact-period highland Mexico, this paradisaical realm of ancestors is frequently depicted on a small scale, including finely carved bones, painted vessels, and jewelry, with flowers, birds, and butterflies frequently portrayed. This fascination with flowers, birds, and butterflies continued into Colonial and contemporary art in Mesoamerica. An excellent sixteenth-century example occurs on a carved stone arch in the Parroquia de San José in the city of Tlaxcala (Figure 50). The carving portrays two entwined water birds with butterfly wings, a supernatural merging of two creatures closely identified with the Prehispanic Flower World, but here on a Colonial, Moorish-style arch. It is quite likely that these two birds refer to two of the four barrios of Tlaxcala, these being Tizatlan and Ocotelulco, which are rendered in the two extant copies of the *Lienzo de Tlaxcala* as a pair of aquatic birds with large beaks, resembling herons.

In terms of floral symbolism, broad vistas of research open out in Mesoamerican studies. I am confident that for many years to come, I will be studying Mesamerican concepts of the soul and paradise including their close relation to aesthetics, that is, the cult of life as the cult of beauty.



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The Classic Maya Maize God: A Reappraisal

Introduction

Academic interest in the Classic Maya maize god has undergone three general phases of growth and decay. The most vigorous period of research occurred during the late nineteenth and early twentieth centuries. Due to contributions by Seler (1902-1923, 1963, 1976), Schellhas (1897, 1904), Spinden (1913), and others (e.g., Dieseldorff 1922; Goodman 1897), Classic and Postclassic forms of the maize god were delineated and analyzed. Hieroglyphs pertaining to maize and the agricultural cycle were also identified, commonly with the use of early post-Conquest colonial sources. Frequent and often fruitful comparisons were made with agricultural deities and rituals of Central Mexico. This was clearly the time in which most of the iconographic data concerned with maize was discovered and described.

During the following period of study, extending from the early 1920's to the mid-1960's, there was comparatively little concern with semantic particulars. Identifications of the deity seem often to have been based less on symbolic features than on general good looks. The Classic deity was used as a subjective means of supporting the then current assumptions concerning Classic Maya society and culture. His presence suggested the importance of slash-and-burn maize agriculture. The god's refined features and graceful bearing evoked the Apollonian qualities for which the Maya were so admired. Passivity, generosity, and self-sacrifice were traits which could be seen both for the maize god and the supposedly peaceful Classic Maya. His continual death and rebirth reinforced the famed Maya concept of cyclical time, which was devoid of personal interests or linear historical development. In short, until recently the maize god has served as a convenient symbol for perceiving the Classic Maya.

In the third and present period of study, the maize god has been virtually ignored. There is now something essentially dated about the entity, as if he embodies the previous assumptions discarded over the last several decades. Recent studies concerned with Classic

Maya subsistence have demonstrated that the Maya were not simply slash-and-burn agriculturalists, but also engaged in such intensive farming methods as soil improvement, terracing, irrigation canals, and raised fields. Instead of being incorporated into the new data concerned with intensive agriculture, the maize god seems to have died with the supposed preeminence of swidden farming. Beginning with the epigraphic work of Berlin (1958), Proskouriakoff (1960, 1961), and Kelley (1962b), it has become increasingly apparent that such historic details as dynastic descent, accession to office, and intersite marriage and warfare formed the central subject of Classic Maya inscriptions. It has been found that the principal figures carved upon monuments are neither gods nor temple priests but rulers in positions of personal aggrandizement. In consequence, most recent iconographic work has been far more concerned with political sanctification than with agricultural fertility and the seasonal cycle. The recognition of widespread warfare and sacrifice has set a far more violent tone for the Classic Maya, one in which the refined and even somewhat effeminate maize god seems to no longer belong. In the following study it will be argued that the Classic maize god is not an outmoded concept. The deity's present unimportance is due to a lack of subsequent study, not because he has nothing more to reveal.

The Tonsured Maize God

In his description of the codical God E, Schellhas (1897, 1904:24-25) was the first to isolate the attributes and nominal glyph of the Postclassic maize god. Schellhas correctly identified the god as male, although his fine features first caused Förstemann (1906:60) to consider him female. The Postclassic deity is usually portrayed with maize foliation emerging from the top of his head; Schellhas noted that this foliation converts the youthful head into a maize cob. The Kan glyph, previously identified by Thomas (1882:80) as a maize grain, is frequently infixed into the foliated head. Selser (1902-1923:3:593) first noted that the nominal glyph of God E is markedly similar to the Classic numeral eight head variant identified by Goodman (1897:46). Selser mentioned that both the Classic head variant and the Postclassic nominal glyphs have a forehead spiral and a maize cob curling down from the back of the head.¹ Because of these parallels, Selser stated that the numeral eight head variant also represents the maize god.

A number of Classic maize deity identifications were made by Spinden (1913). Following Schellhas and Selser, Spinden based his identifications primarily on cranial foliation. Among his examples are the vegetal figures upon the Tablet of the Foliated Cross at Palenque, the so-called "singing girls" from Copan Structure 22, and the four males emerging from basal Cauac heads upon Lintel 3 of Temple IV at Tikal. In addition, Spinden (1913:Fig. 123a, f) illustrates several figures which differ slightly from his other Classic maize god examples. These two variants, found upon the side of Quirigua Stela H and the western subterranean vault of the Palenque Palace, have distinct types of coiffured heads. For both, hair has been

¹ The Classic and Postclassic forehead spirals are not entirely the same. Whereas the Postclassic form is an integral part of the foliation curling off the head, the Classic feature is a separate element affixed to the brow. In the present study, it will be seen that this Classic curl represents maize grain, not foliation.

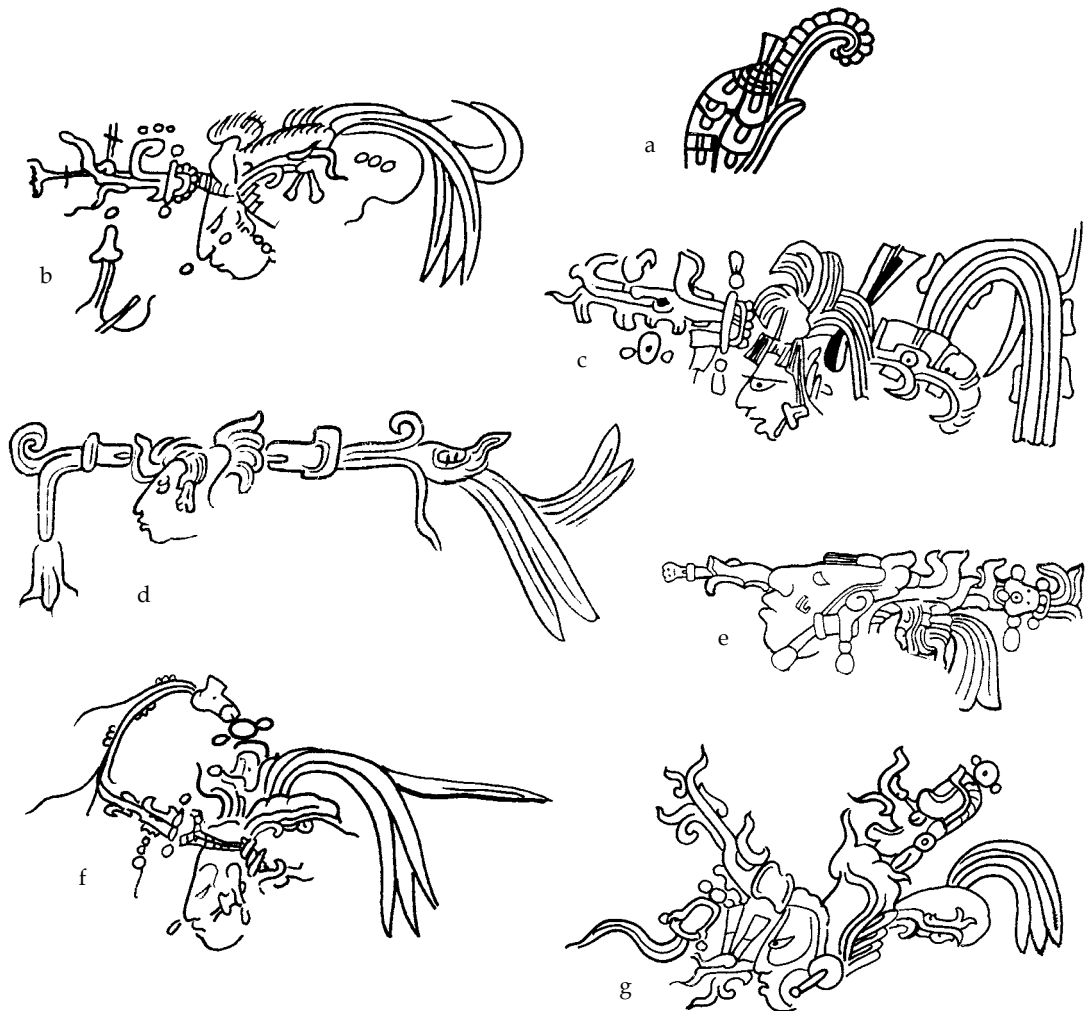


Figure 1. The head of the tonsured young lord: (a) Central Mexican representation of corn as anthropomorphic head, note corn silk hair and backcurving tassel (after *Codex Borgia*, p. 24). Figures *b*, *c*, *f*, and *g* have saurian headpiece; all but *d* have backcurving tassel. Examples *e*, *f*, and *g* have capping, beaded head ornament. (*b*, after Robicsek and Hales 1981:Vessel 69; *c*, after Coe 1973:Vase 25; *d*, after Lothrop 1936:Pl. 1a; *e*, Stela 1, Bonampak; *f*, after Robicsek and Hales 1981:Vessel 117; *g*, after Coe 1978:Vase 14.)

removed, either by shaving or plucking, to accentuate the extremely flattened and elongated skull. The coiffure of the Quirigua figure is created by completely removing the brow hair; only the uppermost cranial hair is allowed to grow (Figure 1b, f). The Palenque example has a less developed but more diagnostic form of tonsure. A horizontal strip of hair is left on the lower brow, thereby accentuating the hairless portion of the head (Figure 1c–e, g). Although Spinden mistakenly interprets the capping tassel of the Palenque archway figure as maize leaves, neither of these examples have the cranial foliation of God E. In a discussion of the archway figure, Seler (1976:69) stated that its tonsured and elongated head is characteristic of the maize god. Seler (1902-1923:3:595) also identified several identical tonsured individuals

upon a Chama vase as the maize deity, and equated them with the number eight head variant. Dieseldorff (1922:48-49) subsequently identified other Classic examples of the youthful entity as the maize god.

In November of 1982, Nicolas Hellmuth gave a presentation in the Department of Art History at Yale University. Entitled "The Young Lord in Maya Art," it involved the identification of a mythical character found frequently on Classic Maya ceramic vessels. Hellmuth noted that this entity is entirely distinct from the Headband Twins, possible Classic counterparts of the *Popol Vuh* Xbalanque and Hunahpu. According to Hellmuth, the character is portrayed as a youthful male having an especially elongated and flattened head. The hair is usually separated into a brow fringe and capping tuft by a tonsured horizontal zone, giving the head a "double-domed" appearance. The entity wears a series of distinctive costume elements, among them: a frequent tassel projecting from the back of the head, a long-snouted brow piece resembling the Palencano Jester God, and above, at the top of the head, another long-nosed face commonly supplied with beaded elements (Figure 1). Hellmuth also noted that the young lord often wears a complex beaded belt assemblage. The belt is usually composed of a series of vertical tubular beads with a Xoc Monster and spondylus medallion placed above the hanging loincloth assemblage (e.g., Coe 1973:Vase 21). Other beaded elements commonly depend from other areas of the belt.

In his talk, Hellmuth convincingly demonstrated that the Holmul Dancer is the same young lord supplied with an elaborate back-rack (e.g., Coe 1978:Vases 14, 15). Hellmuth also noted that the character appears in a number of other contexts. He is frequently found in canoe scenes, such as the incised bones of Tikal Burial 116. The figure also occurs with nude young women in standing bodies of water (e.g., Coe 1973:Vase 25). In yet another scene, the young lord rises out of a turtle carapace (Figure 6a). The "double-domed" and youthful entity, which Hellmuth has termed the Principal Young Lord, is the same tonsured figure identified as the maize god by Spinden, Seler, and Dieseldorff. In light of new epigraphic and iconographic data, it appears that their early assertions are in fact correct.

The most striking physical attribute of the youthful entity is the extremely elongated head (Figure 1). The "double-domed," or tonsured coiffure, seen in Figures 1c, d, e, and g, is especially suggestive of the maize cob, as the lower hair resembles the pulled-back husk, and the capping tuft, the maize silk.² Two other Classic deities, God K and God D, commonly have the tonsured coiffure. It has been noted by Schellhas (1904) and Seler (1963:1:67) that God D and the maize god are frequently paired in the Postclassic codices. It will be subsequently demonstrated that among the Classic Maya, God K was also identified with maize. In the Central Mexican Codex Borgia, maize cobs are at times represented as a head in profile, complete with eyes, teeth, and corn silk hair (Figure 1a). The Mexican cob shares

² The Aztecs compared a type of tonsured head to a maize cob. Duran (1971:82) describes a Nahuatl term for certain Aztec youths:

These youths who lived in seclusion were called *elocuatecomame*. When this name is explained in our language, it almost sounds nonsensical [since it refers to] the *tecomate*, which is smooth and was used in referring to their shaved heads. And to indicate that their heads were tonsured, the word *elotl* ["ear of corn"] was employed. People called this tonsure "a smooth head like a gourd with a round rim like that of an ear of corn."

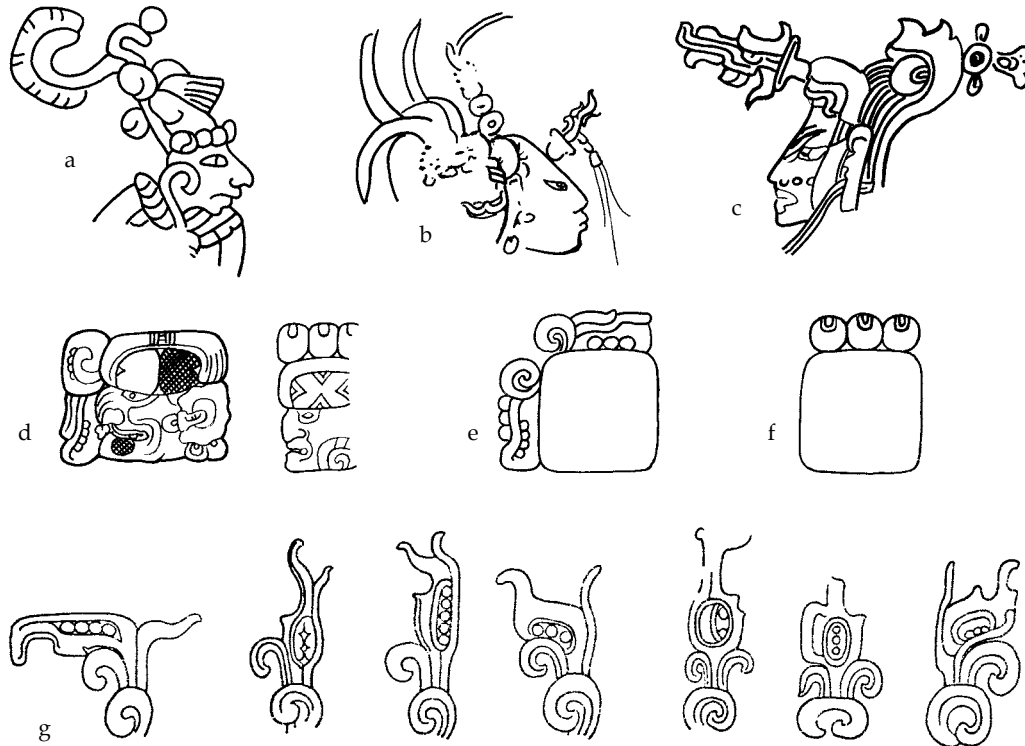


Figure 2. Forms of maize grain found with tonsured young lord: (a) Early Classic example of tonsured deity from Tetitla, Teotihuacan, two corn curl grains on head, one sprouting maize foliage (after Foncerrada de Molina 1980:Fig. 20); (b) young lord with corn seed infix in back of head (after Coe 1978:Vase 2); (c) head of young lord with corn grain (after Hellmuth 1978a:Frontispiece); (d) examples of glyph G9 of Supplementary Series showing substitution of T86 with T135 (*left*, Hieroglyphic Stairway, Naranjo; *right*, Stela E, Quirigua); (e) affix T86; (f) affix T135; (g) examples of corn curls sprouting maize foliage, Copan Stela B.

another feature with many of the Classic youthful heads—the element curling off the back of the head. For the Mexican example, it is the pollen-filled maize tassel affixed to the cob. The Maya form may also represent the maize tassel.

Small circular elements are occasionally placed against, or infixed into, the young lord's head. On one fragmentary Teotihuacan mural, an Early Classic form of the Maya entity has two spiraling elements upon his head, one of which sprouts maize foliage (Figure 2a). The numeral eight head variant commonly has the same curling element upon the forehead. Termed the "maize spiral" by Thompson (1971:280) and "corn curl" by Schele (1976:21), the device probably represents a corn grain, as maize foliage commonly emerges from the curl (Figure 2g). On one Late Classic sherd from Lubaantun, the element is seen being ground upon a metate (Hammond 1975:Fig. 116c). Another circular device also occurs with the deity head; rather than spiraling, it has a symmetric "U"-shaped feature at one side (Figure 2c). At times, this element is equivalent to the corn curl. In G9 of the Supplementary Series, affix T86, the glyphic form of the foliated corn curl, occurs in free variation with the symmetric globular device, affix T135 (Figure 2d–f). It is probable that both circular elements represent maize seed.

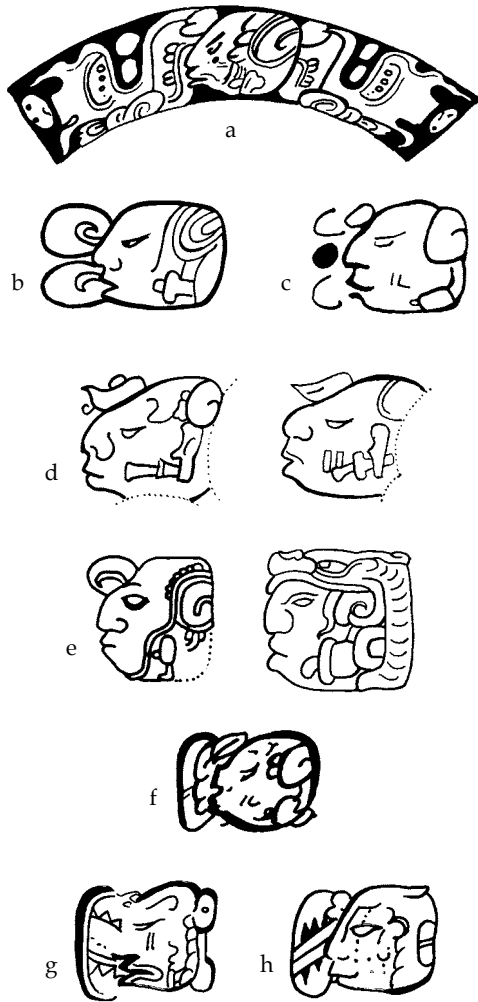


Figure 3. The nominal glyph of the tonsured young lord: (a) glyph supplied with foliation, from rim of Late Classic plate representing young lord as a scribe (after Robicsek and Hales 1981:Vessel 72); (b) nominal glyph from plate depicting tonsured young lord, note corn curl grains in front of face (after Arts Club of Chicago 1982:Pl. 46); (c) nominal glyph of young lord occurring in tortoise shell resurrection scene (after Robicsek and Hales 1981:Vessel 117); (d) examples of nominal glyph upon Bonampak Sculptured Stone 1; according to Mathews, glyphs serve as variants of the numeral eight personified glyph; (e) examples of numeral eight head variant illustrated by Thompson 1971, note corn curl infixed in parietal region of head (*left*, Quirigua Stela J; *right*, Copan Temple 11); (f–h) forms of Young Lord Primary Standard glyph (*f*, Coe 1973:Vase 42; *g*, Coe 1973:Vase 53; *h*, Kidder and Samayoa Chinchilla 1959:Pl. 24).

The usual nominal glyph accompanying the tonsured young lord is a youthful male head having a corn curl infixed to the back of the cranium (Figure 3a–c). In a discussion of the calendrics of Bonampak Sculptured Stone 1, Mathews (1980:71–72) suggested that the glyphs at C2a and D1a are variants of the personified numeral eight glyph, that is, the foliated maize head. The Sculptured Stone 1 variant is identical to the young lord nominal glyph, being a corn curl-infixed head (Figure 3d). The use of the corn curl-infixed head as a numeral eight variant is not limited to Bonampak. Thompson (1971:Fig. 24) illustrates two examples from Quirigua and Copan; neither glyph has explicit cranial foliation (Figure 3e). Stephen Houston (pers. comm.) has mentioned an interesting substitution for one of the hieroglyphs in the Primary Standard Sequence. Termed the Young Lord by Coe (1973:21), its conventional form is the youthful corn curl head preceded by a *ti* or *ta* locative (Figure 3f). Houston noted that the main sign may be substituted by another youthful head, this one having a maize cob curling down the back (Figure 3g–h). The foliated variant closely resembles both the God E nominal glyph and the conventional personified glyph of the number eight. Because of the direct substitutions in the numeral eight head variant and the Primary Standard glyph, it is probable that the foliated and corn curl heads represent a similar entity, a maize-headed young lord.

The maize-headed tonsured deity is usually found as a richly costumed dancer. Even in canoeing scenes, where dancing is impossible, he holds his arms in dancing pose. The codical God E is also a dancer, as can be seen on pages 20 of the Codex Paris and 33 of the Madrid. The Classic deity is usually covered by an abundant array of jade beads, pendants, and diadems; the precious stone may refer to the green and vital qualities of the living plant. The most elaborate costume worn by the young lord is that of the Holmul Dancer. On one vase (Coe 1978:Vase 14), the Holmul Dancer is glyphically named by the corn curl-infixed head in each of the

supplementary texts. Coe (1978:96) mentions that the following glyph refers to the particular figure carried in each of the three backracks. Although the main sign varies according to the particular burden, the superfix, the T86 maize affix, is constant. Coe (1978:95) notes the following features of the Holmul dancer backrack: a serpent-winged bird at top; a sky band niche containing the principal burden, a quadruped of some sort seated upon a Cauac throne; and finally, a complex pendant train. In his November talk, Hellmuth noted that along with the beaded belt and the Xoc Monster and spondylus medallion, the Principal Young Lord can also wear a beaded skirt. Anne Dowd has pointed out to me that upon the back of Copan Stela H there is a face-on view of a backrack notably similar to that of the Holmul Dancer (Maudslay 1889-1902:1:Pl. 56). Here the serpent-winged bird stands upon a sky band niche containing the burden, in this case a skeletal head of the sun god capped by the Quadripartite Badge (*ibid.*:Pl. 61).³ Below, in the hanging train, there is a small, rotund individual wearing a large loincloth. I suspect he is a Copanec version of the Holmul Dancer's dwarf assistant. The entire back assemblage is surrounded by a panoply of feathers, a feature also found on the Holmul Dancer.

The sides of Stela H contain four individuals with cranial maize foliation (Maudslay 1889-1902:1:Pl. 59), who Spinden (1913:89) identified as maize gods. Eighteen-Jog is clearly identified with these flanking individuals, as maize sprouts from the top of his headdress. Spinden (1913:90) also called attention to two carved slabs excavated by Gordon (1896:2) east of the Great Plaza at Copan. Both carvings portray a youthful dancing figure wearing the beaded belt, here with pendant Yax signs, and the Xoc Monster-spondylus medallion (Figure 9a). The flanges projecting from the sides of the hips are also found with the Holmul Dancer (e.g., Coe 1978:Vases 14, 15). Because of the explicit foliage growing from the top of the crania, Spinden identified the carvings as representations of the maize god. Thus, upon both Stela H and the carved slabs, dancers with cranial maize foliation are dressed in the costume of the tonsured young lord.

During his presentation, Hellmuth mentioned that upon the Palenque Tablet of the Foliated Cross, Chan-Bahlum is dressed in much of the costume of the Principal Young Lord. Thus he has the beaded belt, pendant elements, and the Xoc Monster-spondylus medallion; in addition, he wears the beaded skirt. It appears that here Chan-Bahlum personifies the sprouting maize, as he stands upon corn growing out of a cleft Cauac head. In the basal register of Bonampak Stela 1, an individual can be seen in the cleft of a Cauac Monster (see Mathews 1980:Fig. 3). The figure is clearly Hellmuth's Principal Young Lord, complete with the tonsured, elongated head, backcurving tassel, and the capping, beaded saurian creature (Figure 1e). The human profiles present in the corn curl foliation at the sides of the Cauac head are probably representations of the same youthful entity.

In a second variation of the emergence theme, the tonsured youth rises out of a cracked tortoise carapace (Figure 6a). On one codex-style plate, the Headband Twin with jaguar skin markings holds a downturned jug over the emergent youth (Robicsek and Hales 1981:Vessel

³ Hellmuth (pers. comm.) notes that the Stela H backrack is not entirely identical to the Holmul Dancer type. Thus, there is no known Holmul Dancer having the Quadripartite Badge or the sun god head burden. However, this does not discount the fact that 18-Jog is dressed as the tonsured young lord. This deity occurs with other dancing apparel; the Uaxactun Dancer is such an example. Of the various representations of the deity with a backrack, that upon Copan Stela H is most similar to the Holmul Dancer.

117). Robicsek and Hales (*ibid.*:150) note that the Headband Twin appears to be watering the rising figure. In another carapace scene (*ibid.*:Fig. 59), three deity boatmen hold articles suggesting successive stages in the maize agricultural cycle. The figure farthest from the emergent lord wields a pointed paddle notably similar to the *koa* (digging stick). The middle boatman holds the aforementioned jug, possibly representing the watering of the planted maize. The bestial form of GI, the boatman closest to the carapace, holds an eccentric flint as if to strike the neck of the young lord. The consequence of this act would be the decapitation of the elongated maize cob head, that is, the harvest.

If the tortoise shell emergence scene concerns the growth of maize, one would expect the carapace to represent the enclosing earth. Although Itsimté Altar 1 is badly battered, it is possible to reconstruct its original form (see Morley 1937-1938:5:Pl. 156; Robicsek 1978:Fig. 81a). The upper surface was a great tortoise shell having figures emerging from either end. God K, who is found frequently in one of the carapace openings, lies within the right side of the shell. In the better preserved portion of the monument, it can be seen that the carapace was marked with large Caban curls, a well known symbol of the earth.

The examples of the tortoise shell emergence theme, discussed above, have all been from the Guatemalan Peten. However, similar scenes can be found in Yucatan. On the carved columns of Chamber E, adjoining the Great Ball Court at Chichen-Itza, there is an important variant form (see Selser 1902-1923:5:317). Three individuals can be seen within a large, monstrous head marked with crossed bands. In the Maya codices, crossed bands are used as Cauac markings, and it is probable that the head is that of a Cauac Monster. However, in all of the column examples, the two lower figures appear to lie in the fore and aft openings of the carapace. Although squash sprouts from their heads, the head of the central, rising young lord contains unequivocal representations of corn.

In the most recent and thorough discussion of the carapace emergence theme, Robicsek and Hales (1981:150) state that in the past, it would be interpreted as the youthful maize god rising out of the earth. However, they dismiss this possibility on the basis of the corn curl–infix nominal glyph. Instead of considering it as a reference to maize, they regard it as a personified Ahau glyph. Because the nominal glyph can occur with the coefficient of one, they interpret it as 1 Ahau, or in Quiche, Hun-Hunahpu, the *Popol Vuh* father of the Hero Twins. However, the head of the spotted Headband Twin serves as the conventional personified Ahau glyph, not the youthful corn curl glyph (Thompson 1971:Fig. 11). Moreover, in the canoe scenes of Tikal Burial 116 (Triak 1963:Figs. 3, 4), the corn curl head is supplied with the coefficient of six rather than one. Although the deity does not appear to have been named as Hun-Hunahpu, he probably is a Classic form of the Quichean character.

In the *Popol Vuh*, Hun-Hunahpu is described as the father of Hunbatz and Hunchouen, the singers and artisans who were turned into monkeys by their half-brothers, Hunahpu and Xbalanque (Recinos 1950:108-109). Coe (1977) has demonstrated that the monkey brothers occur as Howler Monkey scribes in Classic Maya iconography. As well as being a dancer, the tonsured young lord is commonly portrayed as a scribe and artisan (e.g., Robicsek and Hales 1981:Vessels 60, 61, 62, 69, 71, 72). Coe (1977:328) notes that the Central Mexican monkey day sign Ozomatli, equivalent to the Quichean day of Batz, was presided over by Xochipilli, the Flower Prince. A god of dance, music, and the arts, Xochipilli was also identified with maize. On page 35 of the Codex Magliabechiano, Xochipilli is carried in a maize-covered litter. Xochipilli is closely related to the corn god Centeotl, a deity born on *ce xochitl* (Sahagún 1950-1982:Book 2:212), equivalent to the Quichean date of Hun-Hunahpu.

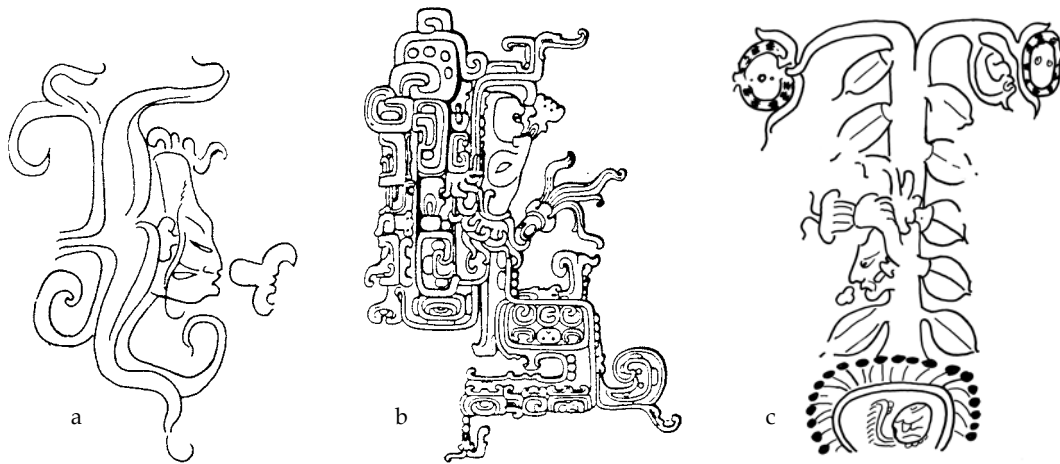


Figure 4. Disembodied heads with foliation: (a) tonsured head in center of foliage (after Robicsek 1978:Pl. 191); (b) inverted head with maize foliation, from Zoomorph P, note facial markings and cartouche containing corn curl grains and inverted Ahau (from Spinden 1913:Fig. 33); (c) head of tonsured lord placed in flowering cacao tree, drawn from vessel in Museo Popol Vuh, Guatemala City.

Nicholson (1971:416-419) placed the two gods under a single category in his Centeotl-Xochipilli Complex, “the cult which revolved around the cultivation of the staple food plant, maize.” On pages 47 and 48 of the Magliabechiano, it is stated that major festivals dedicated to Xochipilli were held on 1 Xochitl and 7 Xochitl. These dates correspond to the Quichean calendric names of Hun-Hunahpu and his brother, Vucub-Hunahpu.

Both Hun-Hunahpu and the tonsured young lord suffer the act of decapitation. On one vessel in the Museo Popol Vuh, the young lord’s head is in a cacao tree (Figure 4c), much like the *Popol Vuh* incident when Hun-Hunahpu’s head is placed in a gourd tree. It is probable that the specific species of tree mentioned in the *Popol Vuh* is a product of the Quichean language as it functions through punning to connect two parallel episodes in the *Popol Vuh*. Just as Xquic, or Blood Girl, goes to the lone gourd tree in the underworld, upon arriving on the earth’s surface she visits another single standing plant, a corn stalk. By pulling off the silk from the single cob, she magically produces a great load of corn. In so doing, she proves to be the spouse of Hun-Hunahpu. Whereas the Quichean word for gourd tree is *tzimah*, that for corn silk is *tzimiy* (Edmonson 1965:134-135). Such a word play, *tzimah* to *tzimiy*, serves to link the head of Hun-Hunahpu to the lone maize cob.

Among certain contemporary Maya groups, the cobs of maize specifically used for planting seed are placed in actual or symbolic trees. In Yucatan, there is the granary termed the *cuumche*, or vase tree.⁴ A tree with three branches emerging equidistant from the trunk is cut and trimmed. Vine is wrapped around the upper limb section, making a sort of large basket. The cobs used for planting are placed within the raised container. Among Highland Maya groups, cobs saved for planting seed are usually placed in the house rafters. However, once the seed has been removed, the Tzotzil Zinacantecos place the spent cobs in the forks of trees (Vogt 1969:45). Girard (1962:109, 311) has recorded several Chorti ceremonies involving the consecration of the planting seed. In this case an altar is densely covered with vegetation

⁴ I am grateful to Rufino Vargiez of Telchaquillo, Yucatan, for describing the structure to me.



Figure 5. Severed heads of the Postclassic God E and Classic vessels depicting the disembodied head of the tonsured lord, note Kan crosses on plate rims: (a) severed head of God E surrounded by red pool of blood, note necklace (after Codex Madrid, p. 35b); (b) head of God E on Caban earth sign, has bell-shaped nose piece (after Codex Dresden, p. 34a); (c) head with corn curl infix in center of bowl, repetitive series of nominal glyphs and maize grains inside two Kan crosses (after Arts Club of Chicago 1982:Pl. 46); (d) disembodied head with backcurving tassel (after Coe 1982:No. 48); (e) head with corn curl infix (after Coe 1973:No. 11).

that suggests, according to Girard, a great tree laden with fruit. The corn and fruit hanging from the ceiling are to be used in the planting. Girard (1962:109, 219) suggests that the verdant, fruit-laden altar is a Chorti ritual form of the tree containing the head of Hun-Hunahpu.

Following a suggestion by Dr. Pearlman, Coe (1978:83, 1982:92) has mentioned that the disembodied head frequently found in the center of Late Classic plates may represent the severed head of Hun-Hunahpu. The head is undoubtedly that of the tonsured young lord. At times, it has the corn curl infixed to the back of the skull (Figure 5c, e). All three of the plates shown in Figure 5 have Kan Cross rims. The Kan Cross can be greatly varying

length; that of Figure 5e encircles over half of the rim. The frequency of the Kan Cross upon these plates is surely not coincidental. Stephen Houston (pers. comm.) has noted that the Chama Vase (Coe 1978:Vase 9:A1, E1, J1) provides direct substitutional evidence that the Kan Cross carried the phonetic value of *kan* in the Classic script. Thompson (1971:75) notes that in contemporary Maya languages, forms of this word denote yellow, ripeness, and by extension, maize.

Severed heads of God E are present on pages 34a of the Codex Dresden and 35b of the Madrid (Figure 5a, b). Both are clearly dead; the Madrid example is surrounded by a pool of blood, and the eyes of the Dresden head are shut. These Postclassic examples of the maize god share specific features with the tonsured head found in the center of Late Classic plates. Terming it the Disembodied Head, Coe (1978:83) notes that the Classic entity usually has a necklace at the base of the neck and a bell-shaped nose ornament. Whereas the beaded necklace is prominent at the base of the Madrid head, the Dresden example has the nose ornament. Although none of the Classic plates illustrated have the bell-shaped nose ornament, it can be seen in other depictions of the disembodied head (Figure 4a–c). Coe (*ibid.*) also mentions that the Late Classic head frequently has red swirling facial paint (Figure 5c, d). Each of the inverted severed heads upon Quirigua Zoomorph P has similar facial patterning and the bell-shaped nose ornament (Figure 4b). At the base of the neck are beaded swirls, probably a reference to blood. Two streams of foliation grow from the cranium; one contains a corn curl cartouche, denoting it as a maize cob. The foliated severed heads clearly symbolize the cob cut from the stalk. It is probable that the disembodied, tonsured head also

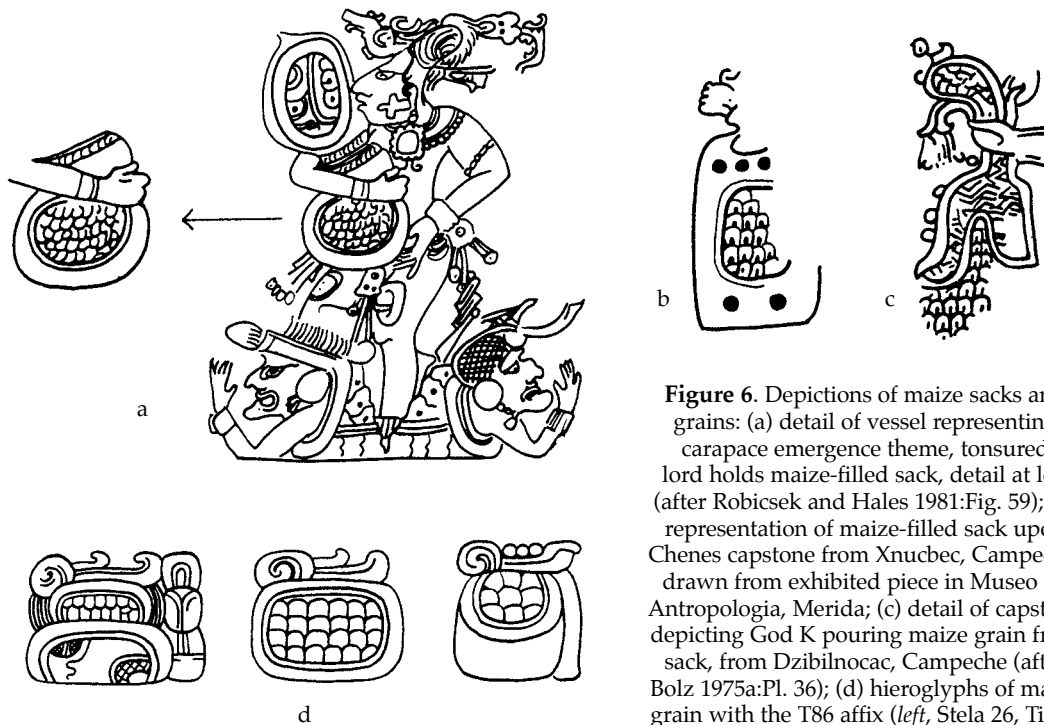


Figure 6. Depictions of maize sacks and grains: (a) detail of vessel representing carapace emergence theme, tonsured lord holds maize-filled sack, detail at left (after Robicsek and Hales 1981:Fig. 59); (b) representation of maize-filled sack upon Chenes capstone from Xnucbec, Campeche, drawn from exhibited piece in Museo de Antropología, Mérida; (c) detail of capstone depicting God K pouring maize grain from sack, from Dzibilnocac, Campeche (after Bolz 1975a:Pl. 36); (d) hieroglyphs of maize grain with the T86 affix (*left*, Stela 26, Tikal; *center*, Stela 31, Tikal; *right*, Stela 10, Copan).

represents the harvested maize.

Hellmuth (pers. comm.) has mentioned that the Uaxactun Dancer is the full figure counterpart of the disembodied head found on Classic vessels. As with the Holmul Dancer, the Uaxactun Dancer is named after the first reported site from which vessels bearing his form were found. Occurring in dance form in the center of Late Classic bowls and plates, he is

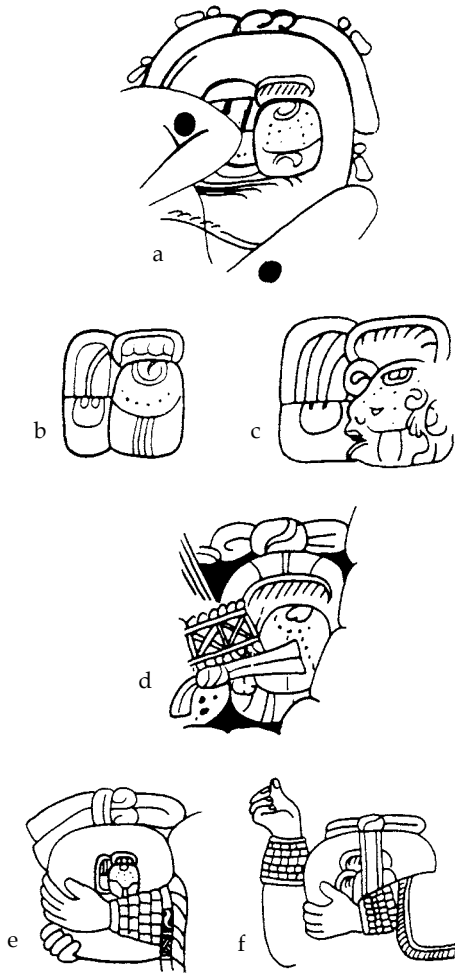


Figure 7. Hieroglyphs on Late Classic bundles: (a) bundle-sack carried by spotted Headband Twin, note glyphic compound with Spotted Kan main sign, same as on examples *d*, *e*, and *f* (after Robicsek and Hales 1981:Vessel 186); (b) Spotted Kan compound from Temple of the Inscriptions, Palenque; (c) stucco compound from Palenque; (d) bundle with Spotted Kan compound placed on throne behind God L (after Coe 1973:Vase 49); (e) bundle with Spotted Kan compound, Yaxchilan Lintel 1; (f) bundle with partially obscured glyphic compound, Yaxchilan Lintel 5.

undoubtedly the same tonsured individual known as the Holmul Dancer and the Disembodied Head. Globular maize grains are frequently depicted on the interior of Uaxactun Dancer plates (see Smith 1955:Fig. 73a; Coe 1982:No. 44). Kan Cross rims are also common on Uaxactun Dancer vessels (e.g., Coggins 1975:Figs. 88a, 106d). The simple reason why so many Late Classic plates and shallow bowls contain severed maize heads, the dancing young lord, Kan Crosses, and maize grains, is that such plates most likely contained corn. Maize grain is frequently seen placed in similar bowls in Late Classic vessel scenes (e.g., Adams 1971:Figs. 77-80; Coe 1973:Vases 13, 30; Coe 1978:Vase 7).

The tonsured young lord frequently carries a large sack across his shoulder; the article is probably a grain sack containing maize. In one vessel scene, his sack is shown in a cutaway view, exposing the grain inside (Figure 6a). On one Chenes painted capstone from Xnucbec, Campeche, God K stands in front of a sack represented with a similar "X-ray" view (Figure 6b). In a Chenes capstone from Dzibilnocab, God K pours maize grain out of a woven sack (Figure 6c).⁵ Masses of maize grain can also be found in the Classic script, complete with the T86 maize affix (Figure 6d).

The Headband Twins, frequently found with the tonsured young lord, at times also carry the maize sack. In one vessel scene, the twins are seen seated behind the young lord (Coe 1973:Vase 43). One of the twins (Coe 1973:Vase 43, Figure 2) holds the sack with both hands. In a vase scene showing the young lord receiving or bestowing his regalia, the spotted Headband Twin holds the sack (Robicsek and Hales 1981:Vessel 82). In

⁵ Karl Herbert Meyer (pers. comm.) kindly provided me with information regarding the provenience of the two capstones.

yet another scene depicting the tonsured young lord with the Headband Twins, the twin with the jaguar pelt markings holds a great bowl or basket containing the young lord's jewelry; the other twin holds the sack (*ibid.*:Vessel 186). Although the bag has the typical cloth strap, it is also supplied with the bundle topknot and a glyphic compound (Figure 7a) composed of a Spotted Kan main sign (T507), affixed by T679a and T25, Landa's *i* and *ca*. The same compound is found in the inscriptions at Palenque and upon Classic bundles. Examples of such bundles occur upon Classic vases and several Yaxchilan lintels (Figure 7d-f). The meaning of this compound is unknown, save that it appears, at least tangentially, to concern maize. This is in part suggested by the Spotted Kan, which in form is simply a Kan sign supplied with a series of dots. However, the bundle's iconographic context presently supplies the strongest evidence for maize. Thus, in the aforementioned vase scene, the bundle is conflated with the young lord's grain sack. Moreover, bundles marked with simple Kan signs are also found in Classic iconography (e.g., Coe 1973:No. 32; Parsons 1980:Pl. 312; Robicsek 1978:Pl. 137).

I am not suggesting that bundles found in dynastic scenes simply contained maize. Maize was probably used as a metaphor for other valued substances, such as jade and blood. From the Early Classic to the Late Postclassic, maize and bloodletting were closely identified among the Maya (Figure 8). Jeffrey Miller (1974:154) noted that the Xoc Monster and spondylus belt serve as symbols of women; however, this assemblage is also commonly worn by the tonsured young lord. Schele (1979:46) interprets its presence on males as a reference to bloodletting; much like suckling a child, the rulers nourish the gods with their blood. In support of this interpretation, Schele cites the *Popol Vuh* episode when men were created to nourish the gods. It should be noted that this was the race of men fashioned from maize (Recinos 1950:167). The tonsured young lord at times has a decidedly feminine caste, which parallels the female, life-giving quality of maize. Among Highland Maya groups, corn is commonly identified with the blood of parturition. Ximénez recorded that the seventeenth century Pokomam cut the child's umbilical cord over a corn cob; the bloodied seed was saved for the planting (cited in Edmonson 1971:108). A similar custom continues among contemporary Tzotzil. The small crop, termed the "child's blood," is shared within the family (Guiteras Holmes 1960:6). Vogt (1969:63) mentions that among the Zinacanteco Tzotzil, two maize cobs are placed on the woman's abdomen immediately after birth.



Figure 8. Depictions of maize in association with bloodletters: (a) figure at base of Yaxha Stela 2, Early Classic, note maize cob in forehead and shining lancet in mouth; (b) Late Classic Foliated Maize God holding bloodletter, Copan Stela H; (c) Postclassic representation of bowl containing Kan sign grains and stone and stingray spine perforators, Codex Madrid, p. 37.

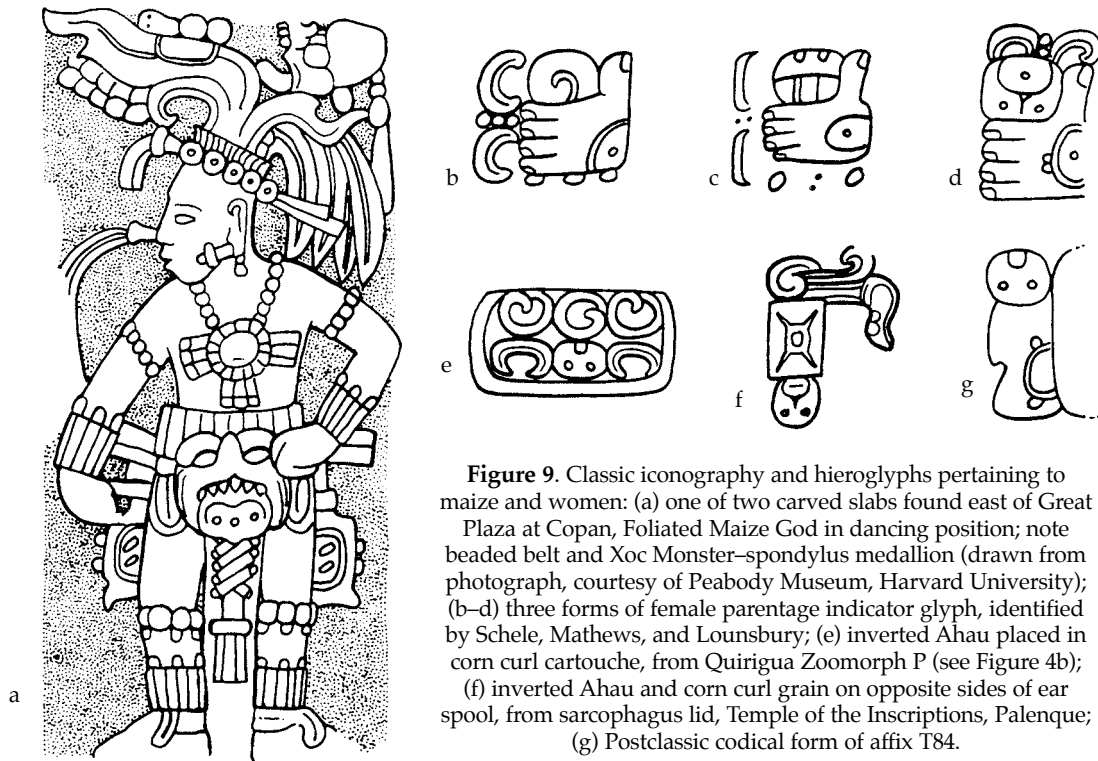


Figure 9. Classic iconography and hieroglyphs pertaining to maize and women: (a) one of two carved slabs found east of Great Plaza at Copan, Foliated Maize God in dancing position; note beaded belt and Xoc Monster–spondylus medallion (drawn from photograph, courtesy of Peabody Museum, Harvard University); (b–d) three forms of female parentage indicator glyph, identified by Schele, Mathews, and Lounsbury; (e) inverted Ahau placed in corn curl cartouche, from Quirigua Zoomorph P (see Figure 4b); (f) inverted Ahau and corn curl grain on opposite sides of ear spool, from sarcophagus lid, Temple of the Inscriptions, Palenque; (g) Postclassic codical form of affix T84.

It is possible that three of the Classic female parentage statement glyphs identified by Schele, Mathews, and Lounsbury (1977) represent hand-held maize grain (Figure 9b–d). One of the hieroglyphs is a hand holding the corn curl grain. The hand can also hold a Ben sign; in his study of the *ahpo* affix, Lounsbury (1973) provided the phonetic value of *ah* for the Ben sign. In a number of Highland Maya languages, *ah* is a term for maize (Lounsbury, pers. comm.). For the third variant under discussion, an inverted Ahau is held. It is possible that the inverted Ahau is purely phonetic, and signifies *al*, a term for mother’s child in a number of Maya languages. However, the inverted Ahau is often paired with the corn curl in Classic iconography (Figure 9e, f). Moreover, a similar element forms the seed of affix T84 (Figure 9g), an affix identified as representing maize (Knorozov 1967:83).

During a recent Princeton conference devoted to early Maya art, David Stuart (1982) presented a paper concerning the Classic symbolism of dynastic blood. He mentioned that the Tikal Rowers appear to be closely identified with dynastic bloodletting. The rowers are best known from a number of the carved bones found in Burial 116 at Tikal. The principal passenger in these scenes is the tonsured young lord (see Trik 1963:Figs. 3, 4, and 5). It is interesting that although Kelley (1976:236) does not interpret the tonsured deity as a maize god, he suggests, on the basis of the animal passengers, that these scenes concern the mythical theft of corn. On an Early Classic Tikal ceramic vessel, the rowers emerge from the heads of a bicephalic serpent (see Coe 1965b). The head of the central figure holding the serpent has a corn seed cartouche sprouting maize foliage (Figure 10a). The beard is found in other Early Classic examples of the young lord (Figure 10b–d). Example *b*, from the Pomona Flare, has been previously identified by John Justeson (pers. comm.) as a representation of the maize god.

An identifying feature of Classic emblem glyphs is the so-called water group prefix

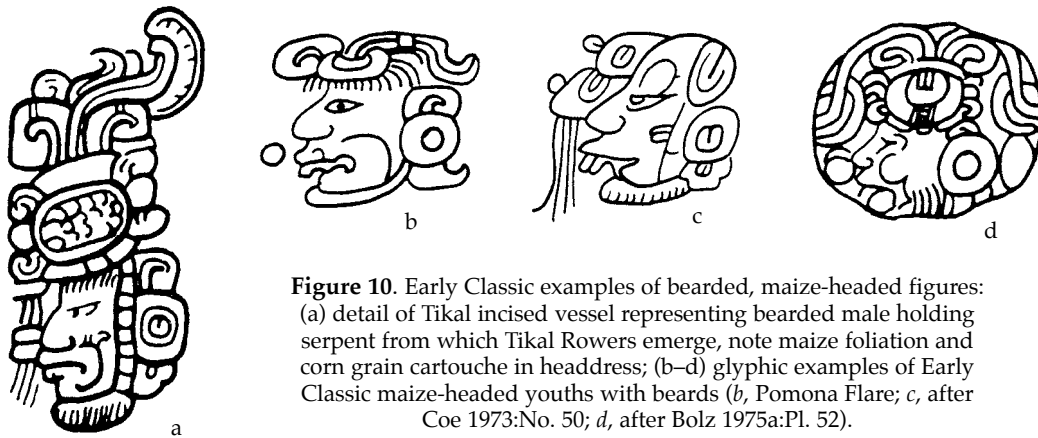


Figure 10. Early Classic examples of bearded, maize-headed figures: (a) detail of Tikal incised vessel representing bearded male holding serpent from which Tikal Rowers emerge, note maize foliation and corn grain cartouche in headdress; (b-d) glyphic examples of Early Classic maize-headed youths with beards (b, Pomona Flare; c, after Coe 1973:No. 50; d, after Bolz 1975a:Pl. 52).

(Figure 11a). Both Seler (1902-1923:3:649) and Barthel (1968:168) have mentioned that the prefix may represent blood; Barthel favored lineage blood in particular. Stuart (1982) also considers the water group to be a reference to dynastic blood. He compares the prefix to similar streams found issuing from the hands of Yaxchilan rulers (Figure 11d). Stuart notes that the perforator god, identified by Joralemon (1974), usually hangs inverted next to the ruler's groin. The spondylus shell, another probable reference to bloodletting (Schele 1979), commonly depends below the perforator. Stuart notes that cartouches found in the Yaxchilan

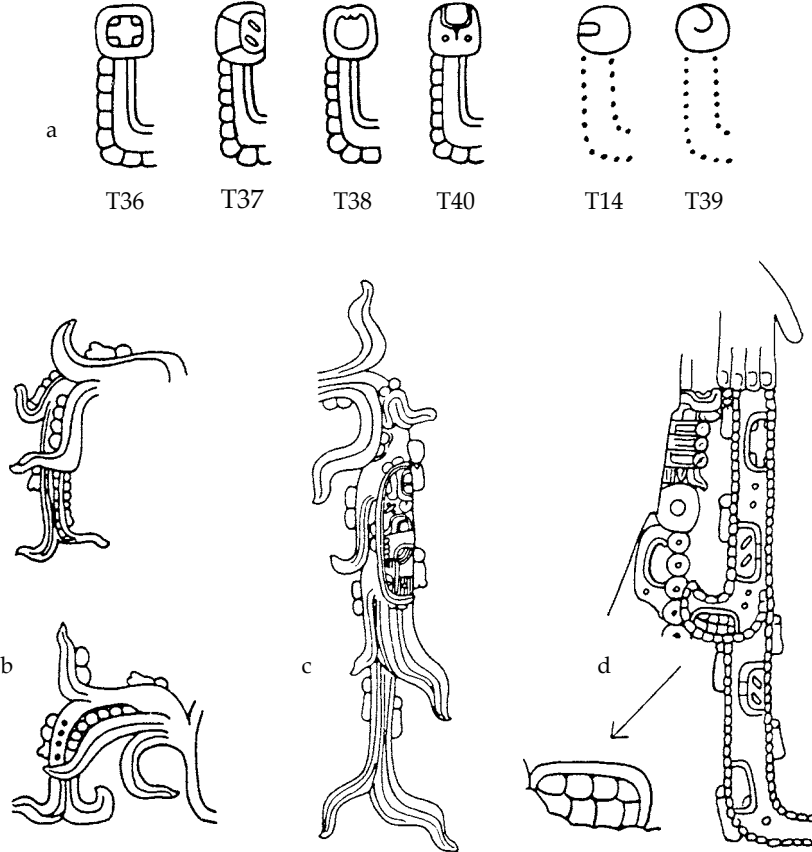


Figure 11. Glyphic and iconographic imagery concerned with bloodletting and maize: (a) Classic and Postclassic examples of water group prefix; (b) representations of corn upon Temple of the Foliated Cross, Palenque; (c) detail of inverted maize cob, from East Jamb of Temple of the Foliated Cross, Palenque; (d) detail of Stela 1, Yaxchilan, beaded stream falls from hand of ruler, contains Kan cross, Yax sign, and corn grain cartouches; detail of grain cartouche at lower left.

streams also occur in the water group affixes. Thus the Yax and Kan signs present in the Stela 1 bloodstream are also found in water group affixes T36 and T37. The Stela 1 stream has yet another cartouche, this one containing a cluster of maize grains (Figure 11d). Both the Yax sign, a sign for green, and the aforementioned Kan Cross also appear to refer to maize. The other water group signs allude to previously discussed maize imagery. Thus the spondylus of T38 is commonly worn by the tonsured young lord. It has been suggested that the inverted Ahau, present in T40, refers to maize grain. Finally, affixes T14 and T39 contain the globular and corn curl grain elements (Figure 11a). Barthel (1968:165-166) notes that these function as water group affixes in the Postclassic codices.

The beaded streams found in the Yaxchilan bloodletting depictions and the water group prefix are notably similar to Classic representations of maize. The corn plants carved upon the Palenque Tablet of the Foliated Cross contain lines of seed very much like the beaded edges of the water group (Figure 11b). In Tzotzil, the words for hanging seed corn are *čohi* or *čohol*; the term for the dripping down of juice or blood is *čohlahet* (Laughlin 1975:122). Fought (1972:498) has recorded a modern Chorti account explicitly identifying maize seed with blood:

People when they are dying, save their corn which has beautiful grains. They look for those with beautiful white grains, with black corn, with red corn. Because they say that that is the blood of Jesus Christ.

I suspect that blood was considered as dynastic seed, the vital material which linked the generations of the living and the dead.

The Classic act of phallus perforation parallels a basic Mesoamerican agricultural practice, the dehusking of the cob. Steggerda (1941:Pl. 21d) has illustrated a number of husking pins collected among contemporary Yucatec Maya. Made of antler, sharpened bone, and wood, they are used to pierce and separate the husk, thus exposing the seed. If these instruments were found in the context of a Classic elite tomb, they would probably be identified as bloodletters, such as were used in rites of penis perforation. Boos (1968:2, 3) has illustrated two examples of a rare type of Zapotec urn. Following Caso and Bernal (1952:99), Boos (1968:7) noted that the urn figure has a corn cob phallus and a vaginal plaque upon the waist. However, neither Boos nor Caso and Bernal mention the significance of the large twisted cord held in both hands and passing under the phallus. In Mesoamerica, such cords were commonly passed through the wounds inflicted during penitential bloodletting (e.g., Yaxchilan Lintels 15, 17, and 24; Codex Madrid: pp. 19, 82). The figure thus appears to be an individual wearing a female symbol on his waist as he engages in bloodletting from his cob phallus. In this sense, the Zapotec entity closely resembles the tonsured young lord, who is identified both with maize and blood and wears the female Xoc Monster-spondylus medallion upon his waist.

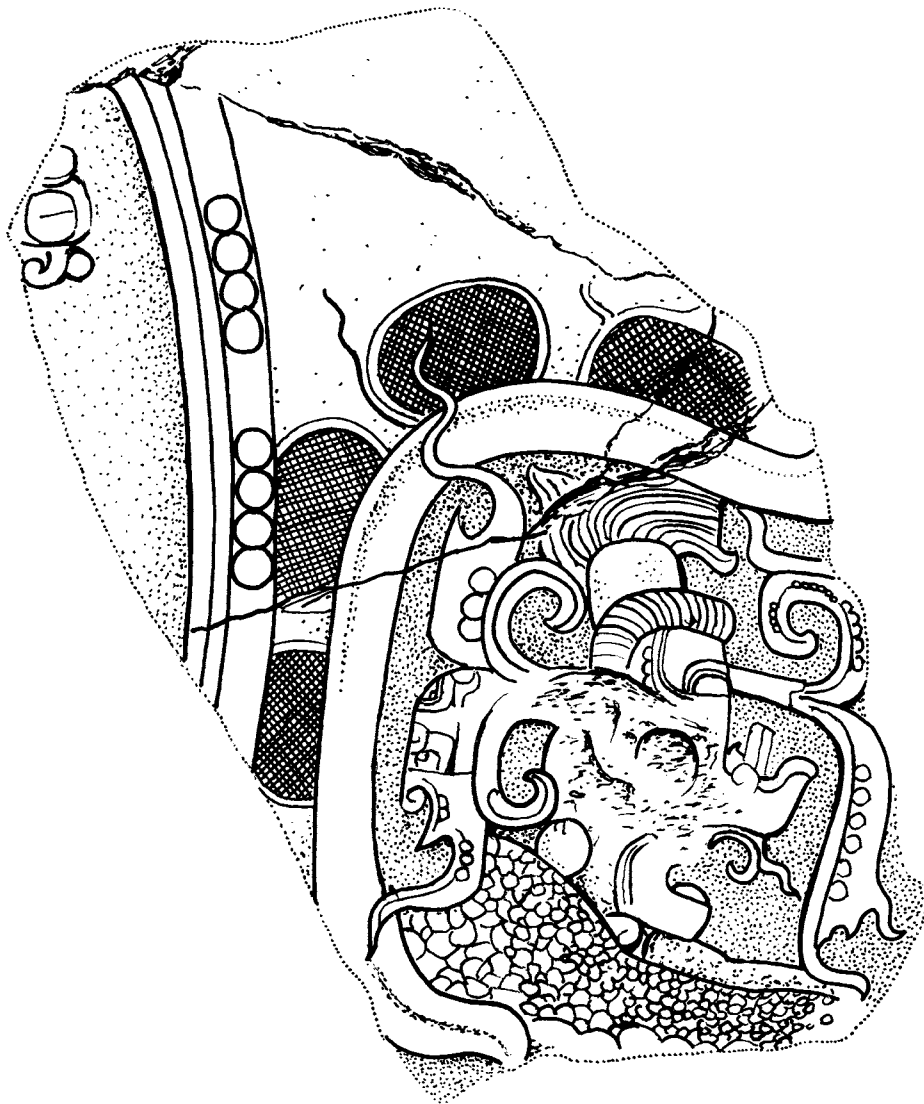
It has been mentioned that the young lord's elongated and tonsured head is commonly found with the Classic God K, a deity closely identified with elite lineages and dynastic descent (Schele 1979). At times, the young lord can be found with the forehead torch of God K, such as upon Copan Stela 11 (Maudslay 1889-1902:1:Pl. 112) and a Late Classic incised vessel (Smith 1952). Kelley (1965:108) has demonstrated that the Palenque Tablet of the Foliated Cross concerns the birth of God K, or GII, on 1 Ahau 13 Mac. In the Temple of the Foliated Cross, representations of maize and bloodletting are explicit. On one side of the tablet, Pacal

holds the perforator while standing upon a maize plant; on the flanking door jambs, both Chan-Bahlum and Pacal hold bloodletters (Joralemon 1974). Considering his strong association with both blood and dynastic descent, it is possible that the tonsured young lord was considered as the founding mythical ancestor of the Maya elite. The *Popol Vuh* states that mankind originated from maize, a material personified as the Classic tonsured young lord.

Conclusions

The entity isolated and identified by Hellmuth as the Principal Young Lord appears to be a Classic god of maize. His elongated, tonsured head mimics the long tasseled cob. Maize grain, at times infixed into his head, is an identifying feature of his personified nominal glyph. His jade ornaments evoke verdant, precious qualities of the living plant. The god's delicate features and Xoc Monster-spondylus medallion suggest the feminine nurturing qualities of corn; among contemporary Mam Maya, maize is termed "Our Mother" (Valladares 1957:196). The sack which he carries appears to contain maize grain. He is frequently found in canoes or wading in standing bodies of water among fish and water lilies, all of which suggest Puleston's (1977) iconography of raised field agriculture.

In many respects, the long-headed tonsured deity overlaps with the Classic individual having cranial maize foliation. At Copan, this latter figure occurs in dancing posture wearing the beaded belt and Xoc Monster-spondylus medallion. Both the tonsured and foliated figures can appear as disembodied heads, a probable reference to harvesting the cob. Much like the Bonampak Stela 1 depiction of the tonsured deity, the foliated figure is also found emerging from Cauac heads (e.g., Lintel 3, Temple IV, Tikal). Most importantly, with the Young Lord glyph of the primary Standard Sequence and the personified glyph of the number eight, there are cases of direct substitution between the foliated maize head and the tonsured lord nominal glyph. However, although the tonsured and foliated characters are perhaps aspects of the same entity, it is doubtful that they are entirely equivalent. The glyphic substitutions, although noteworthy, are rare. Moreover, whereas the tonsured lord is one of the principal characters depicted on Late Classic vessels, there is apparently no representation of the foliated character in any of the ceramic scenes. It is possible to discuss something of the mythology surrounding the tonsured lord. For example, one can note the canoe journey, his watery exchange with nude young women, the emergence from the carapace, and also the particular characters he is involved with, such as the Headband Twins, the howler monkey artisans, and the Tikal Rowers. In contrast, the foliated entity is represented in a far less narrative manner; he usually appears in isolation, without the rich contextual associations found with the tonsured character. Although the foliated figure continued into the Postclassic as God E, the tonsured entity seems to have largely ended with the Classic collapse. An interesting exception occurs on page 36b of the Codex Dresden. Here God B canoes a tonsured individual supplied with a horizontal strip of dark hair; the verbal compound at A1 contains the nominal glyph of God E. There are Kin and Akbal glyphs at A2, signs frequently paired with the Tikal Rowers. It is noteworthy that in this scene, which so strongly suggests the Classic canoe episode, the passenger is not the conventional God E, but a rare Postclassic form of the tonsured lord. Because they are not entirely equivalent, the two Classic entities should have separate names. Suitable terms would be the Tonsured Maize God (TMG) and the Foliated Maize God (FMG). It will take considerably more research to determine how and to what degree these two categories are distinct.



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A Prehispanic Maya Katun Wheel

From the beginnings of the Classic period to the mid-eighteenth century, a span of some twelve hundred years, the Katun has been one of the basic time units of the Maya. Composed of twenty Tuns of 360 days, the Katun is almost twenty years, to be precise, 7,200 days. In Classic period inscriptions it is but the fourth of five time units composing a continual count of days from a mythical event in 3114 BC. But the Katun is a great deal more than a dull cog of Maya calendrics; it constitutes an essential element of traditional Maya history and religion. The great majority of Classic Maya monuments commemorate the ending of the Katun period. Classic Maya lords proclaimed the number of Katun endings experienced during their lifetimes as a sort of title. In Postclassic and colonial Yucatan, invasions, droughts, and even the creation and destruction of the world were recorded and foretold in terms of the Katun cycle. But although the progress and completion of the Katun is expressed repeatedly in prehispanic and colonial Maya accounts, we have little understanding about how the passage of the Katun periods was actually perceived. The focus of this study is upon the succession of Katuns of Postclassic and colonial Yucatan. I will demonstrate that the turtle was an important means of describing the Katun cycle. In both the Classic and Postclassic periods, this creature was explicitly identified with period ending dates. Moreover, the Postclassic data provide strong evidence for the importance of penitential bloodletting at period ending ceremonies. Finally, I will argue that, among the Classic and Postclassic Maya, the turtle served as a model of the circular world.¹

The Katun Round of Postclassic Yucatan

The end of the Classic period (AD 300–900) ushered in an abrupt change in Maya calendrical ceremonialism. Not only were monuments with Long Count dates no longer fashioned, but, among the Postclassic Quiché, Tzotzil, and other Mayan groups of the southern highlands, the passage of the Katun was no longer observed, much less celebrated. This was not the case for the Yucatecan-speaking peoples of the northern Maya lowlands, who continued to erect monuments in commemoration of the Katun (see Morley 1920:574–577). However, the Postclassic Yucatecan method of recording Katun dates was different from the Classic Long Count. The count of the Katun, or *u kahlay katunoob*, was a continuous succession of thirteen Katuns covering a span of slightly over 256 years. Each of the thirteen Katuns was named by the 260-day Tzolkin calendar, more specifically, by the Tzolkin day sign and coefficient with which the Katun ends. Because the 7,200 days constituting a Katun are evenly divisible by twenty (the number of day signs), the Katun was always named Ahau. However, the number of coefficients accompanying the day names does not evenly divide a Katun, as 7,200 divided by thirteen leaves a remainder of eleven. Thus each Katun is two coefficients less than the previous one. Beginning with 11 Ahau, the numbered sequence runs as follows: 11, 9, 7, 5, 3,

¹ This paper was originally presented at the 1987 Annual Meeting of the American Society for Ethnohistory, Oakland, California, November 6, 1987.

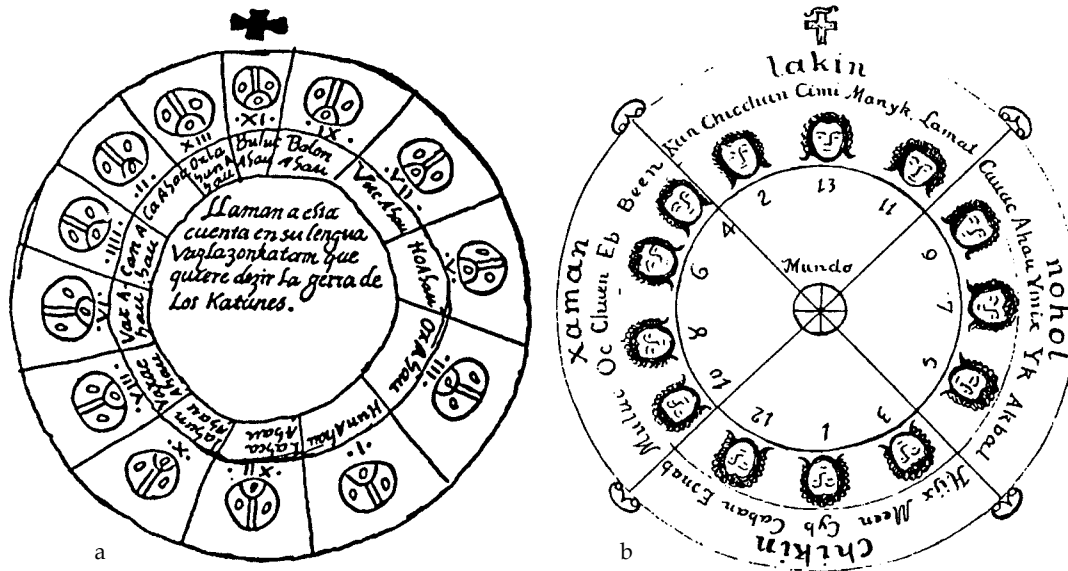


Figure 1. Examples of colonial Yucatec Katun wheels: (a) sixteenth-century Katun wheel provided by Landa (from Tozzer 1941:167); (b) Katun wheel from the *Chilam Balam of Kaua*, the thirteen Katuns and twenty day names are oriented to the four directions at edge of wheel (from Bowditch 1910:Fig. 64).

1, 12, 10, 8, 6, 4, 2, and 13, with 13 Ahau being the final Katun of the round.

The circular Katun wheel is an elegant means of expressing the *u kahlay katunoob*, or cycle of thirteen Katuns (Figure 1). The sixteenth-century work of Diego de Landa, the *Relación de las cosas de Yucatan*, contains the earliest of the seven calendar wheels known for the colonial Yucatec (Glass 1975:77).² Although Landa (Tozzer 1941:168) states that the prehispanic Yucatec used such circular diagrams for computations, all other cited examples derive from seventeenth- and eighteenth-century documents. Pages 2–12 of the damaged prehispanic Paris Codex represent eleven of the thirteen Katuns constituting a Katun round. However, in this page-by-page sequence, no hint is given of a circular system of organization.³ Pages 75 and 76 of the Codex Madrid offer some indication of a circular plan, although the diagram most closely resembles the strongly quadrangular organization appearing on page 1 of the Mexican Fejervary-Mayer. Moreover, the Codex Madrid is entirely concerned with orienting the Tzolkin to the four directions and has no direct bearing on the succession of Katuns. Writing some fifty years ago, Ralph Roys (cited in Tozzer 1941:167, n. 878) states that “no known pre-Spanish representation of a katun wheel or any other circular chronological diagram has yet been found.” This statement would still hold true today, were it not for the discovery of a small and superficially insignificant carving in the ruins of Mayapan.

² Colonial Yucatec calendar wheels concern not only the Katun cycle because year bearers and the twenty days are also represented. Wheels dealing exclusively with the Katun are to be found in Landa’s *Relación* (Tozzer 1941:167) and the *Chilam Balam of Chumayel* (Bowditch 1910:Fig. 63; Roys 1933:132).

³ In the colonial Chilam Balam books, one period ending term, *wudz*, appears only with the completion of Katuns (J.E.S. Thompson 1950:189). In Yucatec, *wudz* specifically means “to fold.” Thompson notes that the entire Katun round is at times referred to as *oxlahun wudz katun*, which he translates as “thirteen foldings of the Katun.” I suspect that rather than referring to the Katun wheel, the literary term *wudz* derives from the page-by-page sequencing of the prehispanic Katun pages, such as appears in the Paris Codex. Each Katun page corresponds to a fold (*wudz*) in the prehispanic screenfold.

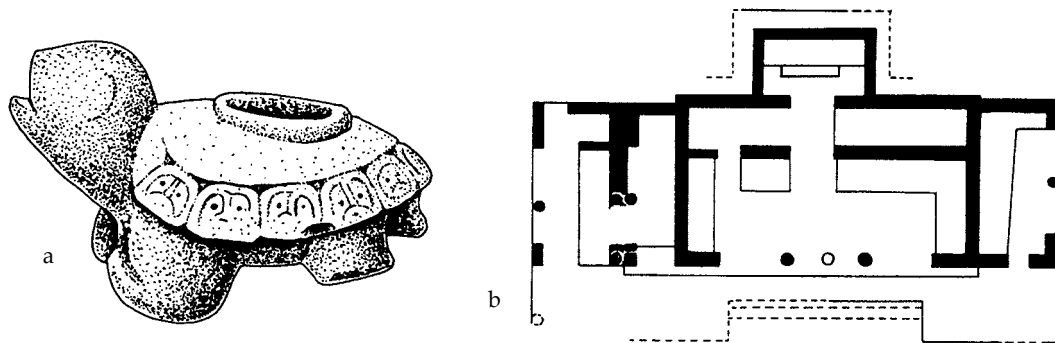


Figure 2. The stone turtle of Structure Q-244b: (a) profile of stone turtle, showing six of thirteen Ahaus carved on carapace rim (after Proskouriakoff 1962b:Fig. 1g); (b) plan of Structure Q-244b, turtle was discovered in central shrine room at back of building (after Smith and Ruppert 1956:Fig. 3).

During the Late Postclassic period, Mayapan was the center of a vast hegemony extending over much of northern Yucatan. According to the chronicles, Mayapan was founded in Katun 13 Ahau and destroyed in Katun 8 Ahau (Roys 1962). It is widely believed that these dates correspond to the later part of the thirteenth century and the middle of the fifteenth century. Under the directorship of Harry D. Pollock, the Carnegie Institution of Washington undertook extensive excavations at Mayapan from 1951 to 1955. Among the more common sculptures uncovered by the Carnegie excavations were small, simply carved stone turtles. At least twenty whole or fragmentary examples were discovered, ranging from 12.5 to 42 cm in length.⁴ At times the turtles are anthropomorphic, bearing the face of a wizened old man. In her analysis of the Mayapan sculptures, Proskouriakoff (1962b:331) identifies the anthropomorphic figures as God D. However, the figures are clearly God N, or Pauhtun, who is frequently found wearing a turtle carapace in Classic and Postclassic Maya art. In Mayapan Structure H-17, four God N turtle sculptures were found, recalling the strongly quadripartite aspect of God N (D.E. Thompson 1955:282). Parenthetically, it is possible that the pair of Early Classic God N sculptures formerly in the collection of Jay C. Leff constituted part of a similar set of four God N figures (see Easby 1966:Pls. 446-447).

The great majority of Mayapan stone turtles were found in close association with the interior shrine altars of either ceremonial structures or large houses near the center of Mayapan (Proskouriakoff 1962b:331). For example, an especially large sculpture was found in Structure Q-81, a colonnaded hall located in the ceremonial center of Mayapan. Also found in the area of this shrine were a great many incensario figures, among the finest examples known for Mayapan (Winters 1955). Structure Q-244b, on the other hand, was not a public building but a residence located on the south side of a patio courtyard (Smith and Ruppert 1956). Excavated in 1955, Q-244b was an unusually elaborate household structure containing six rooms (Figure 2b). The shrine, Room 3, is located on the central axis, furthest back from

⁴ Diane Chase (1985:228) mentions that three stone turtles were excavated at Santa Rita in association with Structures 8, 25, and 77. Gann (1928:132) describes three fragmentary stucco-modeled turtle sculptures in a small shrine south of Tulum. Another limestone turtle, almost identical to examples from Mayapan, was exhibited at the Dallas Museum of Fine Arts (Stendahl 1950).

In-the-round turtle sculptures are also known for prehispanic highland Mexico. Piña-Chan (1960:Photo 11) illustrates a stone turtle from the Late Classic site of Piedra Labrada, Guerrero. Still another example was discovered in an Aztec cache of sculptures excavated in Mexico City (Moedano Köer 1951:Photograph 5).

the main room and entrance. Among the items found in the shrine room were broken censers, a crouching anthropomorphic sculpture, another fragmentary figure, and a stone turtle.

Carved of limestone, the turtle is of average size, being approximately 23 cm in length (Figure 2a). In the center of the back is carved a vertical pit or chamber, a feature found on four other Mayapan turtles (Proskouriakoff 1962b:333). The most interesting trait of this particular sculpture is the series of Ahau glyphs lightly incised around the rim of the carapace. Proskouriakoff (1962b:Fig. 1g, legend) states that thirteen Ahau signs are carved on the shell, but makes no mention of the importance of this number. Of course, thirteen is a highly significant number, as the thirteen Ahaus ringing the shell constitute a Katun wheel, a complete round of thirteen Katun Ahaus, although here without the coefficients. Viewed in this light, the Katun wheels illustrated by Landa and other sources bear a striking resemblance to a turtle carapace. The identification of the Katun round with the turtle may be based on an actual biological trait. Bruce Love (personal communication) recently mentioned to me that, according to one Yucatec informant, a turtle shell is divided into thirteen parts. Although not all turtles have thirteen principal carapace shields, an especially common pattern is composed of five vertebral shields and eight flanking carapace shields, making a total of thirteen (see Stebbins 1954). In Yucatan, both the marine green turtle (*Chelonia mydas*) and the terrestrial Mexican box turtle (*Terrapene mexicana*) have the pattern of thirteen principal plates. This pattern is plainly visible on an almost intact Mexican box turtle shell excavated at Mayapan; the thirteen scutes form the central dome of the shell (Proskouriakoff 1962b:Fig. 41s).

Although the turtle sculpture from Structure Q-244b is the only Mayapan example that has a series of thirteen Ahau signs, it is possible that a similar tortoise from Structure R-87 was originally supplied with a Katun round, either painted or modeled in stucco over the series of shell disks (see Proskouriakoff 1962b:Fig. 1d). Like Structure Q-244b, Structure R-87 was an impressive and complex residential unit. The turtle was discovered carefully placed above a looted hole at the base of the central raised altar (Proskouriakoff and Temple 1955:300). Unfortunately, neither the excavation report nor the discussion of Mayapan sculpture by Proskouriakoff (1962b) mentions the specific number of medallions on the carapace rim. Fragments of another stone turtle were found in the debris overlying Structure R-87. This example bears on its back a coefficient of ten followed by a clear date of 8 Ahau (Figure 3a). The original inscription may have been 10 Ahau, 8 Ahau, that is, Katun 10 Ahau with the immediately following Katun 8 Ahau, or possibly the date Tun 10 in Katun 8 Ahau (Proskouriakoff and Temple 1955:298). Yet another Mayapan turtle, found in association with the round temple H-18, bears a hieroglyphic text upon the rim (Chowning 1956:450, Fig. 2i). Although the text is highly eroded, Proskouriakoff (1962b:332) suggests that the initial sign may be an Ahau glyph with a high coefficient.

The identification of turtles with Ahau period ending dates is by no means limited to Late Postclassic Mayapan. At the Usumacinta site of Piedras Negras, a massive cliff carving bears a Late Classic representation of a tortoise shell emblazoned by an Ahau with a coefficient of five or possibly seven (Figure 3b). Deity heads project from both openings of the shell, a common Classic convention. Whereas the right head is clearly God K, the crosshatching occurring with the left figure suggests the aforementioned God N, who often wears a crosshatched headdress. Itsimte Altar 1 is another Late Classic tortoise with a central day sign cartouche (Figure 4). Although damaged, the sign is probably Ahau, as this is the

only giant day sign appearing on Classic altars. Standing on four leglike supports, Machaquila Altar A presents an almost in-the-round view of the tortoise shell (Figure 5). The openings of both carapace ends are plainly visible on the altar sides. Viewed from above, one can discern two figures filling both openings and the central, almost circular shell. As with the Piedras Negras carving and Itsimte Altar 1, the right figure is clearly God K. The opposing entity is probably the Uinal Toad, here with a bound waterlily pad headdress. Instead of an Ahau sign, the center of the carapace contains a seated lord accompanied by a hieroglyphic text. Like Mayapan examples, a ring of glyphs like radiating skuttes covers the carapace rim. Because of extensive surface erosion, neither these glyphs nor the extensive texts on the sides can be readily interpreted.

The recently discovered cave of Dzibih Actun, in northern Yucatan, contains a remarkable series of paintings extending from the Late Postclassic period to the twentieth century.⁵ In one portion of the cave is an unusual series of pinwheel-like figures (Figure 6a). Andrea Stone (personal communication 1986) has noted that the central portion of these figures closely resembles the rectangular version of the Ahau sign found in colonial Yucatec manuscripts. However, the strange appendages remain to be explained. The figure farthest to the viewer's left is supplied with a curious birdlike head. In prehispanic Maya art, sea turtles are depicted with similar beaked faces (Figures 6b, 6c). The Dzibih Actun figures may thus be representations of Katun turtles swimming with outstretched fins.

⁵ In the fall of 1983, residents of the Yucatec community of San Juan de Dios, Quintana Roo, informed me of a painted cave near their former town of Yalcoba, located in northeast Yucatan. Known as Dzibih Actun, the cave was said to contain figures engaged in various activities, such as hunting and playing instruments. In the spring of 1986, I told Andrea Stone what I had heard concerning the cave. During the summer of 1986, Stone located and mapped the site, recording with photographs and drawings the many figures appearing upon the walls.

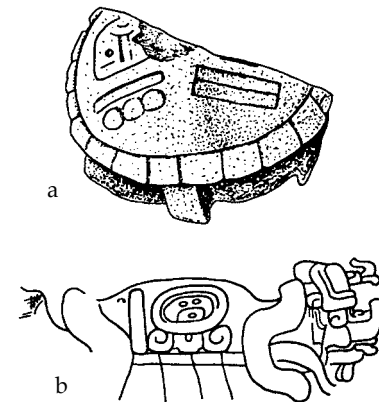


Figure 3. Postclassic and Classic examples of Ahau dates on turtle sculptures: (a) fragment of turtle sculpture from Mayapan Structure R-87, text inverted; intact date was probably Katun 10 Ahau, Katun 8 Ahau, or, possibly, Tun 10 of Katun 8 Ahau (after Proskouriakoff 1962b:Fig. 1f); (b) Classic period rock sculpture from cliff face at Piedras Negras, Guatemala; Ahau sign with coefficient in center of shell, right figure God K, left figure probably God N (after photographs courtesy of Mary E. Miller and Flora Clancy).

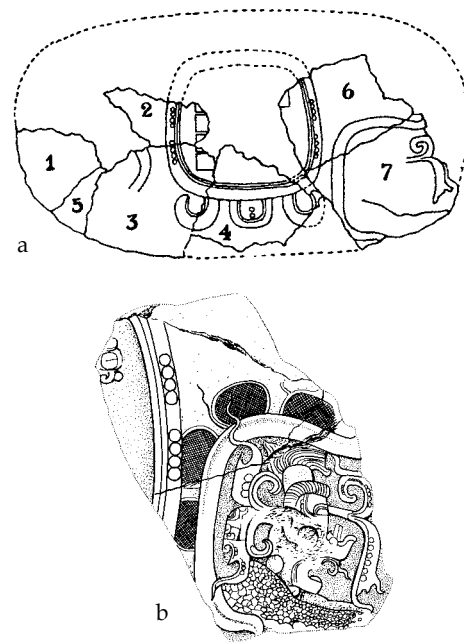


Figure 4. Itsimte Altar 1, a Late Classic turtle altar: (a) drawing by Morley showing day sign cartouche in center of shell (from Morley 1937-1938:5:Pl. 43g); (b) detail of right half of shell showing God K in opening, note Caban curls on carapace rim (after Morley 1937-1938:5:Pl. 156b).

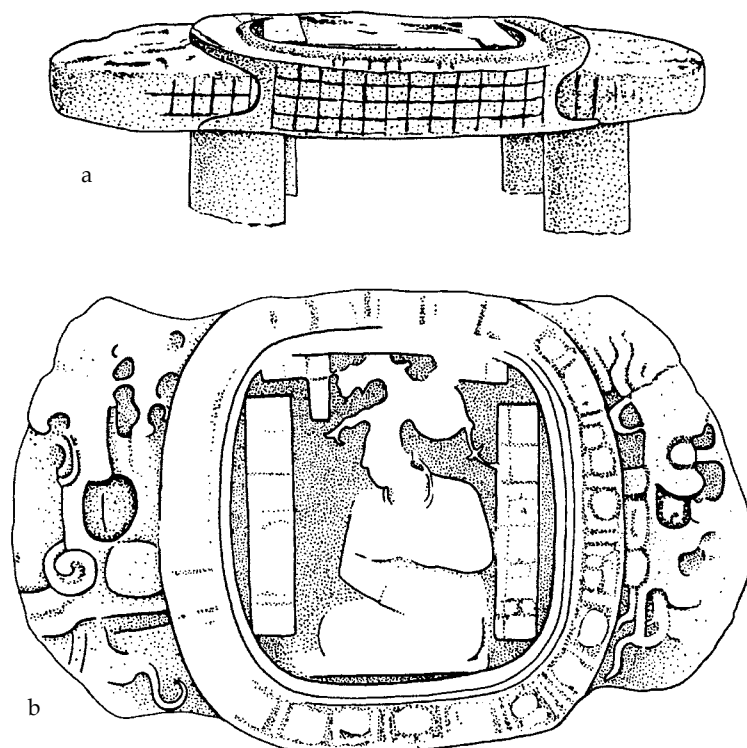


Figure 5. Machaquila Altar A: (a) profile view of altar, showing carapace openings and placement of hieroglyphic text (after Graham 1967:Fig. 71); (b) top of Altar A, note Uinal Toad and God K figures at either end of round carapace (after Graham 1967:Fig 73).

Although the Dzibih Actun turtles may well be Late Postclassic in date, it is also possible that they are early post-Conquest paintings.

The Turtle as Locus for Blood Offerings

In a recent study, David Stuart (1988) has established that Classic period endings were often commemorated with penitential bloodletting. Stuart notes that a sign frequently appearing with Classic period ending events, the hand scattering glyph, denotes the act of offering blood. Curiously, there has been little evidence for bloodletting in Postclassic Katun ending celebrations. However, given the strong identification of the Katun with the tortoise altars at Mayapan, a reasonable case can now be made. Along with the Katun wheel turtle, the shrine of Structure Q-244b also contained two flint nodules, three flint chips, and an obsidian blade (Smith and Ruppert 1956:500). Either as worked blades or sharp flakes, flint and obsidian commonly served as bloodletting lancets. In fact, in Yucatec *tok* signifies both “flint” and “to let blood” (Barrera Vásquez 1980:805). The receptacle carved in the back of the Katun wheel tortoise may have contained bloodletting instruments, if not blood itself. A similar chamber appears on a large tortoise uncovered at the altar of Structure Q-151, a major colonnaded hall near the center of the site. At the time of discovery, the pit was capped with a stone disk sealed with plaster. When opened, it was found to contain fragments of stingray spines, the

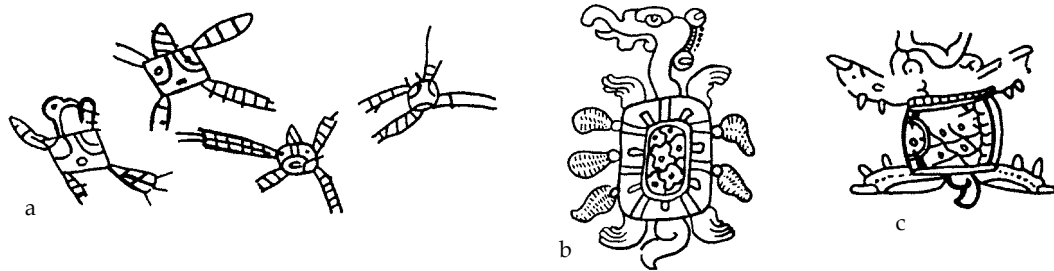


Figure 6. Late representations of Katun Ahau turtles from northeastern Yucatan: (a) Katun Ahau turtles painted on cave wall at Dzibih Actun, Yucatan (drawn from photograph courtesy of Andrea Stone); (b) sea turtle with long birdlike beak and neck, compare with far left Dzibih Actun turtle in *a* (after Codex Madrid, p. 72b); (c) sea turtle from Paris Codex, note claws on extended flippers (after Paris Codex, p. 24).

Maya lancet *par excellence*, and two obsidian flake blades (Shook and Irving 1955:144). In addition, a number of the ceramic turtle effigy vessels found at Mayapan contained bloodletting instruments.⁶ A single large obsidian flake blade was found in both of the two turtle effigy vessels cached in association with Structure R90, a small shrine located in a residential compound (Proskouriakoff and Temple 1955:329).

In addition to the material remains at Mayapan, Postclassic Maya iconography provides explicit evidence for the identification of turtles with self-inflicted bloodletting. On page 81 of the Codex Madrid, a seated figure wields a stingray spine directly above a turtle (Figure 7b). On page 19 of the same codex is an even clearer portrayal, with no less than five gods strung together by a rope passing through their penises (Figure 7c). In the upper center of the scene, the presiding deity, God D, sits upon a turtle. A recently discovered Postclassic cache from Structure 213 at Santa Rita contained twenty-five ceramic figurines. Four of the figurines are of aged men engaged in penis perforation (Chase and Chase 1986). Of special interest is that all four men stand upon turtles (Figure 7a). The scenes provided in the Postclassic imagery are idealized portrayals of the bloodletting act, offerings performed by live gods and, possibly, upon real turtles. However, in the actual rites of Postclassic Yucatan, turtles of stone and stucco were the locus of the bloodletting act. The imagery suggests that the participants situated themselves over the turtles so as to let blood directly upon the carapace. The blood may have been contained or burned within the receptacle frequently occurring in the center of the shell.

The Round World

The significance of the Mayapan turtles remains to be discussed. Proskouriakoff (1962b:331-332) tentatively suggests that the turtles represent an important Mayapan totem, with the aged deity being a form of idealized ancestor. However, no evidence exists in prehispanic, colonial, or contemporary Maya belief that the turtle is a totemic ancestor. It will be recalled

⁶ A small ceramic turtle effigy vessel was found at Tancha on the surface directly in front of Structure 44 (Miller 1982:6-7, Fig. 6). Miller states that the vessel is a form of censer, although it is very similar to the effigy vessels found at Mayapan.

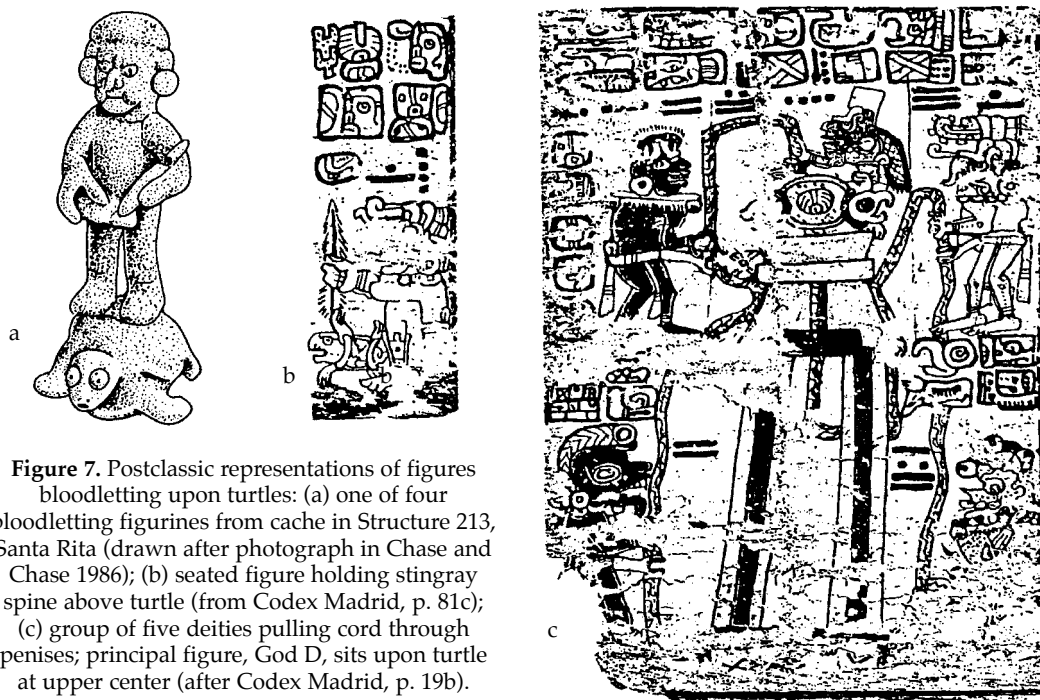


Figure 7. Postclassic representations of figures bloodletting upon turtles: (a) one of four bloodletting figurines from cache in Structure 213, Santa Rita (drawn after photograph in Chase and Chase 1986); (b) seated figure holding stingray spine above turtle (from Codex Madrid, p. 81c); (c) group of five deities pulling cord through penises; principal figure, God D, sits upon turtle at upper center (after Codex Madrid, p. 19b).

that, in Postclassic iconography, turtles frequently serve as supports for the bloodletting act.⁷ Caves in the vicinity of Palenque have yielded terminal Classic incensario supports representing full figures standing upon turtles (Rands et al. 1979:Figs. 3-5). Like the Classic turtles serving as supporting platforms for individuals, the Mayapan sculptures are usually placed at the foot of altars, occupying the base or foundation of the ritual space. Scenes in Classic Maya iconography provide graphic evidence that the turtle served as a symbol of the earth. A common iconographic theme is the youthful male rising out of a turtle carapace (Figure 8b). I have identified this young male as the Tonsured Maize God, a Classic prototype of Hun Hunahpu of the Quichean *Popol Vuh*; the cleft carapace scenes depict maize rising out of the earth (Taube 1985, 1986).⁸ The columns in the Lower Temple of the Jaguars at Chichen Itza contain an interesting variant of this scene; here the maize god rises out of a monstrous head, an apparent blend of Cauac Monster and tortoise (Figure 8a). The aforementioned Itsimte Altar 1 presents explicit evidence that the carapace symbolized the earth, as the shell is marked with Caban curls that clearly denote it as the earth (see Figure 4b).

⁷ The striking similarity of the Mayapan turtles to Machaquila Altar A and Itsimte Altar 1 suggests that these Classic Peten sculptures may have served as platforms or supports for individuals engaged in bloodletting. Clancy (1974) advocates that Maya altars should actually be considered as pedestal stones, as they correlate closely with the basal register of Classic stelae, that is, the ground or platform upon which the ruler stands.

⁸ A fragmentary jade from the Sacred Cenote of Chichen Itza represents the Tonsured Maize God with a turtle carapace on his back (see Proskouriakoff 1974:103, Pl. 58b1). Although Proskouriakoff suggests that the shell and human figure are unrelated and were possibly carved at separate times, the scenes in Classic iconography strongly suggest that the shell and figure do constitute a single scene, a representation of the Tonsured Maize God and the earth. Three other Cenote jades contain representations of turtle shells, two in the round and one in relief (see Proskouriakoff 1974:Pls. 50b3-4, 65a2).

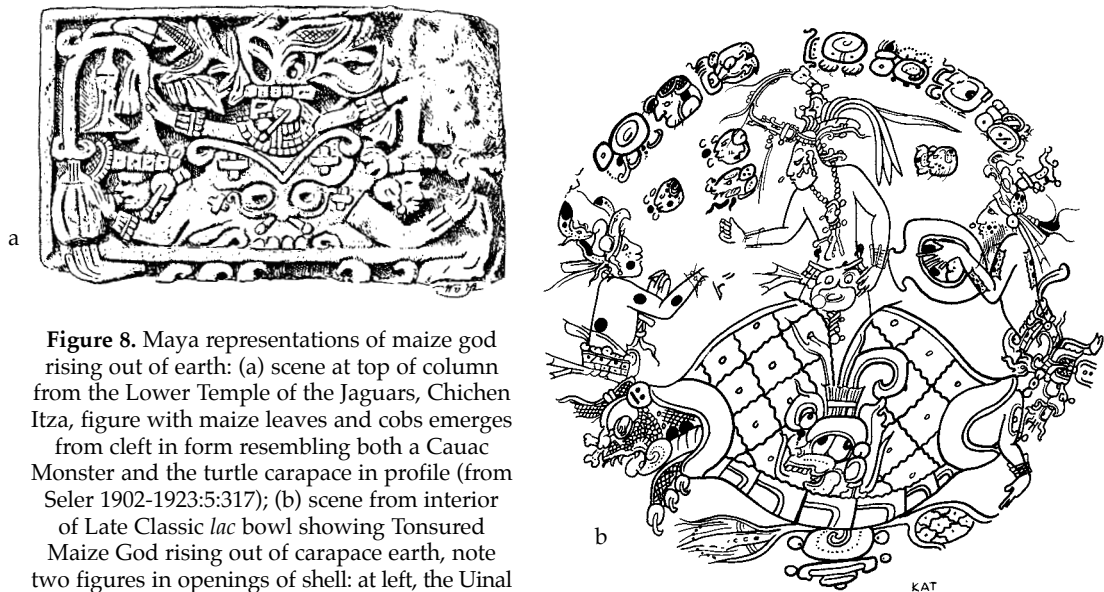


Figure 8. Maya representations of maize god rising out of earth: (a) scene at top of column from the Lower Temple of the Jaguars, Chichen Itza, figure with maize leaves and cobs emerges from cleft in form resembling both a Cauac Monster and the turtle carapace in profile (from Selser 1902-1923:5:317); (b) scene from interior of Late Classic lac bowl showing Tonsured Maize God rising out of carapace earth, note two figures in openings of shell: at left, the Uinal Toad; at right, the God of the Number 13 (after Robicsek and Hales 1981:Vessel 117).

The concept of the earth as a rounded carapace is in striking contrast to the usual cosmological model presented for the Maya. According to J. Eric S. Thompson (1970b:195-196), one of the great deans of ancient Maya thought, the Maya regarded the world “as a flat square block with skies above and underworlds beneath.” Contemporary, colonial, and prehispanic Maya lore provides widespread evidence of the square model, often with the world metaphorically expressed as a rectangular house or milpa. However, there is no reason why only one model of the world should have existed. In prehispanic Central Mexico, the earth could be conceived as a monstrous caiman, a quadrangular surface, or a great disk surrounded by water (Selser 1902-1923:4:3-16; Nicholson 1971:403-404). The protohistoric Yucatec had at least these same three models for perceiving the world. But although the earth crocodile (Itzam Cab Ain) and the quadrangular world are well known, the circular model has been generally ignored.

Colonial Yucatec manuscripts provide explicit evidence that the world was considered as a round mass. On page 26 of the *Chilam Balam of Chumayel*, a circular diagram depicts the passage of the sun. In the center of this device lies a smaller circle labeled “tierra,” in other words, the earth (Figure 9c). The accompanying Yucatec text describes this disk as a *petel*, translated as “annulus” by Roys (1933:87). In Yucatec, *pet* means “circular” or “round.” In the early colonial dictionaries, forms of the phrase *u pepetecil cah* are glossed as “roundness of the world” or “roundness of the community” (Barrera Vásquez 1980:648). And then there is the term *peten*. In the colonial dictionaries, it is translated as “island,” “district,” “region,” or “province” (Barrera Vásquez 1980:648). The word derives from the term for round (*pet*), as *peten che* signifies wooden wheel. The colonial circular maps of Mani and Sotuta are surely related to the circular conception of a region or district (see, e.g., Roys 1943:Fig. 18). In colonial Yucatec, such circular maps were known as *pepet dzibil* (Barrera Vásquez 1980:184). The *Chilam Balam of Chumayel* contains an extremely schematic form of a circular map crossed

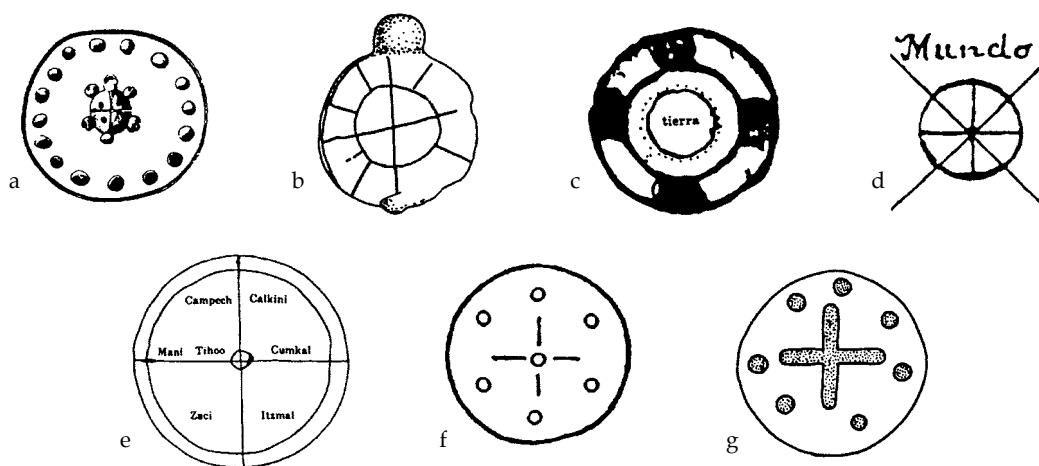


Figure 9. Representations of turtles and the circular world: (a) one of three medallions containing turtles, on Early Classic vessel, Kaminaljuyu (from Kidder et al. 1946:Fig. 71a); (b) stone turtle marked with cross, Mayapan Structure H-15 (after Proskouriakoff 1962b:Fig. 1b); (c) *Chilam Balam of Chumayel* diagram of the passage of the sun, note earth disk in center (from Roys 1933:Fig. 7); (d) center of *Chilam Balam of Kaua Katun* wheel (detail from Bowditch 1910:Fig. 64); (e) schematic circular map from *Chilam Balam of Chumayel* (from Roys 1933:Fig. 27); (f) diagram of Chorti sacred copal ball, Chiquimula (from Girard 1966:136); (g) diagram of contemporary Yucatec *noh wah* tamale (drawing from photograph by author).

by directional lines (Figure 9e). The Yucatec text describes the disk, encompassing much of northern Yucatan, as *peten*, translated by Roys (1933:125) as “the land.”⁹ In the colonial Yucatec documents, *peten* often refers to something more than a regional polity; in many cases it signifies the world. Thus the *Chilam Balam of Kaua* account of Katun 1 Ahau contains the couplet *pecnom can, pecnom peten*, which Gates (1931:14) translates as “[t]here shall shake the heavens, there shall shake the earth-circle.” Like the circular maps, the colonial Katun wheels are representations of the circular world. The center of the *Chilam Balam of Kaua* Katun wheel contains a disk crossed by lines oriented to the cardinal points, as well as longer intercardinal lines radiating out to the edges of the Katun wheel (Figure 9d). The central disk is clearly glossed as “Mundo,” or world, but it appears that the entire wheel is a representation of the world, with the Katuns oriented to the cardinal points. Both the Kaua and Chumayel Katun wheels have the cardinal points placed at the edges of the circular diagrams. One passage in the Chumayel provides a list of towns at which particular Katuns were celebrated in successive order (Roys 1933:142-143). The Fray Andrés de Avendaño account of the late seventeenth-century Itza contains an important description of the Katun cycle:

⁹ The Maya text accompanying the Chumayel map describes the disk as a type of animal: “Mani is at the base of the land. Campeche is the tip of the wing of the land. Itzmal is the middle of the wing of the land. Zaci is the tip of the wing of the land. Conkal is the head of the land” (Roys 1933:126). Given this translation, the disk appears to be considered as a sort of bird, although it is not remotely avian in appearance. However, *xik* not only means wing, but also a fin for swimming. In the *Vienna Dictionary*, *xik* is glossed as “ala con que vuela el ave o nada el peje” (Barrera Vásquez 1980:94). It is thus possible that the Chumayel is not referring to a bird, but a sea turtle. However, nothing in the Mayan account explicitly identifies the land as a turtle.

These ages are thirteen in number; each has its separate idol and its priest, with a separate prophecy of its events. These thirteen ages are divided into thirteen parts which divide this kingdom of Yucathan and each age, with its idol, priest, and prophecy, rules in one of these thirteen parts of the land, according as they have divided it. (Means 1917:141)

In view of this account, it is clear that the Katun wheel is actually a form of map placing the Katuns in the circular Yucalpeten, the world of the Katun.

In the colonial Yucatec circular diagrams, the earth is presented as a flat disk. Although the world may have been conceived in this sense, like a flat mirror, indications exist that it was also perceived as a rounded domelike form. In contemporary and colonial Maya lore, the world is represented at times as a circular semirounded mass. Girard (1966:136) illustrates a sacred ball of copal marked with seven dots and four lines constituting a cross (Figure 9f). According to the contemporary Chorti residents of Chiquimula, this ball represents the earth (Girard 1966:138). In the question and answer section of the colonial Yucatec *Chilam Balam of Chumayel*, the earth is twice referred to as a large layered tamale, or *noh uah*. The following is from one of the Chumayel passages: “that which stops the hole in the sky and the dew, the nine layers of the whole earth. It is a very large maize tamale” (Roys 1933:128). In contemporary Yucatec ceremonies, the rounded ceremonial tamales, *noh wah*, are marked with a cross, probably denoting the four directions (Figure 9g). The entire design is strikingly similar to the Chorti copal ball. The modern Lacandon, closely akin to the Yucatec Maya, consider the world to be like a rounded mass of ground maize: “Nohochakyum made a round ball like masa for making tortillas. That is our world and the house of Sukukyum, who lives in the middle of it” (Cline 1944:108). In another Lacandon account, the earth is described as an inverted gourd bowl: “Nobody knows how long it took to make this world. This one is like a jícara [gourd cup] which has been turned over, so it is round on top where we are” (Cline 1944:110). Balls of copal or ground maize and an overturned jícara, these are forms resembling the rounded dome of a turtle carapace. The identification of the rounded earth with the earth turtle possibly extends back to the Early Classic Esperanza phase of Kaminaljuyu. A burnished cream bowl from Tomb A-VI bears three medallions with modeled turtles as the central motif (Kidder et al. 1946:185). Like contemporary and colonial representations of the circular world, the round carapace is marked with a cross or axis, thereby dividing the round shell into quarters (Figure 9a). At Mayapan, a stone turtle from Structure H-15 is similarly divided into four quadrants by a central cross (Figure 9b). Although the Mayapan and Kaminaljuyu examples are schematic, with no indication of directional glyphs, both may refer to the world and the four quarters.

Conclusions

Stone images of turtles were an important component in period ending celebrations at Late Postclassic Mayapan. Along with several Classic examples, a number of the turtles bear the Ahau glyph, the specific day sign of Uinal, Tun, and Katun period endings. One sculpture in particular, that discovered in Structure Q-244b, contains a series of thirteen Ahau signs, thus constituting a prehispanic form of the Katun wheel. The turtle from Structure R-87 may be yet another example, although this requires further verification. The identification of one or both of these sculptures as Katun wheels is no small matter, because, at the present time,

these constitute the only material evidence that the prehispanic Maya conceived of calendrical cycles as circular wheels.¹⁰ When discovered in their original context, the Mayapan turtles were at the base of altars in the interior shrines of ceremonial structures and residences. Postclassic representations and the actual remains of lancets indicate that these turtles were the locus of self-inflicted bloodletting, frequently through the penis. The turtles found in Structure Q-244b, Structure R-87, and other residential buildings indicate that period ending ceremonies were performed not only in the ceremonial center, but also in the houses of the Mayapan elite. The placement of the shrines in the farthest rear portions of ceremonial and residential buildings indicates that these particular bloodletting events were fairly private affairs, by no means public festivals. The blood was evidently deposited on the surface of the stone turtle, which served as a symbol of the circular earth. It is possible that the receptacle in the center of the shell constituted a sort of cave similar to the Pueblo *sipapu*, a means of offering blood to the underworld. Like the Mayapan example, the colonial Katun wheels are representations of the circular earth, a form apparently conceptualized as a great turtle surrounded by the sustaining sea.

¹⁰ However, the Mayapan sculpture is not the only prehispanic calendar wheel known for prehispanic Mesoamerica. The famous Aztec Calendar Stone is another example. It is noteworthy that in both Central Mexico and the Maya region, the prehispanic calendar wheels are only known in stone sculpture, not in painted manuscripts.



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CHAPTER 3

Itzam Cab Ain: Caimans, Cosmology, and Calendrics in Postclassic Yucatán

For the peoples of ancient Mesoamerica, cosmology and calendrics were by no means separate fields of concern. Both subjects were part of an integrated whole, a complex system of world view that encompassed both space and the dynamic passage of time. In the prehispanic codices, this integration is frequently expressed with day signs oriented to particular gods, trees, and houses of the world directions. Such a series may run in a page-by-page sequence, such as on pages 25 to 28 of the Dresden Codex or pages 49 to 53 of the Borgia (Seler 1904a; Thompson 1934). However, the integration of time and space may also be represented in a single mandala-like plan. Famous examples of this type appear on page 1 of the Fejervary-Mayer Codex, and pages 75 and 76 of the Madrid Codex (Seler 1901).

The placement of calendric periods of time in space is by no means limited to the codices. However, it is obvious that in such instances, no page-by-page sequencing is possible. Instead, the depictions are generally of the “cosmogram” type, in which the temporal periods are represented simultaneously in a single scene. Perhaps the most famous example of this type is the great Aztec “Calendar Stone.” In a recent study, I identify a calendric sculpture of the cosmogram type at the Late Postclassic Maya site of Mayapán (Taube 1988a). In that example, the cycle of 13 *katuns* forms a ring on the back of a turtle; in other words, the sculpture is a prehispanic “katun wheel.” In that study, I provide evidence that to the ancient Maya the turtle was an important symbol of the circular earth. However, I also stress that the Maya and other inhabitants of ancient Mesoamerica had a number of different models for perceiving the world. Among the Maya, the turtle was but one zoomorphic metaphor for the earth; another was the caiman. In this study, I will focus on the caiman metaphor, known in Yucatec as *Itzam Cab Ain*. Along with identifying depictions of this beast, I will also cite three instances in which calendrical periods are placed in relation to the earth caiman body as a form of calendrical cosmogram.

Itzam Cab Ain

Among the inhabitants of Late Postclassic Central Mexico, the caiman was a widespread symbol or metaphor for the earth (Seler 1902-1923:4:646-653). In the Borgia Group of codices, the rough and spiny back of the caiman is frequently used to denote the surface of the earth (eg. Borgia 27, 39–40, 42, 53; Vaticanus B 69; Fejervary-Mayer 28). Moreover, in the Early Colonial Period *Historia de los Mexicanos por sus pinturas* account of creation, the caiman is explicitly identified as the earth (Garibay 1965:26). For the Late Postclassic Maya of Yucatán, the evidence is similarly direct. The 1579 *Relación de la Ciudad de Mérida* describes a fire-walking ceremony which began with the preparation of a caiman (*lagarto*) to represent the flood and the earth:

También tuvieron noticia de la caída de Lucifer del Diluvio, y que el mundo se había de acabar por fuego, y en significación de esto, hacien una ceremonia y pintaban un lagarto que significaba el diluvio y la tierra (de la Garza ed. 1983:1:72).

This ceremony was evidently a reenactment of the cosmogonic flood episode described in the Colonial Yucatec “Chilam Balam” books of Chumayel (Roys 1933:98-101), Maní (Craine and Reindorp 1979:118) and Tizimin (Edmonson 1982:40-41). In these accounts, there is mention of a creature known as *Itzam Cab Ain*, or “*Itzam* earth caiman.”¹ Noting that the term *itzam* signifies “whale” in contemporary Yucatec, Martínez Hernández (1913:165-166) compares this caiman creature to the great *Cipactli* earth caiman mentioned in the *Historia de los Mexicanos por sus pinturas*. Thus in the Central Mexican account, *Cipactli* is described as *un peje grande*, or “a large fish” (Garibay 1965:26). Seler (1902-1923:4:649) notes that in the prehispanic Central Mexican codices, the caiman is often depicted with a fish tail. This is by no means an exclusively Central Mexican trait. The famous caiman on Copan Altar T is also provided with a fish tail, and there are other examples in Classic Maya iconography (see Hellmuth 1987a:Figs. 230-240).

There are indications that among the Classic Maya the caiman also represented the earth. On the Early Classic Yaxha Stelae 6 and 10, an open-mouthed caiman serves as the basal register, or earth, of the standing lord. A caiman also occupies the lower register of Step 3 of Yaxchilan Hieroglyphic Stairway 3 (Graham 1982:169). The Maya and Central Mexican concept of caiman world trees probably also relates to the earth caiman. In representations of caiman trees, the saurian head and body occupy the lower trunk of the tree, as if the earth caiman were pulled up by the tail to support the heavens. Frequently with the Classic Maya examples, the head and upper limbs of the caiman are horizontal, with only the lower portion of the body rising to form the tree. On Izapa Stela 22, the earliest known depiction of the caiman tree, a human figure actually stands on the horizontal snout of the caiman (see Norman 1973:Pl. 41).

We have seen that for the Protohistoric period in Yucatán, there is firm evidence that the caiman was a symbol of the earth, and this appears to be true for the Classic Maya as well. However, the term “*Itzam*” of *Itzam Cab Ain*, remains to be discussed. It has been noted that according to Martínez Hernández, the term means “whale.” In fact, the entire phrase *itzam cab ain* is glossed *ballena*, or “whale” in colonial Yucatec dictionaries (Barrera Vásquez

¹ In the Chumayel manuscript, the creature is actually referred to as *itzam kab ain*, which Roys (1933: 101, n. 4) translates as “the whale with the feet of a crocodile.”

1980:272). On the other hand, Thompson (1970b:212) notes that the Vienna Dictionary glosses *itzam* as “*largartos como iguanas de tierra y agua*,” and for this reason translates *itzam* as “iguana.” However, Barrera Vásquez (1980:272) disagrees, noting that *itzam* is not a Mayan word for lizard. According to him, the Vienna Dictionary entry actually alludes to Itzam Cab Ain, a terrestrial aspect of the great god Itzamna. For the same reason, I believe that the whale significance of Itzam Cab Ain is secondary to the primary meaning—Itzamna as the caiman earth.

In an influential study, Thompson (1970b:209-233) argued that Itzamna, or “Iguana House,” was the paramount god of the Classic and Postclassic Maya. However, it is now clear that many of the Classic saurian examples of Itzamna cited by Thompson are, instead, distinct entities and have no direct relation to this god. Nonetheless, for the Postclassic Maya of Yucatán, it is clear that Itzamna was a major god. In the early colonial accounts, Itzamna is repeatedly described as the paramount deity (eg. de la Garza ed. 1983:2:323; Saville 1921:211; Tozzer 1941:145-146). Recent work by Hellmuth (1987a) has shown that Itzamna was also a major god of the Classic Maya pantheon. Many vessel scenes of the period represent God D seated on a throne and facing subsidiary deities, such as God N (see Coggins 1975:Fig. 127b). In these scenes, God D is portrayed as a lord receiving lesser divinities. However, although the Classic Maya imagery supports the contention that Itzamna was a major Classic god, there is no Classic example of God D in the form of a caiman or iguana. Rather, Hellmuth (1987a:364-367) notes that that Classic God D merges with the Principal Bird Deity.²

In his initial identification of the codical God D as Itzamna, Selser (1887, 1902-1923:1:379-381) stated that this deity was an aged creator god of sustenance equivalent to Tonacatecuhtli of Central Mexico:

For as the Mexican Tonacatecuhtli, the lord of generation, is supposed to be in the topmost thirteenth heaven, and at the same time also he (or his feminine companion) appears as lord of the earth, so also the ideas of heaven and earth, below and above, seem to me present also in this Yucatec god (translation from Selser 1939:69).

In Central Mexico, Tonacatecuhtli is closely identified with the caiman.³ Thus Tonacatecuhtli is not only the regent of Cipactli, meaning caiman, the first of the twenty day names, but also presides over the *trecena* 1-Cipactli (Caso 1971:337-338). Selser (1963:2:28, 41) cites a number of instances in the Borgia Codex in which Tonacatecuhtli wears the spiny skin of the caiman. For the Postclassic Maya, there are similar representations of Itzamna in

² The association of God D and the Principal Bird Deity continued into the Late Postclassic. On page 11 of the Paris Codex, a rare Postclassic form of the Principal Bird Deity appears in the scene corresponding to Katun 10 Ahau, a katun concerning God D (Taube 1987).

³ Both Tonacatecuhtli and Itzamna are also identified with sacred trees, at times even appearing as personified trees. In the Borgia and Vaticanus B Codices, Tonacatecuhtli can appear with a flowering tree sprouting out of the top of the head (Selser 1963:1:64). Itzamna is similarly identified with trees. At Tayasal, Avendaño describes a stone column called the *Yax Cheel Cab*, or “first tree of the world” (Means 1917:135-136). The column is said to bear the image of Yax Cocay Mut (*ibid.*), recognized to be an aspect of Itzamna (Tozzer 1941:145, n. 695). The head of God D appears as the base of a stone tree on Madrid 96a and, possibly, 11c. On Dresden 41b, a God D head serves as the lower trunk of a tree. In the Classic Period, God D commonly appears with sacred world trees (see W. Coe 1967:100; M. Coe 1973:No. 20, 1978:No. 8, 1982:10; Robicsek and Hales 1982:Vessel 108).

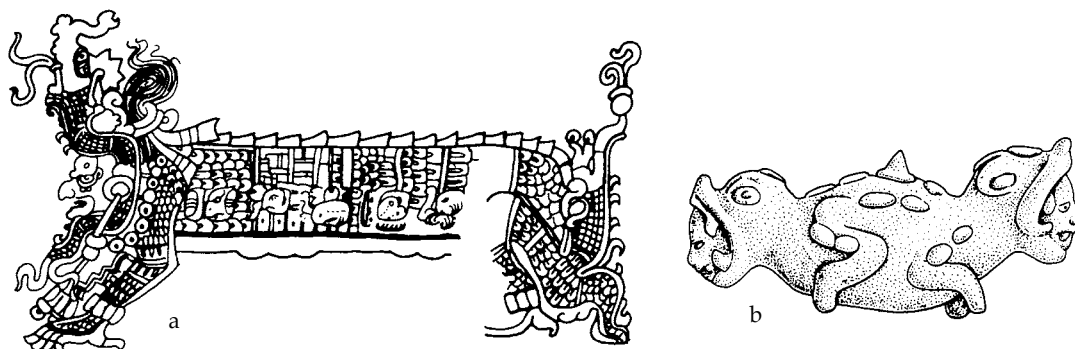


Figure 1. Postclassic representations of *Itzam Cab Ain*: (a) Dresden 4b–5b (drawing by author); (b) Santa Rita Corozal ceramic figurine, Late Postclassic (drawing by author after Gann 1900:Pl. 33).

the guise of a caiman. Selser (1902-1923:4:650) notes that on pages 4b and 5b of the Dresden Codex, Itzamna appears in the jaws of a caiman (Figure 1a). Selser also identifies this scene as a representation of the earth caiman *Itzam Cab Ain*, and compares it to *Cipactli* of Central Mexico. Along with noting the Dresden scene, Thompson (1970b:215) suggests that a number of the cached figurines excavated by Thomas Gann at Santa Rita also represent the earth caiman aspect of *Itzamna*. Two of the Santa Rita figures illustrated by Gann (1900:Pl. 34) are bicephalic caimans with human faces emerging from their open mouths (Figure 1b). In at least one case, the figure is clearly aged, and quite likely these figurines constitute three dimensional versions of the Dresden scene.

Although not mentioned by Thompson, there is another excellent caiman representation at Santa Rita. In the famous Mound 1 murals, a series of anthropomorphic gods are positioned above a horizontal band which in turn lies over an area containing fish and marine shells. On close inspection, it can be seen that the band itself is a caiman body, with the same back crest, vertical bands, and scales found with the aforementioned Dresden example of *Itzam Cab Ain* (Figure 2a). In other words, the human figures are positioned over the caiman earth floating on the sea. The head of the creature appears on both sides of the central doorway, with the widely open jaws flanking the door.⁴ Although incompletely drawn by Gann, the caiman was provided with forelimbs and long claws (Figure 2b). The headdress of this creature provides an especially interesting detail. It contains a vertical paper or cloth element pierced with a stingray or bone perforator. A virtually identical headdress element, again with the same perforator, is worn by an explicit depiction of God D in the same mural scene at Santa Rita (Figure 2c). Clearly, this is no ordinary caiman. Instead, as *Itzam Cab Ain*, the caiman wears priestly accoutrements of *Itzamna*.⁵

⁴ George Stuart (personal communication 1987) notes that with the flanking open jaws, the Santa Rita doorway is very similar to the saurian-mouthed doorways of the Late Classic Chenes region. The identification of forelegs upon the Santa Rita caiman doorway lends support to Stuart's comparison, since a number of Chenes style examples are also supplied with forelimbs (eg. Gendrop 1983:125-127).

⁵ The tall cylindrical headdress worn by God D at Santa Rita is also frequently found with God D in the Madrid Codex. There, God D appears at least 14 times with the cloth or paper element. This device is probably the priestly "miter" mentioned in the *Relación de Valladolid* (de la Garza ed. 1983:2:39). During the Late Postclassic Period, God D is frequently represented as an *Ah Kin*, or paramount priest (see Taube 1988d:73-74).

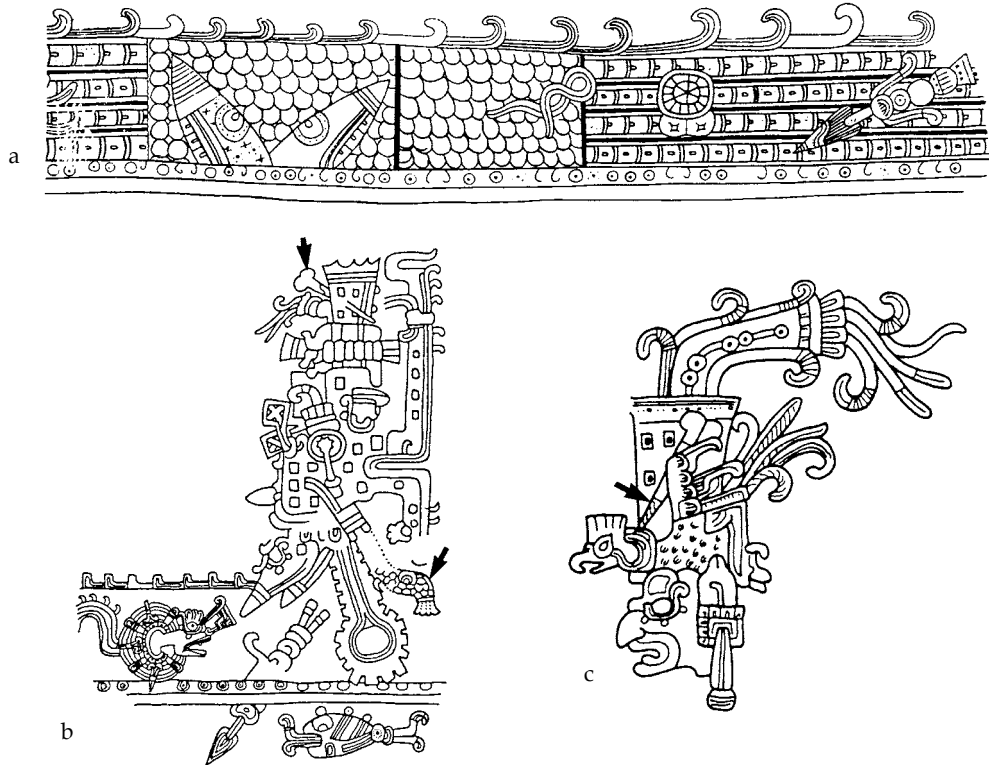


Figure 2. The representation of *Itzam Cab Ain* in the Santa Rita murals: (a) Santa Rita Corozal Mound 1 structure, exterior west wall, mural, note scutes, vertical bands, and back crest (drawing by author after Gann 1900:Pl. 31); (b) Santa Rita Corozal Mound 1 structure, exterior north wall, mural, one of two caiman faces flanking doorway; compare clawed forelimb to example in Figures 1a and 4b (drawing by author after Gann 1900:Pl. 29); (c) Santa Rita Corozal Mound 1 structure, mural, headdress worn by God D (drawing by author after Gann 1900:Pl. 30).

Caimans and Calendrical Cycles

The central theme of the Mound 1 murals at Santa Rita concerns the passage of time. The anthropomorphic figures above the prone caiman are accompanied by dates, represented by Ahau signs with numerical coefficients. Ahau is the particular sign of the 20-day sequence in which the *uinal*, *tun*, *katun*, and larger Long Count periods end. In Postclassic and colonial Yucatán, the 360-day *tun* and the *katun* of 20 *tuns* were named for the particular numbered Ahau on which they ended. For the sequence of *tuns*, the Ahau coefficients (1 to 13) decrease by four with the passage of each *tun*. For example, in an “11 Ahau” *katun*, the *tuns* run as follows: 7 Ahau, 3 Ahau, 12 Ahau, 8 Ahau, and so on, until 11 Ahau, the 20th *tun*, is reached. Since the coefficients accompanying the Ahau signs at Santa Rita are each separated by a difference of four, it is likely that the Ahau dates refer to a succession of *tuns* (Thompson 1950:198). Thus in the Santa Rita murals, the particular god accompanying an Ahau date appears to be the patron or augury of the particular *tun*.

The placement of a succession of *tuns* and their accompanying gods on a cosmological model of the earth recalls a small turtle sculpture from Mayapán. In this instance, a “wheel” of thirteen *katuns* is placed on the back of a turtle, a model for the circular concept of the world (Taube 1988a). There is another Late Postclassic Mayapán stone sculpture that depicts

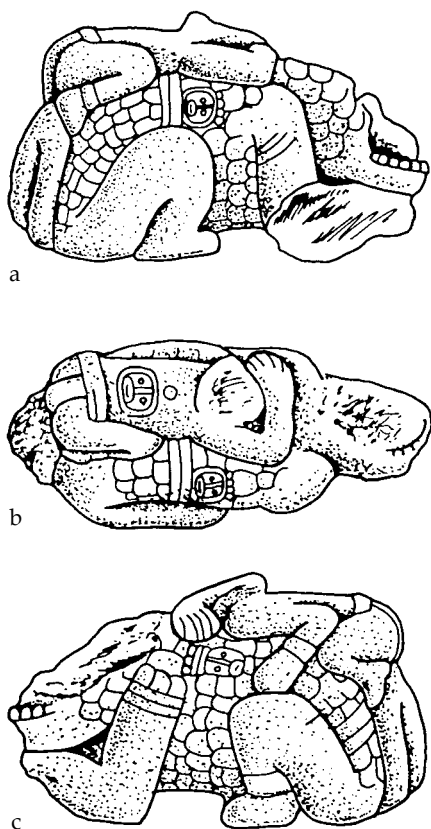


Figure 3. Calendrical periods on a caiman body from Mayapán: (a–c) Mayapán Structure R-88, sculptured altar, three views (drawings by author after Proskouriakoff 1962b:Fig. 4e).

the caiman model of the earth (Figure 3). Although Proskouriakoff (1962b:334) states that the sculpture represents “a reptilian grotesque of uncertain genus,” it is clearly the caiman. Thus it displays the same scale markings and narrow vertical bands appearing in the Dresden scene and in the murals at Santa Rita. Unfortunately, the object is badly damaged, and it is difficult to determine whether a human head may originally have appeared in the open jaws. However, it is clear that a human figure lies upon the back of the creature. This individual is marked with a prominent day sign, 1 Ahau, and the back of the caiman is supplied with two other dates, 4 Ahau, and 13 Ahau. Although the significance of these three dates is unknown, the Mayapán sculpture appears to be another example of period ending dates distributed upon the earth caiman.⁶

A mural in Tanchah Structure 44 depicts another caiman figure marked with calendrical signs (Figure 4a). In the midsection of the caiman torso, there are day signs for Edznab and Ahau, the 18th and 20th days of the series of 20. The caiman appears as a head-dress and back element worn by a striding human. As in many Postclassic caiman representations, the creature displays a prominent crested ridge upon the back. Another example of the back crest can be seen on one of the Early Postclassic gold disks from the Sacred Cenote at Chichén Itzá (Figure 4b). Lying on its back, the caiman occupies the basal register of a battle scene. Although the creature possesses a

strange scroll-like snout, Lothrop (1952:46) notes that it is a representation of the caiman earth monster.

Yet another example of the earth caiman appears within Structure 2 of the Pinturas Group at Cobá (Figure 5). Although quite damaged, the Late Postclassic mural clearly once showed human figures standing upon the crested and scaly body of a caiman, as if it were the earth (see Lombardo de Ruíz coord. 1987:Pl. 52). With its scales and back scutes, the caiman body is similar to the Itzamna caiman in the Dresden Codex. A series of day signs run along the caiman body. In the published fragments, it is possible to see the signs Men, Cib, and Caban. George Stuart, who was present when the Cobá murals were being excavated, notes that the day signs Ben and Ix were once present, and that all ran in order from north to south at the base of the east wall (personal communication, 1987; also see Lombardo de Ruíz coord. 1987:Figs. 49-52). It thus appears that the Structure 2 caiman contained many if not all

⁶ It is intriguing that the episode of Itzam Cab Ain in the Tizimin and Maní accounts was said to occur in 13 Ahau, with 1 Ahau also mentioned in the Tizimin (Craine and Reindorp 1979:117-119). However, the third date upon the caiman, 4 Ahau, is not mentioned in the Chilam Balam episode.

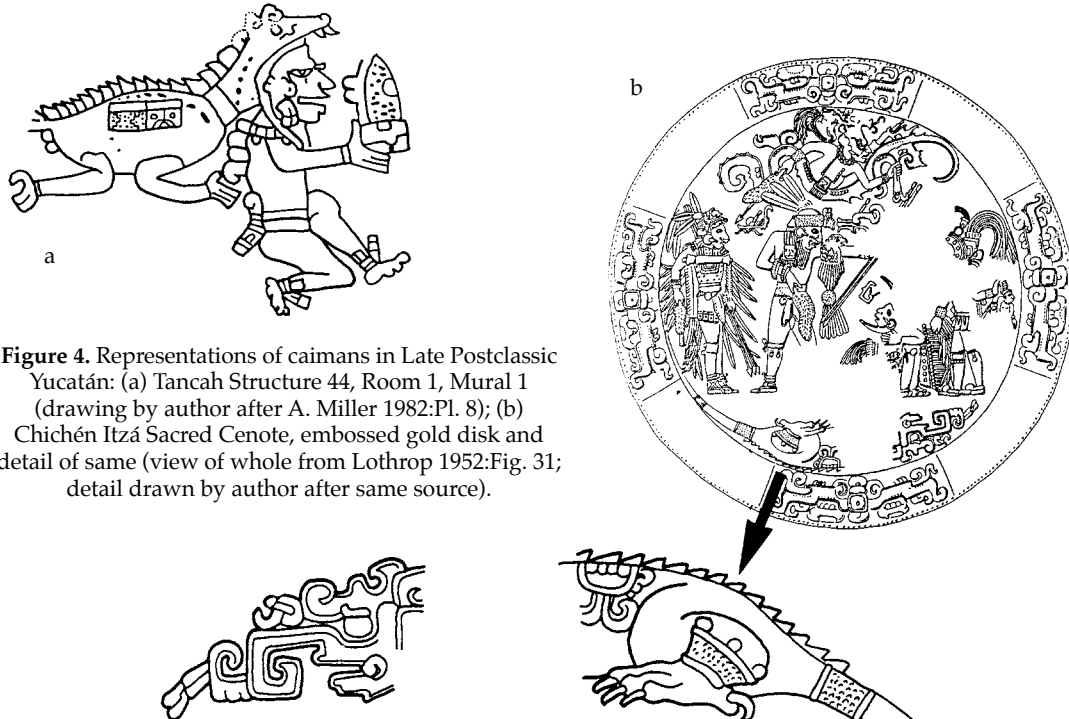


Figure 4. Representations of caimans in Late Postclassic Yucatán: (a) Tanchah Structure 44, Room 1, Mural 1 (drawing by author after A. Miller 1982:Pl. 8); (b) Chichén Itzá Sacred Cenote, embossed gold disk and detail of same (view of whole from Lothrop 1952:Fig. 31; detail drawn by author after same source).

of the 20 day signs along its body.

The Cobá mural is notably similar to Borgia pages 39 and 40 (Figure 6a). Here the aged god Tonacatecuhtli appears as a great open-mouthed caiman. Whereas the head and forelimbs appear on page 39, the remains of the diminutive lower limbs can be discerned at the base of the scene on page 40. Seler (1963:2:41) notes that page 40 depicts an underworld event enclosed by the caiman earth. But although the earth creature is supplied with a caiman mouth, the head is that of Tonacatecuhtli, with a sharply pointed chin, white hair, and a feathered headdress found with other representations of the creator god (Figure 6b). Moreover, the colored bar on the cheek of the caiman mouth—an emblem of Xochipilli—is a characteristic also found with Tonacatecuhtli. A series of day signs pass along the body of the Tonacatecuhtli caiman. Seler (1963:2:42) points out that to the right side of the caiman head, the mouth of the second day sign, Ehecatl, is visible. The day signs then pass in consecutive order to the third day, Calli, the fourth, Cuetzpalin, the fifth, Coatl, and so on, all the way down the right side of the caiman body to end with Malinalli at the rear of the creature. Another distinct pattern of day signs continues from the rear up the left side of the creature to end near the head. Although not noted by Seler, it is probable that the great Tonacatecuhtli caiman head serves as the first day sign, Cipactli, with the partially obscured Ehecatl head constituting the second day of the count. In concept, the placement of a consecutive series of day signs along the body of the earth caiman is identical to the Pinturas Group mural at Cobá.

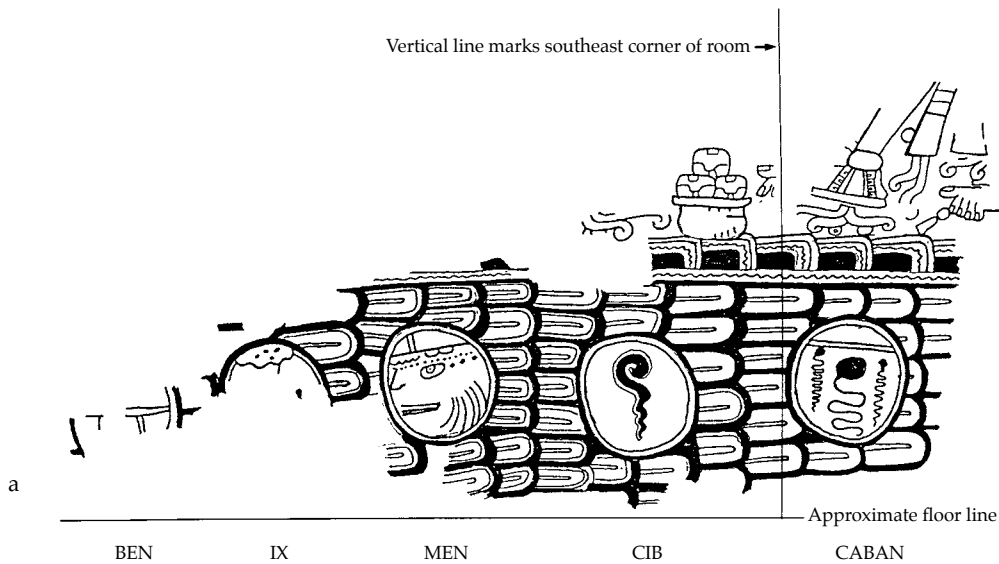
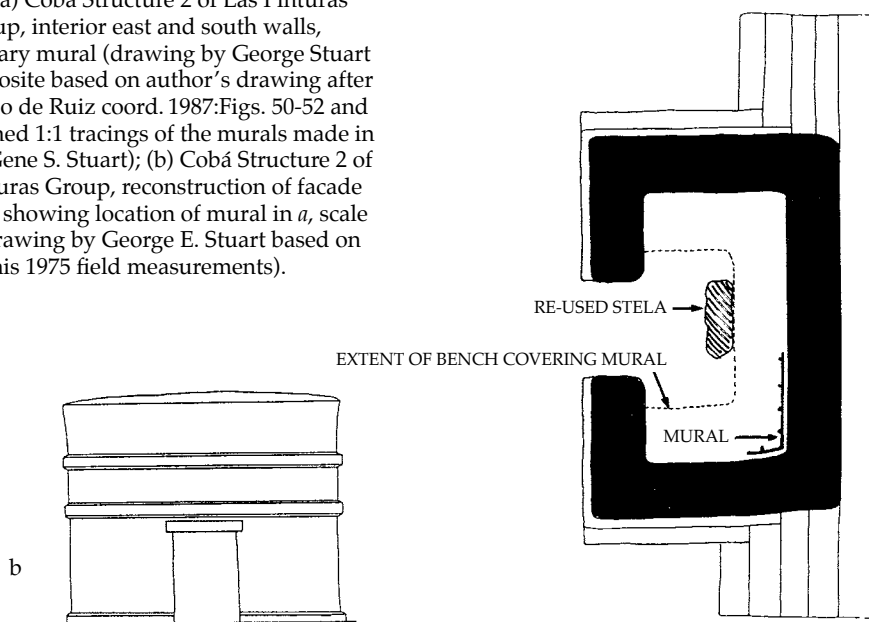


Figure 5. A caiman body with day signs at Cobá: (a) Cobá Structure 2 of Las Pinturas Group, interior east and south walls, fragmentary mural (drawing by George Stuart is a composite based on author's drawing after Lombardo de Ruiz coord. 1987:Figs. 50-52 and unpublished 1:1 tracings of the murals made in 1975 by Gene S. Stuart); (b) Cobá Structure 2 of Las Pinturas Group, reconstruction of facade and plan showing location of mural in *a*, scale 1:100 (drawing by George E. Stuart based on his 1975 field measurements).



Conclusions

In view of the Cobá painting and other Maya scenes, it is clear that the Postclassic Yucatec perception of the earth caiman was very similar to that of highland Mexico. In both regions, the caiman was closely identified with an aged god of creation and sustenance. Although the caiman earth metaphor cannot be traced to before the Postclassic in Central Mexico, there are strong indications that it was present among the Classic Maya. However, the identification of

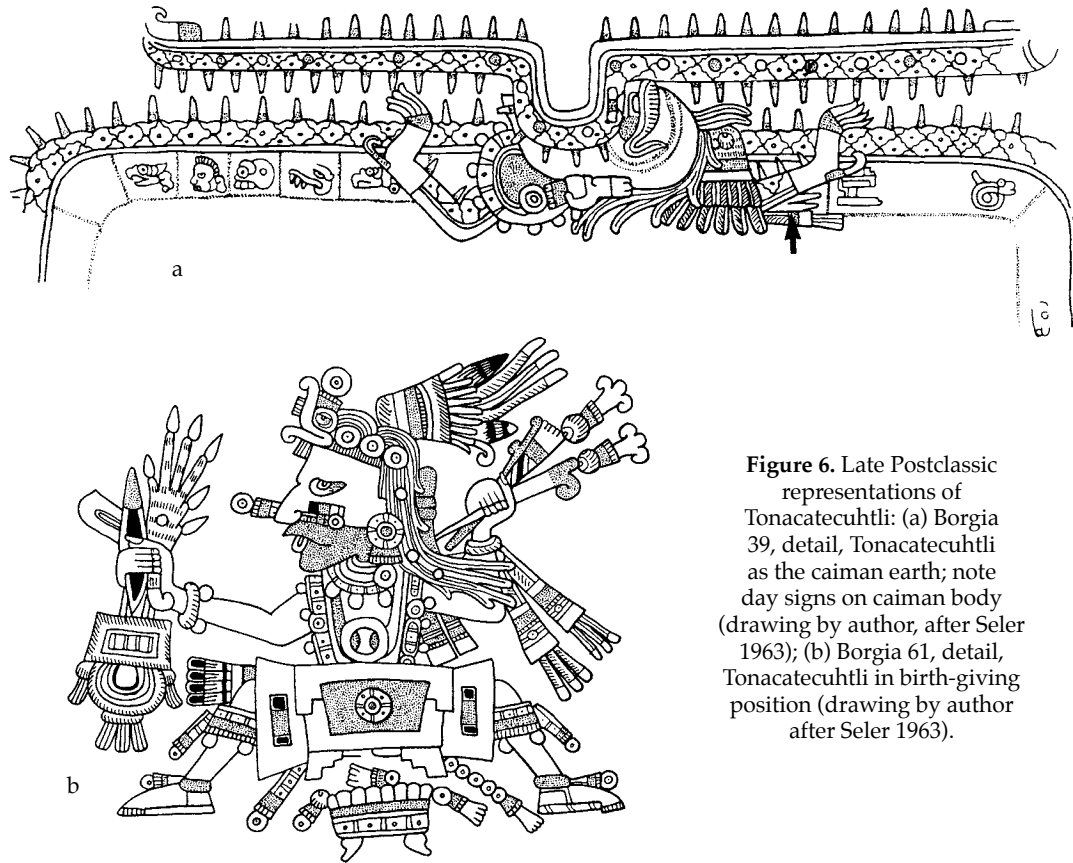
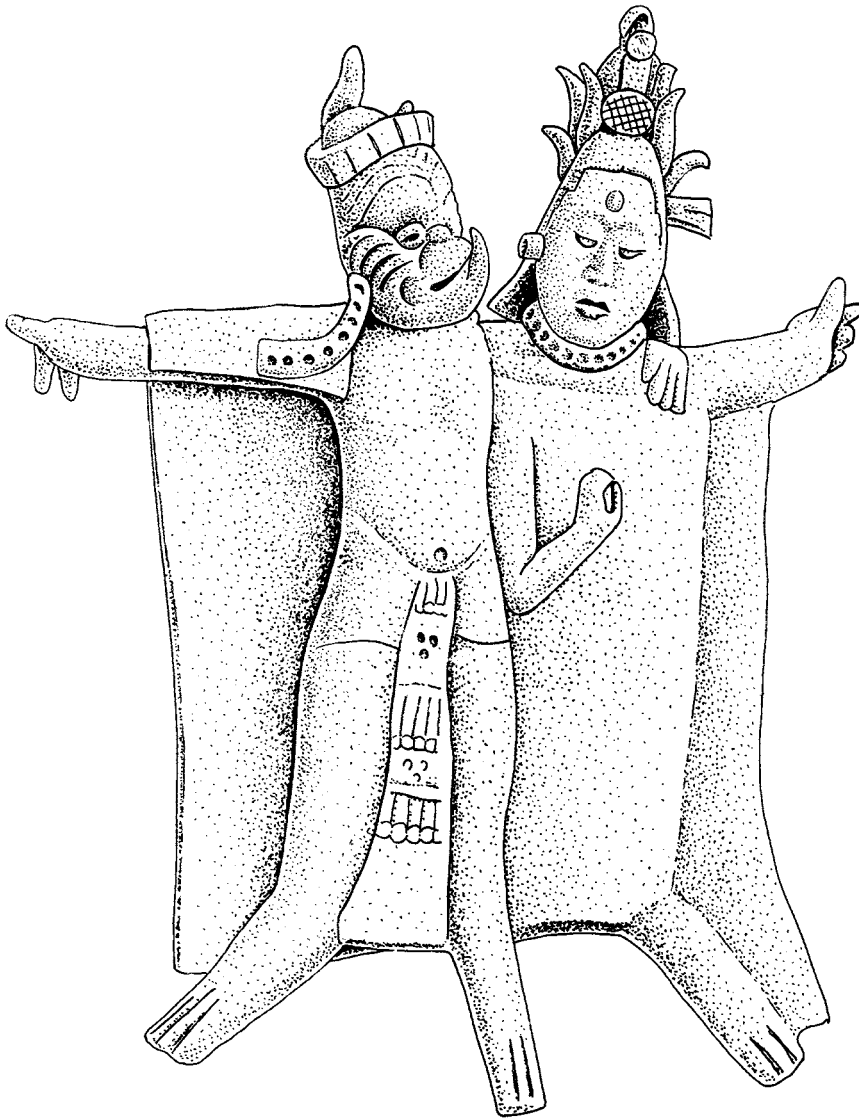


Figure 6. Late Postclassic representations of Tonacatecutli: (a) Borgia 39, detail, Tonacatecutli as the caiman earth; note day signs on caiman body (drawing by author, after Seler 1963); (b) Borgia 61, detail, Tonacatecutli in birth-giving position (drawing by author after Seler 1963).

Itzamna with the caiman in the form of Itzam Cab Ain is primarily a Postclassic Maya trait. Quite likely, the Yucatec use of *itzam* to designate a whale or caiman derives from the late identification of Itzamna with the cosmological caiman.

In the three cited examples from the Late Postclassic—Santa Rita, Mayapán, and Cobá—particular day signs are placed on the body of the earth caiman. In the Santa Rita and Mayapán examples, the days are period ending dates, while at Cobá they form a series of the twenty day names. The placement of day signs on zoöomorphic or anthropomorphic figures is common in the Borgia Group of Late Postclassic codices as, for example, on Borgia 17, 39–40, 53, and 73; Vaticanus B 75, 85, 86, and 96; and Laud 2. The three Late Postclassic Maya examples can be considered as part of the same tradition. However, in the case of the three Maya representations cited, the caiman seems to have had a particular calendrical as well as cosmological significance. According to the Chilam Balam books of Tizimin and Maní, the cosmogonic Itzam Cab Ain flood event occurred in Katun 13 Ahau, the last katun of the 13-katun series. It is surely no coincidence that the world trees subsequently placed in commemoration of the flood were termed *imix che*. The trees are named after Imix, the day immediately following Ahau, and thus the first day of the next katun cycle. As the primordial beast from which the earth is both destroyed and fashioned, Itzam Cab Ain embodies the concept of completion and renewal appearing in both Maya cosmology and calendrics.



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CHAPTER 4

Ritual Humor in Classic Maya Religion

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 Acuña (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 identified 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 (1960:178-182). 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:

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.

chakaab cizin
heekaab mitnal

Cisin is unbound
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
h'paal dzamoob h'okotoob
h'ualak zut ziithoob
bey ppuz
yetel nac yaob

Arrived are the musicians
comedians, dancers,
contortionists, jumpers,
hunchback
and spectators. (1965:71)

It is uncertain on what day this night celebration occurred, but an account in the *Relación de la Villa de Valladolid* 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 *Alquín* watch and wait for the sun, making a grand festival that day" (de la Garza ed. 1983:2:237, my translation).

The comedians, or *ah paal dzamoob*, mentioned in the installation of Pop are probably much like those described by Fray Cogolludo:

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*. (López de Cogolludo [1688]1954:339, 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 (Acuña 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 1980:748, 752-753). In the Pío Pérez dictionary, *ta'ah* is glossed as '*regir el vientre, evacuar en algo, ensuciarlo con excremento*' (Barrera Vásquez 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 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-century 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

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.

Paris Codex pages 19 and 20 also concern the installation of the year. Bruce Love (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 mentions that one of the primary fears experienced during the Uayeb period was that of being bitten by snakes or wild beasts (*animales fieros*) (López de Cogolludo [1688]1954:336-337). 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 0 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 Figure 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 (1962a:286) noted that the following compound on all four pages can be phonetically read *u mam*. Both Cogolludo (López de Cogolludo [1688]1954:343) 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 (1962a: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 *h²uč*, or *mol h²uč*, the latter term meaning ‘old man opossum.’ In addition, the previous month is occasionally called *me’el uč* ‘old woman opossum’ (Gossen

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.

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 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 '*truán, 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 may derive from the pre-Hispanic *ix tol* dance (cf. Makemson 1951:101; Acuña 1978:53, n. 57). 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?
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The chorus answers:

Matan, Matan, Matan, tat	No way, no way, no way, sir.
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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. Codex Vaticanus B, p. 52; Codex Borgia, p. 64; Codex 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 (1963:2:106) the *chicahuaztli* was associated with gods of the earth and fertility. Ichon (1973:427) noted that because the Postclassic staff

⁴ Among the Pedrano Tzotzil, the opossum is believed to be the owner of fire (Guiteras Holmes 1961:196-197). A similar belief is recorded for the Nahuatl of Huitzilán in the northern Sierra de Puebla. In one Huitzilán tale, the opossum steals fire to warm Christ, and in so doing burns the hair off his tail (Taggart 1983:103-104).



Figure 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).

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 (Figure 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 (Figure 2).

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.

Pauhtuns, 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 (1901:189-192) 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 (1950:133-134) 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 (1950:133-134) 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* reading (Thompson 1963:125).



Figure 2. Late Classic mold with modern cast representing opossum musician with drum or rasp (photograph by William Sacco, reproduced with permission of Peabody Museum of Natural History, Yale University).

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 (Figure 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 (Figure 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 (Figure 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 frequently appear with this headdress in Dresden texts (Figure 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

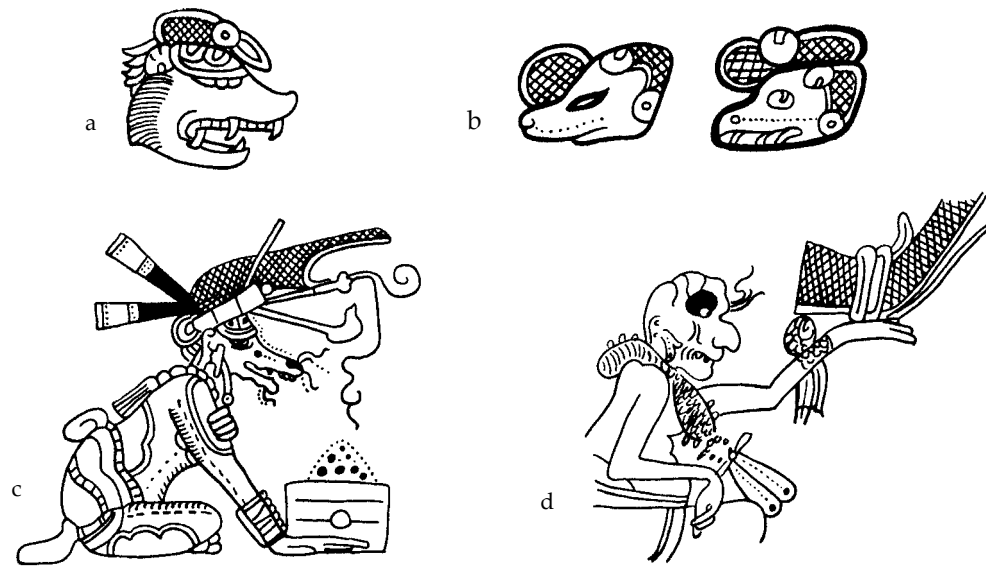


Figure 3. The opossum God N in Classic and Postclassic Maya art: (a) opossum glyph on Early Classic God N effigy vessel, crosshatched element on forehead probably headdress (after Coe 1982:No. 33); (b) Postclassic examples of opossum heads with God N headdress, Dresden Codex, pp. 55b, 56a; (c) Late Classic opossum with God N headdress, compare Akbal eye marking with *a* (after Coe 1975a: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).

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 and M. E. Miller 1986:60, n. 55). 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 Figure 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 Figure 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 et al. 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 et al. 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 (1926a) 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 Pauhtun Mam is an aged thunder deity. But although the Chacs and Pauhtuns may thematically overlap, there is no evidence that they are simply young and old aspects of the same god. The Pauhtuns, 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 (1984:58-59) 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,

⁷ The contemporary Chol similarly believe that the wife of Lak Mam is a large toad (Cruz Guzmán et al. 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 1972:377-379). 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).

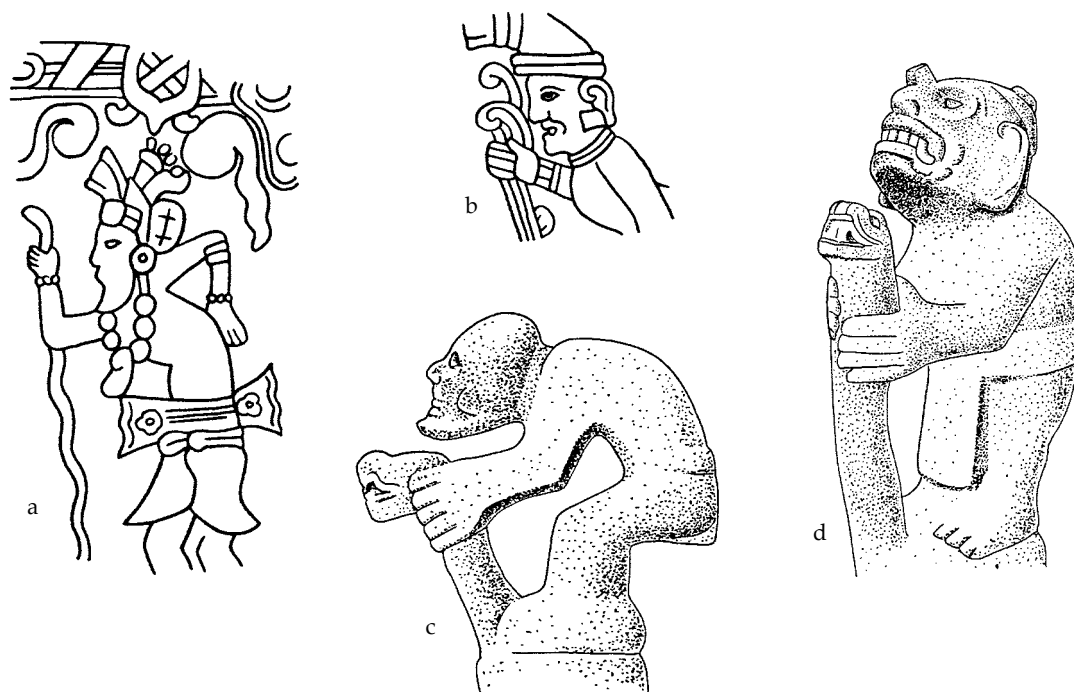


Figure 4. The aged Mam, comparison of stone sculpture from Guatemala and the Gulf Coast: (a) Stela 17, Kaminaljuyu, a Late Preclassic representation of God N, note bound cloth headdress and undulating staff in right hand; (b) detail of Late Classic scene from mound of the Building Columns, El Tajín, 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).

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 (Figure 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 (Figure 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 (Figure 4c). Stresser-Péan (1971:596) identified this common sculptural type as the Mam, “the old god of the earth and

⁹ Klein (1980) has argued that the Bacabs, Pauhtuns, 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.



Figure 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 1902-1923:5:292); (b) dancer accompanying Huehuetotl, Vaticanus B, page 52 (detail), compare arm positioning to God N figure and pre-Hispanic depictions of spider monkeys (cf. Figure 6); (c) representation of God N on painted column from the Temple of the Chac Mool, Chichen Itza, figure holds *chichahuaztli* staff and fan (after Morris et al. 1931:2:Pl. 37); (d) opossum Mam from New Year pages of Dresden Codex holding fan and *chichahuaztli* staff, compare conical shell tinklers on belt with examples on necklace of *b* and wrists of *c*; Dresden Codex, p. 27.

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 (Figure 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 *chichahuaztli* 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 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. 122-126, 140-142). The cloth headdress is often affixed by the “Jester God” plaque, identified by Schele as a Classic Maya symbol of rulership (Schele 1979; Schele and M. E. Miller 1986). 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 Figure 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 *chichahuaztli* staff (Figure 5c). In addition, the figure wears the same conical shell tinklers, in this case as bracelets. On the basis of costume elements, Selser (1902-1923:5:284-285, 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 *oyohualli* symbol of cut shell, costume elements almost identical to the dancing figure on page 52 of the Vaticanus B (Figure 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 B 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 (Figure 6). In one Late Classic vessel scene, a dancing God N in quadruped stance bears the facial markings of the spider monkey (Figure 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. Selser 1902-1923:4:456-464).

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

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).



Figure 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 1984a:No. 21); (e) dancing God N with facial markings of spider monkey (after Coe 1981b:Fig. 2).

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 crosshatching (Figure 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 crosshatching 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 crosshatching 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 (Figure 7j, k). Although lacking masks, they are covered in crosshatched or knotted suits, apparently of coarse cloth or grass. Eduard Seler (1902-1923:4:459) 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 1939:4:2)

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



Figure 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, forming part of “*tupah*” period ending expression, Copan Stela D, B5.

excavations at Kaminaljuyu, a remarkable two-part effigy vessel was discovered in Tomb A-II (Figure 8a). Kidder, Jennings, and Shook (1946:188-190) noted that this figure, modeled in “sardonically rendered ugliness,” is largely covered with the impressions of “a harsh checkboard 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 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 et al. 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



Figure 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 et al. 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 Figures 11a and 11b (from Nicholson and Cordy-Collins 1979:No. 130).

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. Cantú and Carballo 1969:No. 1). The fibrous suit is represented by a checkered pattern 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 (Figure 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 AD 500 to 600. The roughly contemporaneous incised peccary skull from Tomb 1 of Copan contains an excellent example of the suited character (Figure 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 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 (Figure 9). These scenes give every impression of being festival performances. The figures frequently hold rattles and are placed in a position



Figure 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 Figure 7k (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 reads *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 1978b: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).



Figure 10. Detail of Chama Vase, *pa* character wearing black paint in place of suit. Compare nominal text with figure on Copan peccary skull (Fig. 9c) (after Coe 1978:No. 9).

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 alcohol, 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 Figures 11b, 12c, 13c). The kneeling figures upon the Western Court Reviewing Stand at Copan are probable examples of the mythical being (see Figure 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 a 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 crosshatching upon the nose reveal that the mask is woven either of coarse cloth or even wicker (see Figure 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 Figure 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.

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."

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 accompanied by a hieroglyphic text that can be read as *k'an pa* (Figure 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 (Figure 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* (Figure 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 *patic*; 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

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 11. Representations of *pa* character on Jaina-style figurines: (a) personified *pa* wearing suit and mask, compare face with Figure 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.

'the end of something.' Thus, in Tzotzil, *ta patil* 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 1980:632-634).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 (Figure 71). 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 Figure 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 1979-1982:3: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. Figures 12b-c, 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 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 (Figure 13c).

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 (1980:511) glosses as 'mono sustituto del señor o rey.'

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 (Figure 12). In one remarkable vessel scene, a male with an obscenely extended nose dances with a young woman (Figure 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 (Figure 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 (Figure 13a). Far from resisting 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,

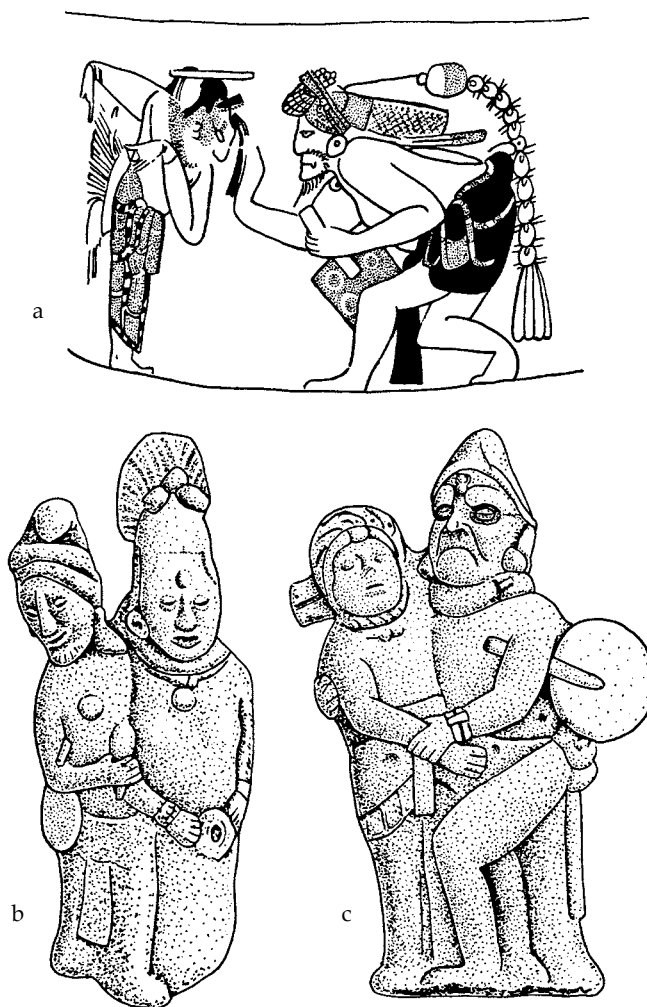


Figure 12. Old man and young woman couples dancing with fans: (a) God N dancing with young woman, detail of Late Classic polychrome vessel (after Bolz 1975a:Pl. 59); (b) figurine representing God N with young woman, note fan and probable rattle held in arm of God N (after photograph in Robicsek and Hales 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).

where a monkey fondles the breast of the semi-reclining 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., Figures 8b, 11a, 14). This device is perhaps analogous to the *oyohualli* pleasure sign (Figure 5a) of Central Mexico, and it may mark the office of entertainers, such as musicians, dancers, and buffoons.

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

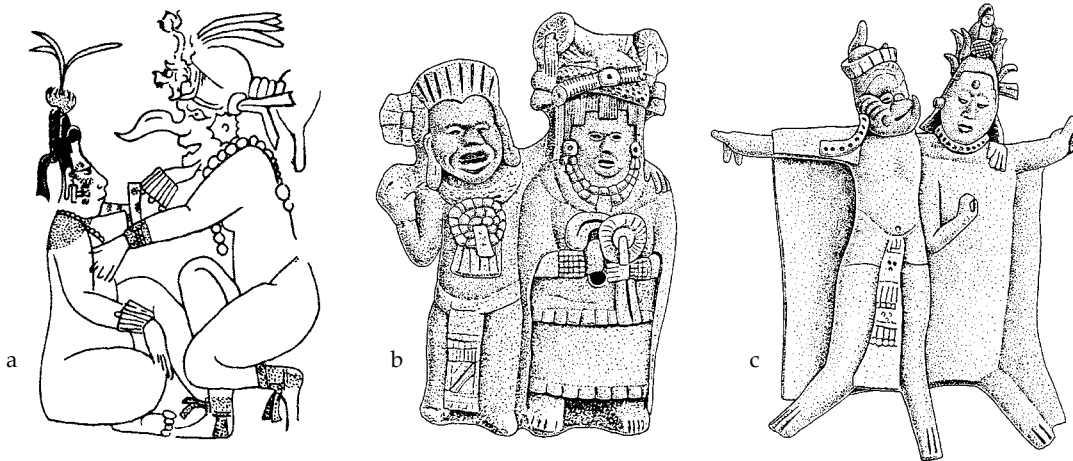


Figure 13. Versions of personified *pa* figures with young women: (a) sickle-nosed form of personified *pa* touching woman's breast, note Ahau headband and Jester God plaque, detail of Late Classic Maya polychrome (after Robicsek and Hales 1981:Fig. 68); (b) simian personified *pa* and young woman holding fan (from Anton 1970:Pl. 214); (c) simian *pa* dancing with woman, pointed chin element probably a goatie (from Krichman and Grudin 1981:Pl. 73).



Figure 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 et al. 1986:138-139).

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 Atamalqualitzli (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 1950-1982:Book 2:177-178). There is strong evidence for a Classic Maya snake dance, in this case also involving lightning. In the two previously described Classic representations of Chac, the lightning god has snakes emerging from the mouth and holds a serpent lightning axe (Figure 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 Palenquero 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 (Figure 16b). Andrews (1939:74) noted that there originally were five figures around this

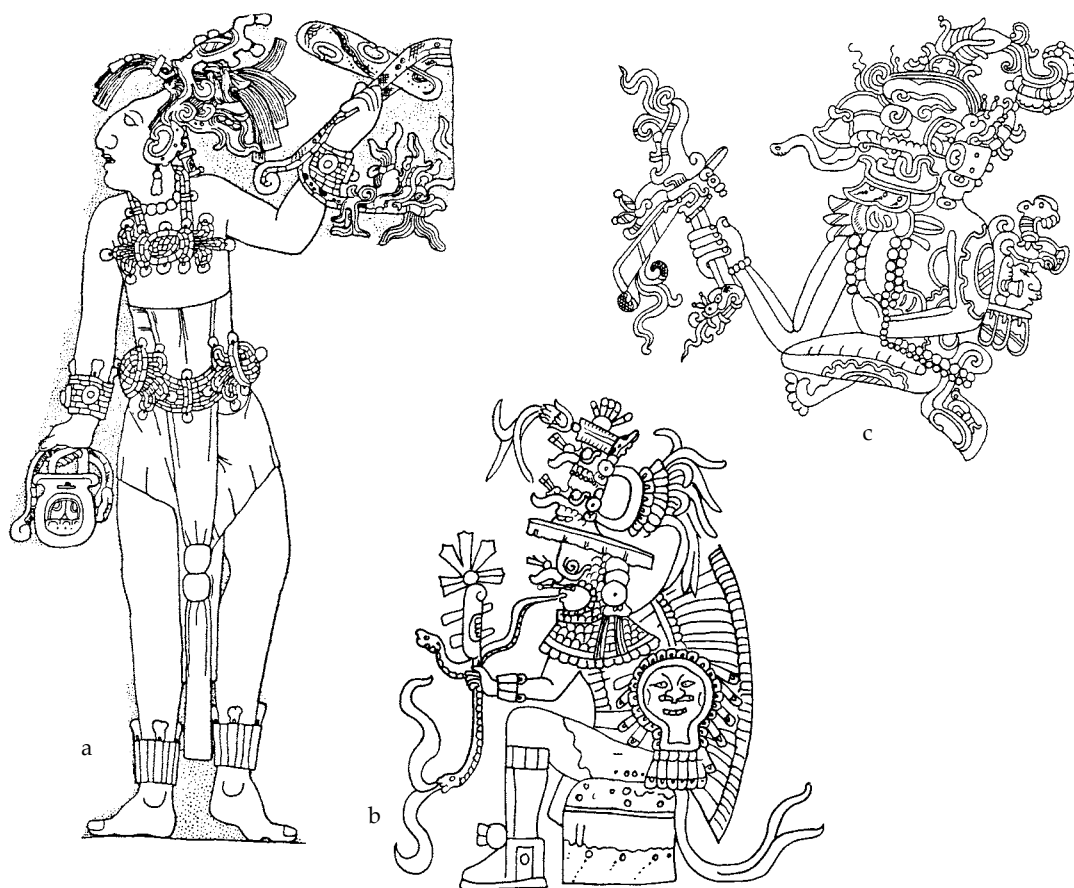


Figure 15. Classic and Early Postclassic Chac figures with serpent lightning axes: (a) Palencano ruler, either Pacal or Kan-Xul, impersonating Chac; with one foot raised in dancing position, figure holds a serpent and Akbal jar in one hand and a burning lightning axe in the other; limestone panel in collection of Dumbarton Oaks (detail from Schele and 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, multi-bladed serpent axe in right hand (after Morris et al. 1931:2:Pl. 133).

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 (Figure 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 (Figure 16c). The Copan figures not

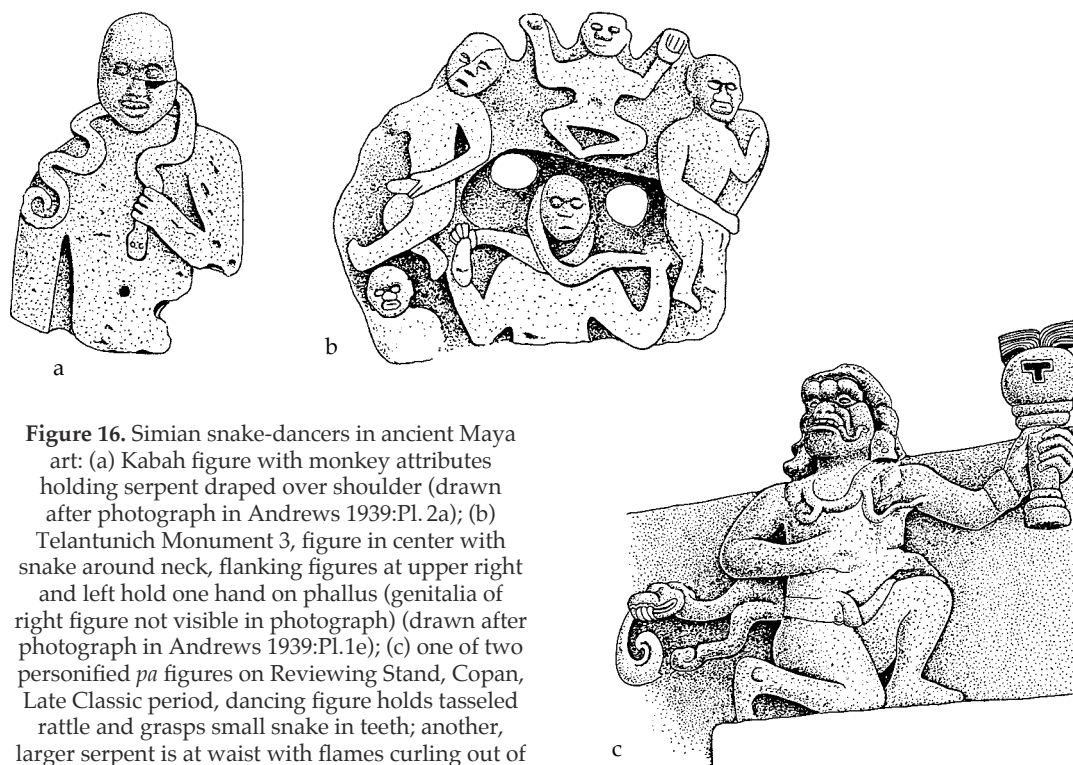


Figure 16. Simian snake-dancers in ancient Maya art: (a) Kabah figure with monkey attributes holding serpent draped over shoulder (drawn after photograph in Andrews 1939:Pl. 2a); (b) Telantunich Monument 3, figure in center with snake around neck, flanking figures at upper right and left hold one hand 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).

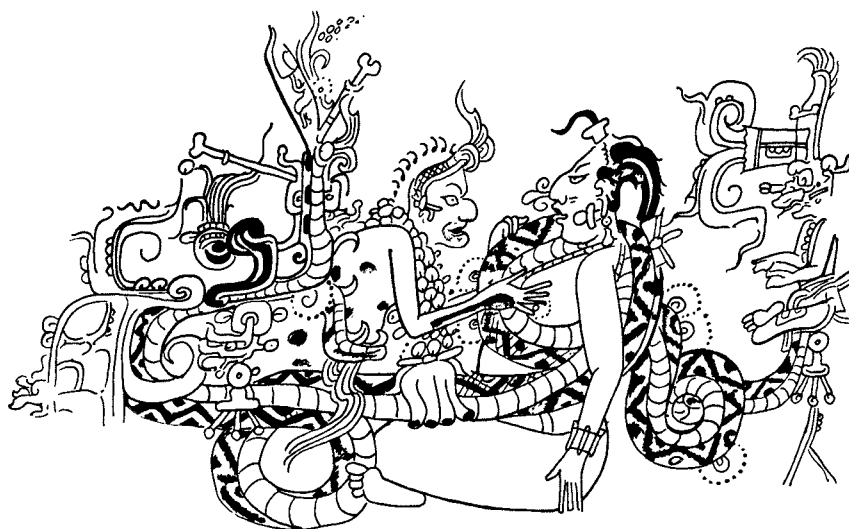


Figure 17. A possible symbolic correlate of the snake dance/copulation performance. God N rises out of Bearded Dragon serpent wrapped around upper torso of young woman. With one hand on her breast, he duplicates the position frequently adopted by the old man and young woman couples. The end of the serpent's 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).

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 (Figure 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 a harem of women (Mendelson 1965:132; Tarn and Prechtel 1981). Tarn and Prechtel mentioned that he is occasionally

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 (1926a). 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 1963:2:34; Krickeberg 1949:1:193-194; Taube 1986). The serpent axe wielded by the Palencano Chac impersonator is actually the Bearded Dragon (Figure 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 (Figure 15b, c). In short, I believe that there are excellent grounds for identifying the Bearded Dragon with lightning.

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 the same material (*Erythrina flabelliformis*) from which the race of wooden men was 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’ (Martínez Hernández ed. 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 1979:229-230). 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:

The opposite of order is symbolized by the cold darkness in 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 1973:127-128)

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

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*.

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 (*kʔukʔul čon*), Spanish Moss Wearers (*čon teʔ*), and the aforementioned Blackmen (*hʔikʔal*). 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 *hʔikʔal* 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 1973:118-120). 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, 135-136). 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 1976).¹⁹ 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 1978b: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

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 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 1967:150-151).

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.

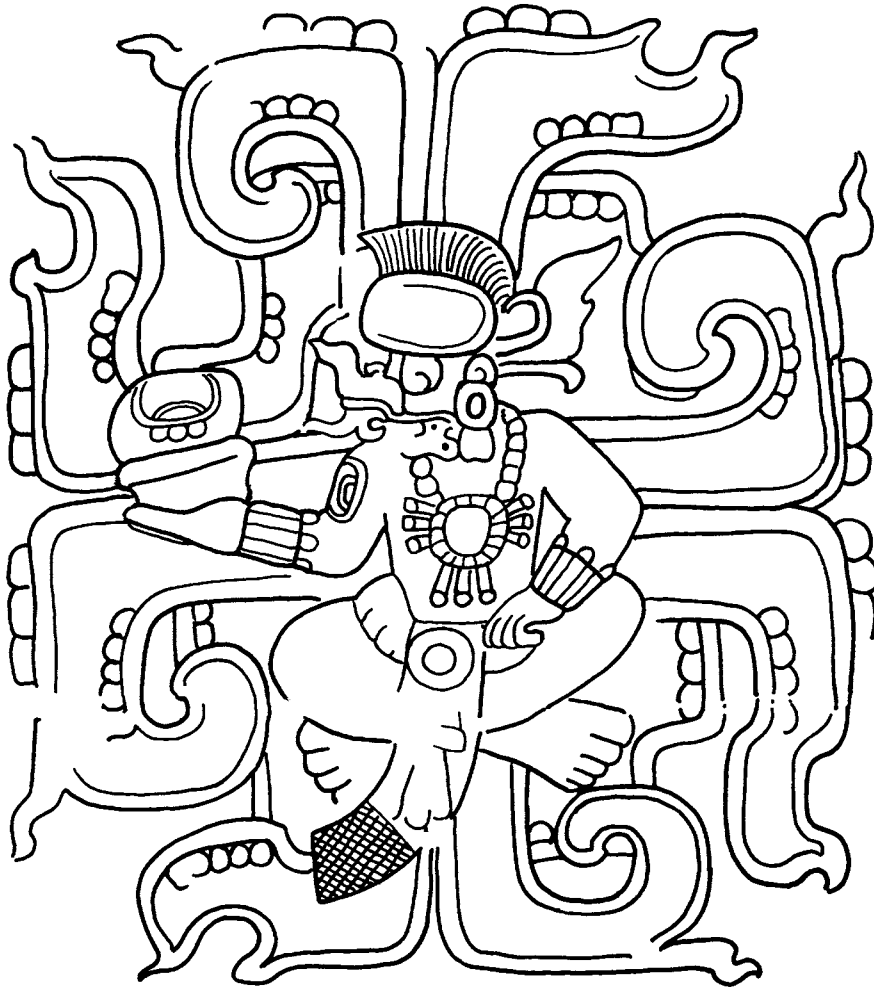
The same could be said of Classic Maya clowns; through inversion and antisocial behavior, these characters sharply define what is correct and what is not. Like the contrast of light and shadow, the clowns provide definition and depth to important social values and behavior. Together with the monumental 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 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’ ceiba*, 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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CHAPTER 5

The Maize Tamale in Classic Maya Diet, Epigraphy, and Art

In the past decade of Classic Maya research, the study of iconography and epigraphy has not played a major role in the formulation of archaeological research designs. Site excavation and settlement reconnaissance strategies tend to focus on gathering information relevant to topics such as relative and absolute chronology, settlement patterns, technology, subsistence, and exchange. Most recent epigraphic and iconographic work has focused upon less-material aspects of culture, including calendrics, the compilation of king lists, war events, and the delineation of particular ceremonies and gods. The differences are an expected consequence of increased specialization, but they should by no means be considered as constituting a hard and fast dichotomy. Some of the most exciting and important work results from exchange between the two general disciplines; the calendar correlation problem is an obvious example. Yet another is Dennis Puleston's (1977) work on the iconography of raised field agriculture. According to Puleston, the abundant representation of water lilies, fish, aquatic birds, and caimans in Classic Maya art graphically depicts a distinct environmental niche—the artificially created raised fields.

A considerable body of data now exists on Maya raised fields, but little subsequent work has been published on the iconography of raised fields or even Classic Maya agriculture. In part, this may relate to Puleston's failure to define the entire agricultural complex. Although acknowledging that maize probably was the principal crop, he made no mention of maize imagery in his cluster of symbolic traits. In a recent article (Taube 1985), I have noted that one of the principal figures depicted on Classic Maya vessel scenes is the maize god. The deity is found with water lilies, fish, aquatic fowl, and frequently stands in waist-deep water; in

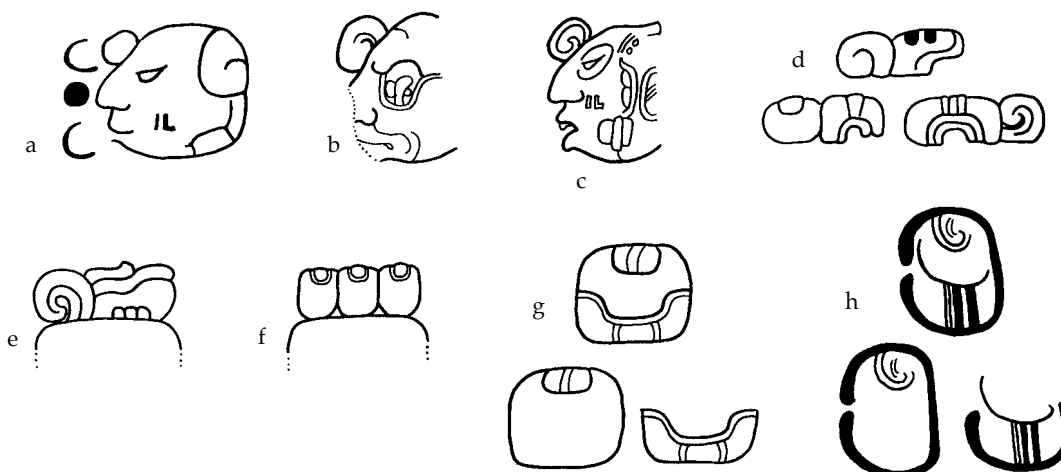


Figure 1. Examples of notched-ball and corn-curl tamales in Classic Maya epigraphy: (a) name glyph of Tonsured Maize God, note curl in back of head (from Taube 1985:Fig. 3c); (b) number six head variant with forehead curl (after Thompson 1971:Fig. 57j); (c) head variant of number eight with characteristic brow curl (after Thompson 1971:Fig. 24-43); (d) affix T130, the tamale with leaf wrapper; above, Postclassic form, below, Late Classic forms (examples after Thompson 1962:447); (e) affix T86, the foliated corn curl (after Thompson 1962:446); (f) affix T135, a series of notched-ball tamales (after Thompson 1962:447); (g) T506, the Kan sign, constituent elements below: notched globular form and leaf wrapper (after Thompson 1971:Fig. 6-54); (h) T574 or T575, calligraphic example from rim of Tepeu 2 Uaxactun dish, turned 90 degrees for comparison, constituent elements of sign below: spiral globular form and leaf wrapper (after Smith 1955:Fig. 73a-l).

short, he constitutes a pivotal feature in Puleston's suggested agricultural complex. Because of his distinctive coiffure, I have labeled him the Tonsured Maize God. Most relevant to the present study is his name glyph, a youthful head with a curling element infixed in the parietal region of the skull (Figure 1a). I identified this globular device, or corn curl, as a maize grain (Figure 1a–e, h); however, it appears to have had a different meaning. I will demonstrate that the corn curl is one of a number of Classic elements that represent the tamale, a cooked, vegetal-wrapped mass of maize dough. In addition, the present study provides glyphic and iconographic evidence that the tamale was known widely as *wa* or *wah* among the Classic Maya and that it, rather than the tortilla, constituted the primary maize product in the Classic Maya diet.

The Tortilla and Tamale in Prehispanic Maya Diet

The dietary basis of contemporary Maya peoples is the tortilla, a disk of baked maize dough usually prepared on the flat *comal* griddle. It thus may come as a surprise to those familiar with modern Maya groups that there is very little evidence for tortilla consumption among the Classic Maya. Half a century ago, Thompson (1938:597) cited archaeological and ethno-historic evidence for the relatively recent introduction of the tortilla in the Lowland Maya area. Thompson noted that the ceramic *comal* virtually is absent at Lowland Maya sites, both in the Peten and in the northern Yucatan Peninsula. Subsequent excavation has supported Thompson's early observation. Smith (1955:100) noted that none were found in the extensive excavations at Uaxactun, and cites only one instance of the *comal* in the entire Peten. Borhegyi

(1959) later demonstrated that these examples, excavated at the site of San Jose by Thompson (1939), actually were the covers of composite incense burners.

Following a decade of intensive excavation by the Tikal Project, Harrison (1970:289) noted that no *comales* were found at Tikal. In his comprehensive study of Prehispanic Yucatan ceramics, Brainerd (1958:81, Figs. 66, 97) stated that the *comal* is “exceedingly scarce,” and mentioned but two possible sherds, both from Chichen Itza. Smith (1971:84) later noted the limited presence of *comales* at the Late Postclassic site of Mayapan, but suggested that these examples also may have been used to roast cacao and other seeds. In highland Guatemala, ceramic vessels of *comal* form occur during the Esperanza phase at Kaminaljuyu (Kidder et al. 1946:208, Fig. 200g, h). However, Borhegyi (1965:55) has suggested that not until the protohistoric period was the *comal* widely introduced in highland Guatemala, presumably from Central Mexico. In contrast to the Maya area, the *comal* has a long tradition in the Basin of Mexico, and has been found at Teotihuacan (Linné 1942:130, Figs. 225, 229), Tula (Chadwick 1971:237), and at many Late Postclassic sites in the Valley of Mexico (Tolstoy 1958:63-64).

Thompson (1938:597) also noted that descriptions of the tortilla and *comal* curiously are absent in a number of early ethnohistoric accounts. Thus Landa states that the Yucatec Maya prepared “good and healthful bread of different kinds,” but mentions neither the tortilla nor the *comal* (see Tozzer 1941:90). In the Peten, tortillas appear to have been absent until colonial contact. According to the Dominican friars, it was necessary to teach the Manche Chol how to manufacture tortillas (Thompson 1938:597). Whereas Thompson discussed only the Lowland Maya area, Carmack (1981:108) has made a like case for the Protohistoric period highland Quiché: “Maize in form of the tamale was the staple, and was eaten with boiled beans, squashes, and chile sauce.”

Previous studies on the antiquity of the Maya tortilla have omitted an important body of data—Prehispanic representations of maize foods. Whereas the tamale is depicted widely in ancient Maya art, tortillas and tortilla making rarely occur. I know of no evidence for the tortilla in the Postclassic codices, and Classic depictions of the tortilla and *comal* are rare. Female ceramic figurines in the coastal Campeche style of Jaina occasionally are represented with tortillas and even *comales*. However, because the vast majority of Jaina-style figurines lack provenience, the few tortilla-bearing figurines may not derive from the Campeche region or may not even be authentic.

Some of the earliest representations of maize foods in the Maya area appear in the Early Classic Esperanza phase of Kaminaljuyu. One Tajín-style mirror back bears a scene of two males facing a bowl of large rounded elements (Figure 2a). The balls clearly are offerings, quite probably tamales, as a stalk of maize sprouts from the top of the mounded mass. However, as a probable Gulf Coast import, the mirror back does not relate to food preparation at Early Classic Kaminaljuyu. Another Esperanza phase piece, a locally made basal-flange bowl, depicts four individuals carrying bowls containing either deer haunches or fish. Between each of them are two bowls, one containing tamales, the other stacked tortillas (Figure 2b). Although on a Maya vessel, the scene is depicted in pure Teotihuacan style. It has been noted that actual *comales* are known both for Teotihuacan and Esperanza-phase Kaminaljuyu. The presence of the *comal* and tortilla preparation at Early Classic Kaminaljuyu may be yet another example of Teotihuacan influence.

Although of local manufacture, the Esperanza-phase bowl is not a reliable indicator of Maya food preparation. It could be argued that the scene relates to Central Mexican food preparation, and reveals no more on native Maya diet than does the Veracruz mirror back.

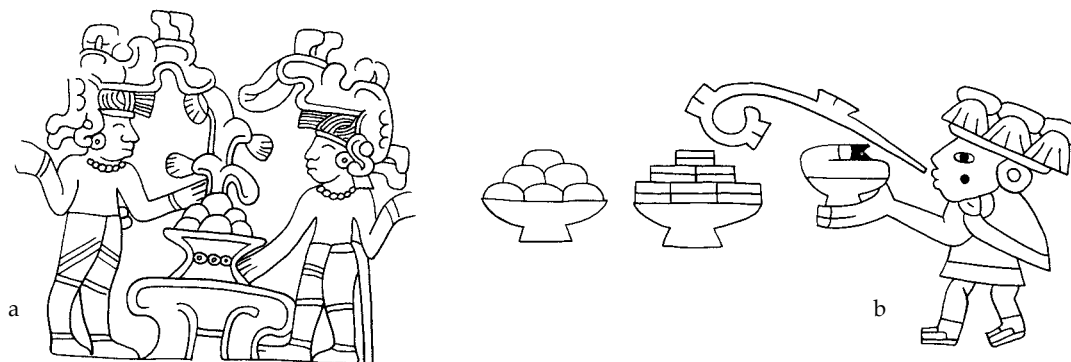


Figure 2. Early Classic representations of maize foods, Esperanza-phase Kaminaljuyu: (a) detail of slate mirror back in El Tajin style, bowl containing tamales placed on platform between two young males; note maize foliation affixed to top of balls (after Kidder et al. 1946:Fig. 156); (b) detail of stuccoed basal flange bowl painted in Teotihuacan style, figure holds bowl containing deer haunch; two other bowls nearby, one mounded with tamales and the other, stacked tortillas (after Kidder et al. 1946:Fig. 207).

In this light, both the tamale and tortilla could be viewed as foreign foods that sporadically occurred in the Maya area. Maya epigraphy supplies the most convincing evidence that the tamale constituted the principal maize food of the Classic Maya. It will be seen that tamales represented in Classic period texts and iconographic scenes were known widely by the Mayan term *wa* or *wah*, a word also signifying food or sustenance in a number of Mayan languages, while the tortilla was primarily a Central Mexican product introduced during times of strong Mexican influence.

The Phonetic Value *wa* in Classic Maya Script

In his study of the “ben ich” compound, Lounsbury (1973:138) suggested that affix T130 has the phonetic value of *wa* (cf. Figure 1d). Noting the occasional presence of affix T130 in the “ben ich” symbolic Ahau compound, which he proved should be read *ahaw*, Lounsbury suggested that the T130 postfix serves as a phonetic marker for the word final *w*. As supporting evidence, Lounsbury cited page 91a of the Codex Madrid, where T130 serves as final *w* in a compound read as *ca-ca-w(a)*, the Yucatec term for cacao. Fox and Justeson (1980:212-213) mentioned other readings of T130 in relation to three recorded Maya month names, *kasew*, *uniw*, and *mwan*. In these cited cases T130 appears as *wa* or word final *w(a)*. More recently, Mathews and Justeson (1984:205) have noted that in the codices, T130 is affixed to the Kan sign (T506) to provide a reading of *wah*, the Yucatec term for tortilla.

The reading of T130 as *wa* now is accepted widely, but little mention has been made of the formal significance of the sign. Both Knorozov (1967:81) and Kelley (1976:126) have identified T130 as a young ear of corn, presumably because of the leaf-like codical form. Affix T130 actually is composed of two parts, a globular element as well as the curving leaf form (Figure 1d). The round object is represented either curled or as a ball with a small infix or notch in the uppermost center. The two variants are present in affixes T86 and T135 (Figure 1e, f). These two affixes, one containing the corn curl, the other the notched ball, occur in free variation in G9 of the Supplementary Series (Taube 1985:173). In view of their shared occurrence in T130 and the substitution between affixes T86 and T135, it is clear that the two globular forms have similar if not identical meanings. The curving device constituting

the other half of T130 usually is transected by a broad band identical to the bracket element contained in the day signs Cib, Ben, and Kan. Broken into its constituent parts, the Kan sign is found to be composed of the same elements that form T130, the globular device as well as the curving element (Figure 1g). This is not coincidental; both the Kan sign and T130 are recognized maize signs (Kelley 1976:126; Thompson 1971:75).

The primary element of T130 is not the curving leaf but the round ball. At times, the ball alone can provide the phonetic *wa* value. On Dresden pages 30c to 41c there is the repetitive compound T667:130 prefixed either by the phonetic T1 *u* or the T229 *ah*. However, on page 33c, T130 is twice replaced by a single large corn curl, although in the second case the compound is prefixed by the T238 *ah* rather than T229 (Figure 3).

The corn curl also occurs as a forehead element affixed to the Classic head variant of the number eight (Figure 1c). In his identification of the numeral head variants, Goodman (1897:46, 51) noted that this spiral is a diagnostic element of the number eight head variant and its jawboned counterpart serving to represent the number 18. Seler (1902-1923:3:593) was the first to identify the foliated head as the maize god, and also stressed the importance of the brow curl. The maize curl is associated with the number eight in a number of other ways. At times, the curl-infixed head of the Tonsured Maize God substitutes for the usual foliated form of the personified number eight (Taube 1985:173). On Copan Stela I, the maize-curl affix T85 lies immediately above a cartouche containing the conventional sign of eight, a bar and three dots (Maudslay 1889-1902:1:Pl. 65). Another maize affix occurs above a number eight cartouche on Dresden page 67a, though in this case the affix contains not the spiral but the notched globe of T130.

The pervasive identification of maize with eight does not derive from any obvious numerical quality of the plant, such as the number of cobs, leaves, or time of development. Thompson (1971:99) suggested that the personified numerals 1 to 13 correspond to the day signs Caban to Muluc, with eight being the coefficient for Kan. However, it appears that the head coefficients have a phonetic component as well. On one of the stucco glyph blocks excavated from the Olvidado Temple at Palenque, the corn curl is affixed not to the brow of the number eight head variant, but to that of the number six (Figure 1b). In Yucatec, the word for six is *wak*, and eight, *wašak*; clear cognates occur in all other recorded Mayan languages, including Huastec. Of equal interest, *wa* or *wah* is an almost pan-Mayan term signifying tortilla, tamale, or general sustenance (Table 1). As a maize symbol, the globular spiral serves as a phonetic marker *wa* for the reading of *wašak*, and at times, *wak*.

The Postclassic codical glyph of God N usually is a tun sign, T528 or T548, topped by a crosshatched superfix (Figure 4a, b). Coe (1973:15) noted that the crosshatched device is a version of T586, a glyph read as *pa* (Justeson 1984:346). Because T528 and T548 both can be read *tun* (Justeson 1984:340, 342), Coe (1973:15) suggested that the nominal glyph of God N be read *pawahrtun*, the name of a protohistoric and colonial Yucatec deity. The proposed reading is

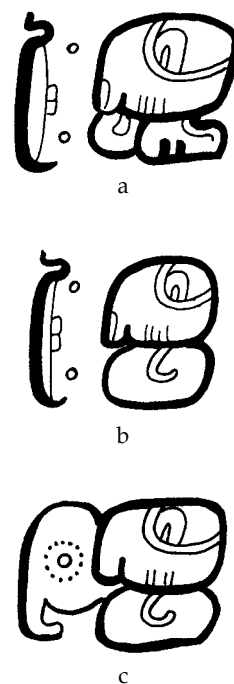


Figure 3. Substitution of the corn curl for T130, Codex Dresden (p. 33c): (a) T667:130 prefixed by T1 *u*; (b) similar compound with corn curl substituted for T130 affix; (c) compound identical to example (b) save that prefixed by T238 *ah* rather than T1 *u*.

	Chorti (Girard 1949)	Chol (Beekman and Beekman 1953)	Tzeltal (Slocum and Gerdel 1965)	Tzotzil (Laughlin 1975)	Tojolabal (Jackson and Supple 1952)
Six	wak	wλc	waqueb	vak	huaque'
Eight	wahik	waxλc	waxaqueb	vašak	huaxaque'
Tortilla	pa	waj	waj	vah	huaj
Tamale	pak at'pa		nolbil waj	pisil vah šohem vah	
Sustenance	pa	waj			hua'el

Table 1. Terms for six, eight, tortilla, tamale, and sustenance in ten Mayan languages.¹

apt, but one problem remains. Given the suggested phonetic values, the compound should be read *patun*, although Landa and the Yucatec sources write the name Pauah Tun or Pauhtun. Coe (1973:15) called attention to an “eye-like element” lying in the center of the suggested *pa* superfix. This is the globular element forming one-half of T130, in this case the notched-ball counterpart of the corn curl. In several Dresden scenes of God N, maize foliage sprouts from the top of the device (Figure 4d). With the maize *wah* sign, the Postclassic God N compounds are phonetically transparent as *pa-wah-tun*. The corn curl substitutes for the notched ball in Classic glyphs of God N (Figure 4b). When God N is represented ideographically in the Classic script, the curl frequently is infixd upon the cheek, probably again to supply the *wah* reading (Figure 4c). In both the Classic and Postclassic periods God N was known as *paawah* or *pawahtun*.

The globular elements of T130 also occur in two codical forms of the water-group prefix (Figure 4e). The stream of beaded dots, or “water,” falls from both the notched ball (T14) and the corn curl (T39). Classic forms of the water group constitute an important part of the emblem glyph compound identified by Berlin (1958), typically composed of a water-group prefix, a “ben ich” *ahaw* superfix, and the main sign which varies according to the particular site or region. A number of researchers (e.g., Barthel 1968:168; Seler 1902-1923:3:649; Stuart 1982) have identified the water group with blood. Although I agree in general, I find that as a sign for blood, the water group also was identified with maize, hence the green *yax* and yellow *k'an* signs commonly occurring within the affix (Taube 1985:180). The aforementioned codical water-group affixes probably also refer to both blood and maize.

The Yucatec Pío Pérez Dictionary provides the following entry for *wah*: “*chorrear, salirse el grano o líquido por la hendidura o rotura*” (Barrera Vásquez 1980:906). This could be paraphrased in English as “to spout, for the grain or liquid to leave by the cut or fracture.” This

¹ The voiced bilabial spirant *w* has been transcribed variously in Mayan orthographies. In sources cited in the present study, it is written *w*, *u*, or *v*. The situation is slightly complex, as in Tzotzil the voiced labiodental spirant *v* replaced *w* save in loan words and words medially, where *w* may be present when followed by *a* (see Laughlin 1975:22). Rather than ignore such phonetic distinctions, I have left the original transcriptions intact. For the purposes of this study, *w*, *u*, and *v* should be considered as phonemically equivalent. In my own use of Mayan terms, I will be using the orthographic system adopted by Barrera Vásquez (1980) for Yucatec.

Jacalteca (Church and Church 1955)	Quiché (Edmonson 1965)	Pokomchi (Fernández 1937)	Yucatec (Barrera Vásquez 1980)	Huastec (Alejandre 1890; Larsen 1955)
wajeb	vaq	uakip uakim	wak	acac
waxajeb	vahäxak	uaxakil uaxajim	waxak	huaxic
waj	va va va	ua	wah tuti wah yahau wah	bacan bolim cuatsam

closely compares to the Classic act of bloodletting, where the liquid commonly is seen falling as a stream from the loins or mouth. The root *wah* carries a similar meaning in Zinacanteco Tzotzil, where *vahahet* means “sprinkling,” *vahluh* “sudden splashing,” and *vahel* “sowing” (Laughlin 1975:361-362). The term *waj* in Tzeltal denotes the act of sprinkling or scattering (Slocum 1953:68). In Quiché, *vah* signifies “overflow,” *valih* “wet, dampen, give water to,” and *awah* “sow” (Edmonson 1965:10, 140-141). The notched ball and corn curl found in the two codical water-group prefixes again provide a *wah* reading, here to describe the action of showering liquid or seed.

In the context of blood offerings, the term *wah* may have had a meaning aside from sprinkling or scattering. In a number of Maya languages, forms of the term *wah* can signify food in general (see Table 1). By extension, *wah* signifies not only sustenance but life itself. Thus in the colonial Yucatec *Motul Dictionary*, *wah* is glossed as “*la vida en cierta manera*” (Barrera Vásquez 1980:905). The term *wa'l* in Quiché refers to vital bodily fluids, such as blood, breast milk, tears, semen, and vaginal fluid (Tedlock 1988). In Postclassic Mesoamerica,

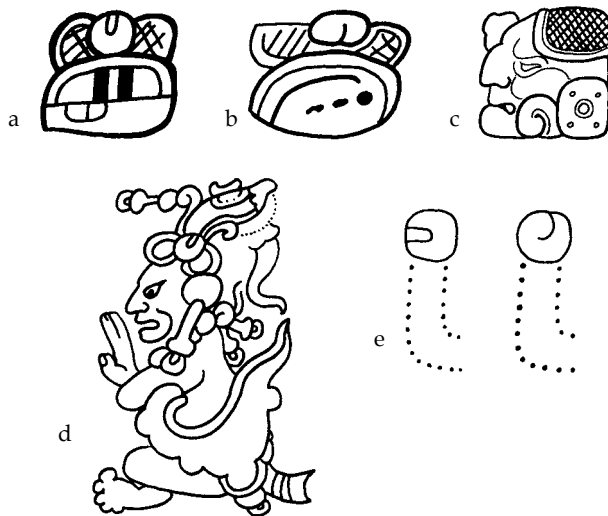


Figure 4. The phonetic value *wa* in Maya epigraphy and iconography: (a) Postclassic name glyph of God N, note notched-ball tamale variant in center of netted element, compound read *pa-wah-tun*, Codex Dresden (p. 47); (b) Classic period example of God N nominal glyph, corn-curl tamale in center of netted superfix (after Coe 1978:Vase 11); (c) Classic glyph of God N, note netted headdress and corn curl on cheek, Palenque Tablet of the Sun; (d) Postclassic codical representation of God N, tamale with maize foliation in center of headdress, Codex Dresden (p. 41b); (e) codical examples of water group with T130 tamale signs, prefixes probably read *wah*: left, T14, right, T39 (after Thompson 1962:445).

blood offerings widely were considered as maize food for the gods. In an Aztec speech attributed to Tlaccael, the sacrificial victims to Huitzilopochtli were compared to tortillas: "They will be in his sight like maize cakes hot from the griddle ready for him who wishes to eat" (Durán 1964:140). Schele (1976:46) has suggested that Classic Maya bloodletting was to provide sustenance to the gods and ancestors. In support, Schele cited the Quichean *Popol Vuh*, where the offering of sacrifice is compared to "suckling" the gods. The individuals created to nourish the *Popol Vuh* gods were the men of maize. A more direct association of blood with food is expressed in the widely reported sixteenth-century cases of Yucatec Maya placing sacrificial blood upon the mouths of deity images so as if to feed them (e.g., Tozzer 1941:118).

Although there is little documentation of penitential blood sacrifice among contemporary Maya peoples, offerings continue to be considered as maize food for the gods and ancestors. In the Mam community of Chimaltenango, the *chimán* soothsayer and prayer maker is believed to feed the divine through prayer and offerings of candles and incense: "Each year when the *chimán* renews his power with God, or with Christ . . . he prays, 'Open your stomach God,' to accept the *tortillas* of next year" (Wagley 1949:69). According to one Mam *chimán*, God is dependent upon religious observations for sustenance: "Without the *chimanés* God would have no *tortillas*, he would starve" (Wagley 1949:69). The contemporary Zinacanteco Tzotzil make offerings in the form of white wax candles to their deified ancestors, the *totil me'iletik*. Vogt (1976:50) states that because candles symbolically are identified with human beings in Zinacanteco ritual, they are sacrificial offerings of the self: "The candles, firmly planted and standing up straight before mountain shrines and saints, appear to symbolize an offering of human life." The act of offering candles to the ancestors resembles the Classic pattern of bloodletting and ancestor worship, but the similarities go further. The candles are considered as food for the ancestors. They specifically are referred to as "tortillas" (Vogt 1976:50), which in Tzotzil is *vah* (see Table 1).

The corn curl appears as the main sign of an unusual Classic emblem glyph (Figure 5). A striking feature is the T86 maize superfix, the foliated corn curl, which probably serves as a semantic determinant for maize. At times, a "ben ich" *ahaw* superfix is placed above T86. On the Altar de Sacrificios vase, the main sign is the simple corn curl, which can carry the phonetic value of *wa* or *wah* (Figure 5a). However, the corn curl also can be supported upon a pair of standing human legs (Figure 5b, c). Aside from the corn curl and foliated superfix, the two forms at first appear to have little in common. However, in many Mayan

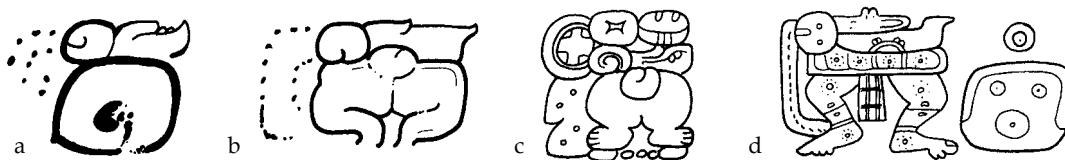


Figure 5. The *wah* emblem glyph, a possible emblem glyph for supernatural beings: (a) example from Altar de Sacrificios Vase, corn-curl tamale as main sign (after Adams 1971:Fig. 94); (b) standing corn-curl variant from unprovenienced Late Classic vessel (after Robicsek 1978:Fig. 37); (c) standing corn-curl variant from Tablet of the Foliated Cross, Palenque; (d) Late Postclassic example of legged emblem glyph with maize superfix (T84), accompanied by 1 Ahau, from now-destroyed murals of Santa Rita, Belize (after Gann 1900:Pl. 29).

languages, the root *wa* signifies “to stand.” Attinasi (1973:332) gives this value for *wa* in Chol. The Quiché terms *va* or *val* mean “stand up,” *valah* “rise, arise,” and *vakat* “walk along” (Edmonson 1965:140). In Tzotzil, the words *va’an*, *va’can ba*, and *va’i* all signify “to stand” (Laughlin 1975:513). Another example comes from Yucatec, where *wa’an* and *wa’t* denote standing, and *wa’laha’an* denotes standing or placed upright (Barrera Vásquez 1980:910, 912, 913). The human legs placed beneath the corn curl serve to reinforce the *wa* or *wah* reading.

An interesting feature of the corn-curl emblem glyph is that it cannot be identified with any of the presently known emblem glyphs associated with specific archaeological sites or geographic regions. Furthermore, it frequently appears in Classic vessel scenes in association with supernatural figures (e.g., Robicsek 1978:Plate 176; Robicsek and Hales 1981:Vessel 95, Fig. 22a). The example from the Altar de Sacrificios Vase (Figure 5a) accompanies a death deity which has been identified as a Classic form of Schellhas’s God A’ (Kevin Johnston, personal communication 1985). The second example also serves as the emblem glyph of a death deity, in this case the skeletal God A (Figure 5b). On Classic period monuments, the sign also is identified with gods. Appropriately enough, this emblem glyph is carved on the Palenque Tablet of the Foliated Cross, a monument rich in allusions to maize and the mythical past (Figure 5c). The sign is preceded by two glyphic compounds at L16 and M16. Floyd Lounsbury (personal communication 1985) has mentioned that the first compound, the 6-Sky expression, is identified with the first creator G I of the Palenque Triad. The following glyph is the bestial form of G I, in this case affixed with the numerical coefficients three and nine.

Use of the *wa* or *wah* emblem glyph continued into the Late Postclassic period, and it appears in one of the mural scenes from the northern Belize site of Santa Rita (Figure 5d). Again the main sign is a standing lower human torso supporting a maize element, in this case T84. As in Classic emblem glyphs, a clear water group is prefixed to the main sign. The procession of gods in the Santa Rita scenes are identified with specific Tun ending dates. The date associated with the emblem glyph is 1 Ahau. In the context of the Palenque Tablet of the Foliated Cross, this *tzolkin* date has special import, as it marks the birth of God K, also known as G II of the Palenque Triad. God K is identified closely with the Tonsured Maize God, who appears to have been the Classic counterpart of the *Popol Vuh* Hun Hunahpu (Taube 1985). Of course, the Quichean name Hun Hunahpu is equivalent to the Yucatec calendric date 1 Ahau, *hun* meaning “one” in both languages. In protohistoric Yucatan, 1 Ahau clearly was identified with the underworld. Landa describes Hun Ahau as the ruler of hell: “They maintained that there was in this place [Metnal] a devil, the prince of all the devils, whom all obeyed, and they call him in their language Hunhau” (Tozzer 1941:132). In the colonial Yucatec *Ritual of the Bacabs* (Roys 1965:9) the opening to the underworld is identified with Ix Hun Ahau and Uaxac Yol Kauil. Roys suggests that the latter term is a name for the maize god. Immediately below and to the left of the Santa Rita glyph is a representation of the aged God L, a well-known underworld god.

It is noteworthy that the emblem glyph at Santa Rita, the only example known for the Postclassic period, does not appear to be tied into historic events. Rather, like the Classic examples, it appears to refer to a mythical region independent of the actual events which led to the Classic collapse and disappearance of historic emblem glyphs. Just where this place may be is unknown, but given the prevalence of death-related and chthonic gods, it is possibly the underworld. At present, however, the emblem glyph should be considered best as simply a place identified with supernatural beings.



Figure 6. The corn curl as a ground maize product: (a) Late Classic polychrome sherd excavated at Lubaantun portraying a woman grinding over a *metate*, with dough depicted as corn curls (after Hammond 1975:Fig. 116c); (b) anthropomorphic deer with bowls containing probable tamales, from unprovenienced Late Classic Maya vessel (after Hellmuth 1978b:182); (c) Contact period Aztec representation of young man in front of tamale-filled basket, accompanying Spanish gloss reads *tamales que es pan* (Codex Mendoza 1978:68).

Representations of the Tamale in Classic Maya Epigraphy and Art

It has been noted that the globular elements within affix T130 can independently carry the phonetic value *wa* or *wah*. In colonial and contemporary Maya languages where *wah* or *wa* signify sustenance, a phonetically similar or equivalent term usually designates a cooked maize product, usually the tortilla, but often the tamale as well (Table 1). The classificatory distinction between the tamale and tortilla in colonial and contemporary Mayan lexicons tends to diminish on close inspection. In Quiché, *va* can refer to the tortilla, tamale, or food in general (Edmonson 1965:140). According to the colonial Yucatec *Motul Dictionary*, *wah* is the specific term for tortilla (Barrera Vásquez 1980:905). However, one type of Yucatec ceremonial tamale is termed *noh wah* (Villa Rojas 1945:109); *noh* in Yucatec means “great” or “large,” and the ritual food thus may be paraphrased as “great *wah*.” Although such tamales often have been labeled as “breads” or “cakes” in the ethnographic literature, they cannot be described as tortillas. Among the Zinacanteco Tzotzil, the two women who prepare the bean wedding tamales are called *hpat vah*, *hpat* being an agentive noun signifying “maker of” (Laughlin 1975:269). In other words, the Zinacanteco women who fashion the ceremonial tamales are termed “the makers of *vah*.”

Iconographic evidence demonstrates that the T130 balls portray a maize product, this being the tamale, not the tortilla (see Figures 6 and 7). A remarkable Late Classic polychrome sherd from Lubaantun depicts a woman grinding maize upon a metate. The lumps of ground dough are almost identical to the T130 corn curl (Figure 6a). A number of sixteenth-century Aztec sources depict the tamale as a spiral ball. Thus on page 68 of the *Codex Mendoza*, spiral balls identical to the corn curl are glossed in Spanish as “*tamales que es pan*” (Figure 6c). Broad, shallow bowls containing tamales commonly are represented in Late Classic Maya art, especially in palace scenes (Figures 6b, 7). In profile, the Classic tamale vessels virtually are identical to actual ceramic bowls and plates having the Tonsured Maize God depicted in their interiors (e.g., Coe 1973:No. 11; Coggins 1975:Figs. 72b, 74a, 86c, 88a, 90a; Smith 1955:Fig. 73). The iconography found within these ceramic vessels provides a clue to function. Like their counterparts depicted in palaces, such dishes probably were used as serving vessels for

tamales.

The tamale appears in a variety of forms in Classic Maya art. It commonly is depicted in vessels either as the notched ball (Figure 7b, c) or as the corn curl (Figures 6b, 7a). The two forms may reflect different methods of manufacture; whereas the corn curl clearly is rolled, the notched ball appears as a more solid mass. The notch occasionally seems to be hollow, but usually it is filled with another substance. Villa Rojas (1945:54, 109) recorded two common Yucatec forms of tamale preparation that correspond closely to the two T130 types. One method is the placing of maize dough and other foods in superimposed layers which then are rolled up into a ball-like mass. Another contemporary method, however, employs congealing rather than rolling:

Zacan [maize dough], mixed with a little water, is boiled until it becomes thick; then with lard and salt added, it is cooked again until of a pasty consistency. The paste or dough is divided into small pieces on each of which is placed a piece of fowl, pork, or other meat, and then *kol* (thick broth) seasoned with tomatoes, annatto, and salt; each piece is then carefully wrapped in banana leaves and set to bake in the earth oven or, less frequently, in a pot. (Villa Rojas 1945:54)

This type of tamale, with its central dollop of food, closely resembles the representations of the notched-ball variety contained in Classic Maya vessels. A third form of tamale found in Late Classic art generally is larger than the T130 types and, rather than having the notch or spiral, it often is painted with some sort of liquid or paste (Figure 7d–f). In form, it resembles



Figure 7. Late Classic representations of tamales in shallow vessels: (a) corn-curl tamales in legged plate, from unprovenienced vessel (after Stierlin 1981:Pl. 75); (b) legged bowl of stuffed tamales, from Lower Temple of the Jaguars, Chichen Itza, Terminal Classic (after Maudslay 1889-1902:3:Pl. 51); (c) vessel filled with tamales, accompanied by ceramic vase, detail of carved vase from Altar de Sacrificios (after Adams 1971:Fig. 79); (d) three large painted tamales in broad plate tentatively identified as tamales by Coe (1973:105), from unprovenienced vase (after Coe 1973:104); (e) painted tamales in legged vessel, from unprovenienced vase (after Reents and Bishop 1984:Fig. 1); (f) detail of polychrome vase from Burial 116, Tikal, note tamales in ceramic vessel (after W. Coe 1967:52).



Figure 8. Preparation of *nabah wah* tamale during Yucatec *ch'a chaak* ceremony. Tamale one of many prepared at dawn following night vigil, with this particular form being composed of intermixed maize dough and *sikil* squash seed paste (photo by author).

the large loaf-like Yucatec tamales prepared in pit ovens for milpa ceremonies (see Figure 8). Often these include *sikil*, a paste made of squash seed, and the material painted on the Classic forms could be either honey or the brown *sikil* paste.

The curving bracket of T130 remains to be discussed. The Postclassic variant surely is a green leaf; the two infixed notches also are present in the *yax* sign for green (T16). Both the Classic and Postclassic forms probably denote a vegetal wrapper, such as would surround the tamale and, possibly, balls of wax. It was mentioned previously that the day signs Kan, Ben, and Cib contain this element. In Yucatec, Cib signifies wax (Thompson 1971:84), and the sign may depict a wrapped ball of this substance. Both the Kan and Ben glyphs are well-known maize signs (Thompson 1971:75, 83). Following an early identification by Thomas (1882:80), Thompson (1971:75) stated that the Kan glyph (T506) represents a maize kernel: "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."

For much the same reason, I interpreted the corn-curl and notched-ball forms as representations of maize seed (Taube 1985). However, the maize growth has been taken too literally; rather than a sign of sprouting, it serves as a semantic indicator for corn. The Kan sign is a graphic representation of the notched-ball tamale within the vegetal wrapper (Figure 1g). Thus it is not surprising that T506 also is depicted within serving bowls in Late Classic art (Figure 9a, f). The Cumhu month glyph is a Kan sign with a T155 superfix. Noting that T155 has the phonetic value *o'*, Lounsbury (1983:46) has suggested that the compound is to be read *och*, a Yucatec term meaning food, sustenance, or maize bread. It has been noted that when supplied with T130, the Kan glyph is read *wah* (Mathews and Juteson 1984:205), another Mayan term of almost identical meaning. Moreover, the Kan sign alone also can carry the phonetic value *wa*. Stephen Houston (personal communication 1985) has mentioned that at A3 on Machaquila Stela 5, T506 substitutes for T130 in a compound written as T1:74:738:130 on Machaquila Stela 2. Houston suggests that both compounds are to be read *u-ma-ka-w(a)*. In a recent study, Love (1989) independently has noted the *wah* value of T506, and identifies the sign as maize bread, in other words, the tamale.

The Spotted Kan (T507) is identical to T506 save for the radiating lines of dots running down its upper side. The pattern of spots is very similar to the dribbled painting found on large, Late Classic tamales (Figure 7e, f). Stuart (1987) has proposed a *tzi* reading for T507. A

compound appearing on Classic ceremonial bundles provides direct support for this reading (e.g., Taube 1985:Fig. 7). Composed of T507 preceded by Landa's "i" (T679) and "ca" (T25), the entire compound could be read *ikatz(i)*. Delgaty and Ruíz Sánchez (1978:53) gloss the Tzotzil *icatsil* as "bulto, carga," and forms of *ikatz* or *ikatzil* have a general meaning of "burden" in Tzeltal and Tzotzil. The T507 *tzi* value may relate to the diagnostic spots. Fray Coto ([c. 1656]1983:73, 449, 506) translates the Cakchiquel *tzic* as "la gotilla" or "puntillo de tinta," and mentions that it also means "to spot or spatter." Similarly, *tzikilik* signifies "spotted" in Quiché (Edmonson 1965:134). In Yucatec, *tzitz* signifies "to sprinkle or asperse." Of special interest, it also can signify the dressing of food, as in the expression *tzitz u pach manteka*, "lardear lo que se asa" (Barrera Vásquez 1980:862). I suggest that the *tzi* value of T507 refers to the liquid dribbled on the surface of the tamale.

The Ben sign (T584), the third of the discussed day signs containing the bracket, differs from the Kan glyph only in that the uppermost surface is marked by the two notches also found with the *yax* sign and the Postclassic leaf portion of T130. In an interesting Pasión variant of the "ben ich" compound, the conventional Ben sign (Figure 9b) is replaced by the corn curl, though the two markings remain at top (Figure 9c). A similar substitution occurs in the female parentage indicator sign identified by Schele et al. (1977), in which two of the



Figure 9. Tamale signs in Classic Maya writing and iconography: (a) seated male with bowl containing Kan sign tamales, from unprovenienced vessel (after Coe 1973:70); (b) conventional "ben ich" superfix (T168), Dos Pilas Stela 16; (c) T168 variant, rolled corn-curl tamale replaces Ben sign, Aguateca Stela 1; (d) T739, the personified God K tamale; curling element at right possibly steam, Yaxchilan Lintel 29; (e) portion of 819-day cycle text, T739 followed by head of God K, Yaxchilan Lintel 30; (f) painted Chenes capstone from Santa Rosa Xtampak (after Pollock 1970:Fig. 74b); (g) T574, kin variant of distance numbers, note T130 suffix, Yaxchilan Lintel 23; (h) T575, with smoke prefix, Lamanai Stela 9, Early Classic period; (i) Late Classic examples of the female parentage indicator (after Schele et al. 1977).

hand-held elements are the corn-curl tamale and the Ben sign (Figure 9i). The highland Maya term for the day Ben is *ah*, a word denoting green corn or reeds (Thompson 1971:81-82). Among contemporary Tzeltal Maya, the dough ground from tender fresh corn is termed *noybil ahan*. Tamales made from this dough, stuffed in corn husk and boiled, are termed *šohbil wah* (Berlin et al. 1974:114). In Quiché, similar green-corn tamales are called *ahel vah* (Edmonson 1971:100). The Ben sign may well represent the *tamal de elote*, or tamale prepared from fresh, green maize.

The vegetal wrapper present in T130, T506, T507, T525, and T584 previously has been interpreted in an entirely different light. Due to its upper curl, Beyer (1936:13) identified the Kin sign variant (T574) present in Classic distance numbers as a spiral conch shell (Figure 9g). The bracket device forms a prominent part of the glyph, and for this reason it often has been considered a shell attribute. Thus Thompson (1971:85) stated that the Cib sign represents the conch, though in this case the spiral is not clearly present. It is interesting that elsewhere, Thompson (1962:127) mentions that “Cib is hardly distinguishable from an inverted Kan,” though no rationale is offered as to why the Kan sign is identified with shells. The shell identification of T574 rests only on vague visual similarity, and is not supported by any semantic or phonetic evidence. Of course, the snail is not the only spiral form in Classic epigraphy and art; the corn curl is yet another. Much as the Kan sign represents the wrapped notched-ball tamale, T574 appears to depict a rolled maize ball placed in its vegetal wrapper (Figure 1h). Frequently, T574 contains the T130 phonetic *wa* affix (Figure 9g). At C6a on Copan Stela I, T574 is affixed by T130 and the aforementioned cartouche of the number eight topped by a foliated corn curl. Rather than depicting a conch, T574 represents a mass of ground maize, probably in the form of a rolled and wrapped tamale.

Another reputed shell sign is T575 (Figure 9h); Thompson (1962:203) stated that in form, the glyph is identical to an inverted T574. Spinden (1924:Figs. 8, 9) first identified the device as a shell, and this interpretation also has fossilized in contemporary epigraphic studies. Thus an important war glyph has been termed the “shell-star” event because of the occurrence of T575 as the main sign (Kelley 1976:38-42). Thompson (1962:203) stated that T575 is identical to some forms of T17, and that affix T17 also can serve as the sign for *yax*, signifying green or new. The association of the shell with green is not clear; but, if the bracket is considered as leaf or husk wrapper, it has every reason to be present in the sign for green. Although T575 also seems to represent the corn-curl tamale in its leaf wrapper, the sign still is understood poorly. Until the significance of T575 is studied more adequately, there is little reason to rephrase the war event as “tamale star.”

An interesting Classic variant of the corn-curl tamale is a quadruped form found both in Glyph Y of the Supplementary Series and the 819-day cycle (Kelley 1976:Fig. 17; Thompson 1971:Figs. 31, 35). The glyph, T739, often is accompanied by smaller notched-ball tamales and a coiling rope-like form (Figure 9d, e). The latter element resembles, but also differs from, conventional Classic representations of smoke; the billowing curls may represent steam rising from the rolled tamale. The crouching posture of T739 recalls the aforementioned standing-tamale emblem glyph, and this also may be an intentional pun on *wa*. However, the limbs have another significance, as they serve as the arms and legs of a curious God K. The diagnostic God K mirror and torch forehead usually rests at the top of the glyph, with the rolled tamale forming the body of the deity. At times, the spiral is composed of contrasting bands, as if the tamale was rolled from alternating sheets of maize dough and other foods (e.g., Coe 1973:29). In the 819-day cycle, the head of God K often follows the legged tamale as

well; the head may be supplied with a maize superfix (Figure 9e).

Berlin and Kelley (1961) compared Classic 819-day cycle inscriptions to a Postclassic Yucatec text on Dresden pages 30b and 31b describing God B and the offering of foods with the four cardinal points. The four directions, with their associated colors, form an important part of 819-day cycle texts. Moreover, the codical verbal main sign describing the event is identical with that of the 819-day cycle, though the head of God B, or Chac, substitutes for the Classic head of God K (Berlin and Kelley 1961:15). In the four Dresden phrases, the particular type of meat offered varies according to direction, but the Kan sign supplied with T130 follows immediately in every case. Although Mathews and Justeson (1984:205) suggest that the Kan sign with T130 should be read as *wah* for tortilla, it surely refers to the tamale. In contemporary Yucatec milpa ceremonies, the large tamales known under such epithets as *noh wah*, *tuti wah*, and *yal wah* (Villa Rojas 1945:109) commonly are offered to the Chacs of the four directions. In other words, the Dresden passage varies little from contemporary Yucatec ceremonial practice. The T739 personified tamale strongly suggests that the Classic 819-day cycle also entailed the offering of maize tamales.

During the Classic period, God K was identified with maize and its principal product, the tamale. Thus the central mythical event mentioned on the Palenque Tablet of the Foliated Cross is the birth of G II, or God K (Kelley 1965:108). On one Chenes painted capstone from Santa Rosa Xtampak, a somewhat effaced but still identifiable God K holds a dish containing two Kan sign tamales (Figure 9f). Following an early identification by Selser (1902-1923:1:376-377), the Yucatec deity Bolon Dzacab generally is accepted as a form of God K (e.g., Kelley 1976:6, 65, 97; Thompson 1970b:227; Tozzer 1941:Note 673). The colonial Yucatec Chilam Balam of Tizimin contains the expression *bolon dzacab uah*, *bolon dzacab ha* (Edmonson 1982:62), which could be translated as “Bolon Dzacab tamale, Bolon Dzacab water.” The Chilam Balam books of Chumayel, Tizimin, and Mani mention the creation of Bolon Dzacab from edible seeds. The following is an excerpt from the Chumayel version:

Then shoots of the yaxum tree were taken. Also Lima beans were taken with crumbled tubercles, hearts of small squash seeds, large squash seeds and beans, all crushed. He wrapped up the seeds composing the first Bolon Dzacab and went to the thirteenth heaven. Then a mass of maize dough with the tips of corn cobs remained here on earth. (Roys 1933:99)

The final sentence is open to reinterpretation. Roys translates *madz* as “a mass of maize dough,” although the term also signifies the glume surrounding the individual seed. The cob tips mentioned are of *bacal*, that is, degraigned corn cobs. Thus, it appears that what were left on earth were the discarded remains of the prepared seed bundle—glume and stripped cobs.

Three large rectangular reliefs lie in the West Court at Copan (Figure 10c). Each represents a long-nosed god whom Thompson (1970b:227, Pl. 6) identified as Bolon Dzacab. Thompson (1970b) considered Bolon Dzacab as an aspect of God K identified with growing crops and seed, particularly maize. The Copan figure is seated on a nest of radially placed leaves. In Yucatan, the ceremonial tamales are prepared on similar beds of leaves (Figure 8). The god holds a bowl of maize that has an infixed cartouche containing the T617 element, first identified by Jeffrey Miller as a sign for mirror (Schele and Miller 1983:3-21). The ball-like mass also occurs as an affix, here with maize foliation as well as the infixed-mirror sign (Figure 10a). The association of the mirror sign with maize is pervasive; the T617 cartouche frequently forms the “notch” of Classic Kan signs (Figure 1g; Thompson 1971:Fig. 6, 54-57).

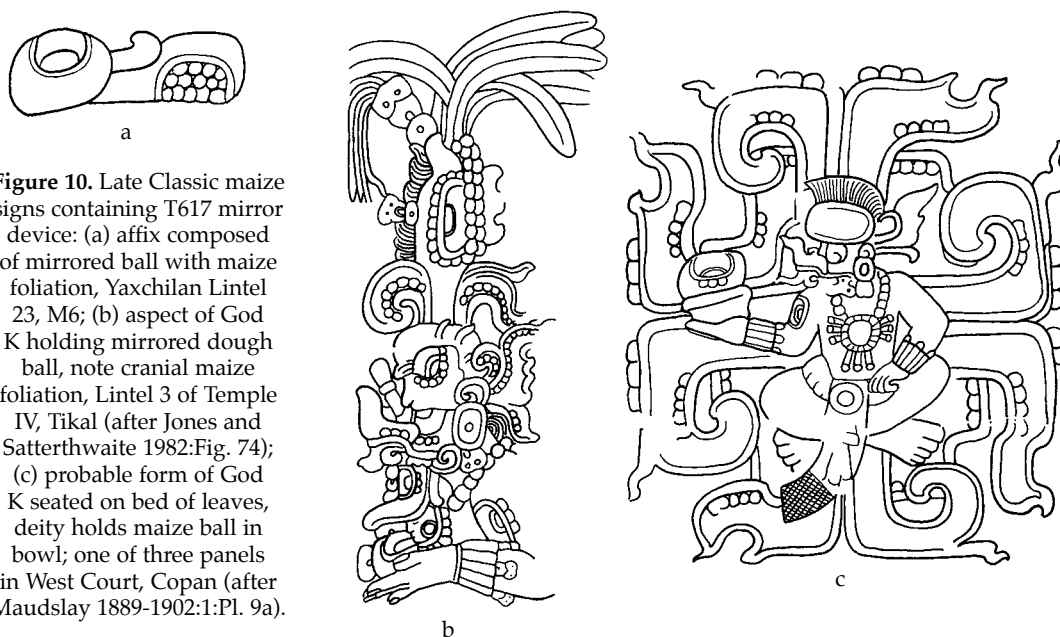


Figure 10. Late Classic maize signs containing T617 mirror device: (a) affix composed of mirrored ball with maize foliation, Yaxchilan Lintel 23, M6; (b) aspect of God K holding mirrored dough ball, note cranial maize foliation, Lintel 3 of Temple IV, Tikal (after Jones and Satterthwaite 1982:Fig. 74); (c) probable form of God K seated on bed of leaves, deity holds maize ball in bowl; one of three panels in West Court, Copan (after Maudslay 1889-1902:1:Pl. 9a).

Although Thompson identified the Copan figure as an aspect of God K, the forehead lacks the mirror and torch conventionally found with the deity. However, the identification is supported by an entity represented on Lintel 3 of Tikal Temple IV (Figure 10b). The figure, again holding the mirrored maize ball, emerges out of the jaws of a serpent. His fan-like crest of hair closely resembles the Copan example, though here it is topped by growing maize. The prominent forehead mirror identifies him as an aspect of God K. The Tikal and Copan examples probably are representations of the same God K aspect, a personification of sustenance possibly equivalent to the Postclassic Yucatec Bolon Dzacab.

Conclusions

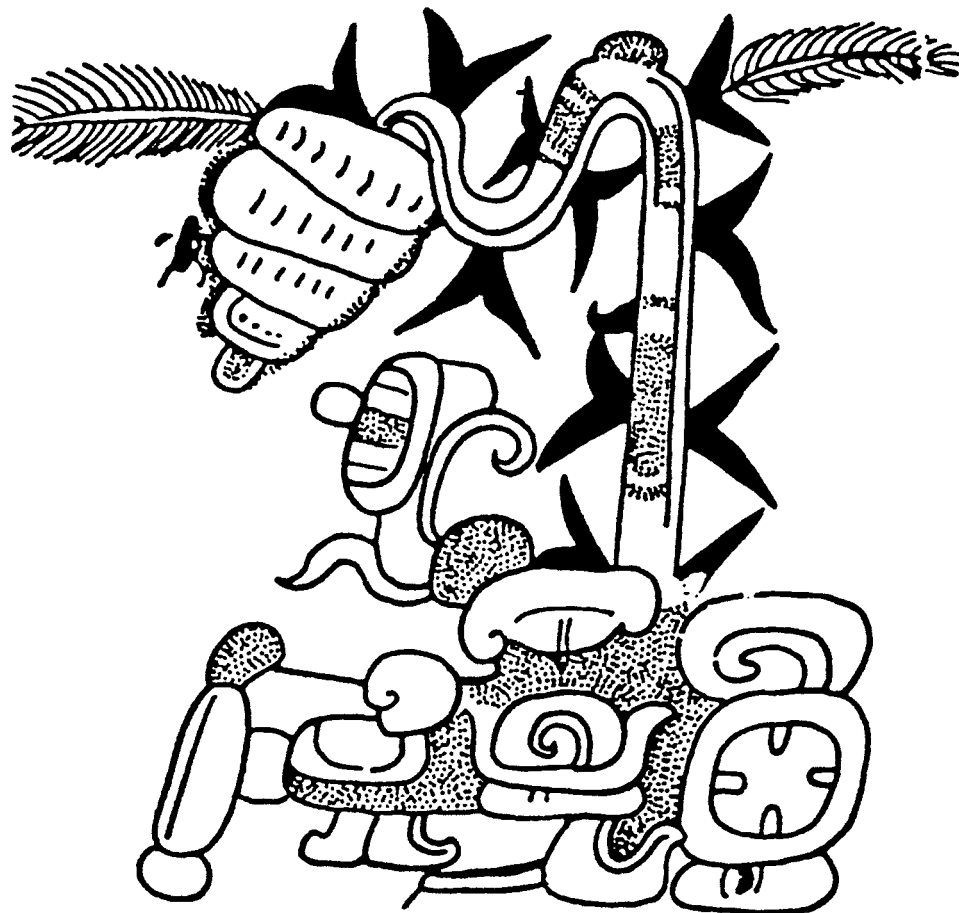
Both a basic commodity and an esteemed ceremonial food, the tamale permeates Classic Maya ideology, writing, and art. Glyphic forms of the tamale are many and suggest a complex lore and terminology surrounding this food. The identification of T130 as the tamale with its leaf wrapper provides strong epigraphic evidence that the tamale was the principal maize product of the Classic Maya. The phonetic value of T130 is *wa* or *wah*, a generally pan-Mayan term designating the basic, daily consumed maize product. Whereas there is no evidence of the tortilla in prehispanic Maya script, the tamale clearly was termed *wah*. The term *wah* usually refers to the tortilla in most modern Mayan languages, though when modified with another word, it also may designate the tamale. The distinctions between the tamale and tortilla do not alter radically the underlying meaning of *wah*, because the word appears to refer to the basic, daily food of the Maya. As the tortilla supplanted the tamale in Maya diet, the term was reapplied to the introduced food item.

The tamale was identified with important Maya deities, such as the Tonsured Maize God, God K, and God N. In addition, an emblem glyph termed *wah* actually may have referred to a particular supernatural region, possibly the underworld. The association of the tamale with deities partly may be because it was one of the principal sacrificial offerings, as

it is in the 819-day cycle, the Postclassic codices, and contemporary Maya ceremonies. The modern Zinacanteco Tzotzil consider the candles offered to the ancestral gods as *vah*, and the Classic act of bloodletting also may have been couched in terms of offering sustenance, or *wah*. The rich ethnographic lore surrounding the tamale has been but spottily treated in the present paper. An in-depth study of contemporary Maya tamale preparation and ceremonial use would open broad vistas into Classic Maya subsistence and ideology.

Acknowledgments

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CHAPTER 6

A Classic Maya Entomological Observation

Considering their fascination with calendrics, astronomy, and gods of natural forces, the Classic Maya were clearly acute observers of their surroundings. It is therefore surprising to learn that in Classic Maya art, flora and fauna are rarely depicted with anatomical accuracy: four-legged insects, long-tailed deer, bearded serpents, and other natural anomalies abound in Classic Maya iconography. This lack of concern for accuracy extends to the plant kingdom as well. Only a few species of flora depicted in Classic Maya art have been successfully identified, the most common being the water lily, maize, squash, and cacao.

The sarcophagus of Pacal within the Temple of the Inscriptions at Palenque is a noteworthy exception to the general absence of specific plant species in Classic Maya art. The sarcophagus depicts no less than five distinct fruit bearing plants (see Robertson 1983:Figs. 174-177). Even in this case, however, the plants are extremely stylized. The species of fruits are simply added, almost affixed, to a generalized foliated tree.

In the following discussion, I will describe an exceptionally detailed Classic Maya rendering of a specific plant species. But perhaps even more remarkable than the bush itself is the careful inclusion of a particular kind of insect known to nest frequently in this type of plant.



Figure 1. Roll-out photograph of Late Classic vessel scene; note bull's horn acacia in center (photograph by Justin Kerr, from Coe 1982:No. 12).

In a recent publication, Michael Coe (1982:36-37) illustrates and discusses a Late Classic round-sided polychrome bowl bearing a complex scene upon the exterior (Figure 1). Coe suggests that the vessel dates to Tepeu 1, that is, roughly within the seventh century AD. In form and style of painting, it is similar to a number of other published vessels of unknown provenance (Coe 1973:Nos. 37-39, 1982:No. 10; Robicsek 1978:Pls. 18, 137-140, Figs. 146-147). According to one recent study, these vessels may derive from a region between Tikal and the Belize border, possibly the site of Naranjo (Bishop et al. 1985:83). The exterior of the polychrome bowl contains a virtual menagerie of creatures known to inhabit the Maya lowlands. Along with three predominantly human figures, eleven distinct animal species are depicted. The human individuals are dressed, and appear to be specific Maya gods. One of the figures is clearly a woman, and according to Coe (1982:37), may represent the young moon goddess. The other two individuals are male with jaguar attributes along with black body paint and god markings. One of the black figures appears to be smoking while seated on a T528 Cauac sign. He wears jaguar spots on his hat and face and bears the eye "cruller" of the Jaguar God of the Underworld.¹

The other black figure is in the act of capturing or slaying a deer. He also bears the eye "cruller," and in addition, wears the Ahau headband of rulership. The most striking attribute of this being, however, is his strangely protruding mouth. Coe (1982:36) notes that he is identical to the deity appearing as T1077, a hieroglyphic sign occurring on Yaxchilan Lintel 8. This same being appears twice on another Late Classic polychrome, in both instances with a jaguar ear and a large shank of hair along with the black body paint, eye cruller, and protruding mouth (see Coe 1982:No. 14). In both representations, he holds a vessel that mirrors the extended mouth, and it is probable that this strange mouth does allude to a jar or pot. Coe (1982:40) identifies the two figures upon this vessel as Jaguar Gods of the Underworld, and it is probable that T1077 and the deer-hunting god are also the same deity, an aspect of the Jaguar God of the Underworld.

Directly in front of the captured deer, there is a curious plant placed atop a zoomorphic Cauac head bearing a sprouting maize plant on its brow (Figure 2). I suspect that the maize

¹ The seated god recalls the right figure upon Tikal Altar 5, who is also depicted with a tasseled conical hat and an eye cruller, here in a clear context of death and the underworld (see Jones and Satterthwaite 1982:Fig. 23). The same broadly brimmed tasseled headdress appears on a Late Classic codex style vase, here worn by a kneeling figure holding a jaguar baby. The kneeling male also appears to have the eye cruller, and in addition, bears jaguar spots upon the cheek (see Robicsek and Hales 1981:Vessel 18). It is quite possible that this figure is the same entity found on the Tepeu 1 bowl.

and zoomorphic head serve as part of a toponymic expression. David Stuart (1987:17-23) notes that in both zoomorphic and symbolic form, the Cauac sign frequently refers to a mountain, or *wits*. In Classic and Postclassic Maya texts, *wits* is written both logographically and phonetically in reference to specific toponymns (ibid.). Quite frequently, as in the case of the Ucanal emblem glyph, a T86 *nal* maize sign is affixed to the *wits* logograph or compound (Stuart 1987; Stuart and Houston 1987). Noting that the Kan cross occurs as a prefix or infix in the Ucanal emblem glyph, Stuart (1987:20) suggests that the entire compound can be read *K'AN-WITS-NAL*. In the polychrome vessel scene, the zoomorphic head and maize sign probably serve as an iconographic *wits nal* expression. The overarching plant, like the Ucanal Kan cross, may serve to qualify a particular place. Although plants do not appear to be a common component of Classic Maya place names, they are frequently used in toponymic expressions of highland Mexico (see Berlo 1983a).²

Because of the prominent V-shaped elements upon the slender, twisting trunk, Dr. Coe (1982:36) mentions that the Classic vessel plant resembles a "lobster claw" *Heliconia*. He also notes the curious fan-like elements near the top of the plant, which he identifies as Moan bird feathers. Rather than referring to a fantastic hybrid plant, however, the V-shaped and feather-like devices represent an actual thorny plant species of the genus *Acacia*. In the Maya region, there are at least four species of swollen thorn acacia, *Acacia cornigera*, *Acacia sphaerocephala*, *Acacia hindsii*, and *Acacia collinsii* (Janzen 1966:252). Swollen thorn acacia are known by many names throughout Mesoamerica. In English, they are commonly termed bull's horn acacia. In Spanish, they are frequently referred to as *cuernos de toro*, or *cornizuelo*. The references to bull horns derive from the sharply bifurcating pairs of thorns, which do bear a general resemblance to cattle horns (cf. Janzen 1967:Fig. 2). In the Classic polychrome scene, these thorns appear as V-shaped elements projecting from the trunk of the tree. Among the lowland Yucatec, swollen thorn acacia are known as *subin* (Barrera Vázquez et al. 1980:740), among the Tzotzil *čohčoh* (Laughlin 1975:123), and in Quiche, *chocol* or *ixcanal* (Edmonson 1965:28). Like the cited English and Spanish terms, the Yucatec *subin* alludes to the impressive thorns, since

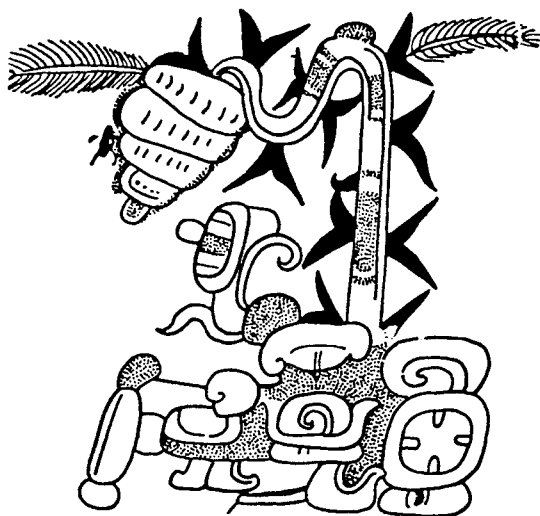


Figure 2. Detail of bull's horn acacia on top of zoomorphic head with maize *nal* sign on brow; note hornet nest at top of plant.

the word signifies the spur found on the feet of roosters, wild turkeys, and other male birds (Barrera Vázquez 1980:740). Similarly, in Belize the thorny acacia is also known by the English term "cock spur" (Standley and Steyermark 1946:6-7). The feather-shaped elements appearing in the Classic representation are accurate portrayals of the leaves found on swollen thorn acacia. Like the Classic rendering, the fan-shaped leaves frequently grow out from between pairs of the bifid thorns (Janzen 1966:Fig. 1d). Given the identification of the Classic plant, the entire toponym could be glossed as "thorny acacia

² The bull's horn acacia does appear in ethno-historic placenames. Thus there is the place name Chokol (Chocol), a Quiche term for thorny acacia (Edmonson 1965:28).

uitz nal.”

Representations of swollen thorn acacia are rare in Classic Maya art.³ One other example may occur in the famous bloodletting scene on Yaxchilan Lintel 24, where a kneeling woman passes a spine-laden cord through her tongue (Figure 3). The curving thorns interwoven upon the cord appear to be in pairs, as if they were the bifid thorns of bull’s horn acacia. In outline, the thorns are quite like the curving and sharply tapering spines of thorny acacia (eg. Figure 4). Because of their large size and sharpness, the thorns of the bull’s horn acacia are very well suited for penitential bloodletting.

Since last century, it has been noted that *Acacia cornigera* and related species of thorny acacia serve as hosts for small but

extremely aggressive fire ants (Belt 1874). Field research by Daniel Janzen (1966, 1967) has established that the ants (*Pseudomyrmex ferruginea*) exist in a symbiotic relationship with the bull’s horn acacia. Nesting within

³ Although the bull’s horn acacia is uncommon in Classic and Postclassic Maya art, this plant is of considerable importance among contemporary Maya. The Tzotzil of highland Chiapas use the branches of *Acacia cornigera* (*cohcoh*) for fencing (Laughlin 1975:123). Joann Andrews of Mérida, Yucatán, notes that contemporary Yucatec use the thorny acacia in a variety of ways. According to Andrews (personal communication), the yellow pod pulp of *Acacia collinsii* is popular among contemporary Yucatec, especially children, for its sweet flavor. Andrews mentions that according to one Maya informant from the region of Telchaquillo, Yucatán, freshly cut branches of the *subin* are placed in calabash and *guanabana* trees in the belief that acacia ants will attack predatory insects damaging the trees. The following spell was told to Andrews by another Yucatec informant from Telchaquillo: “If a husband feels he is dominated by his wife, he is to go to the *zubin* tree, cut off a branch and beat himself around the head and shoulders and be bitten as well by ants. Afterwards he should return home and he will see that his wife is submissive to him.”

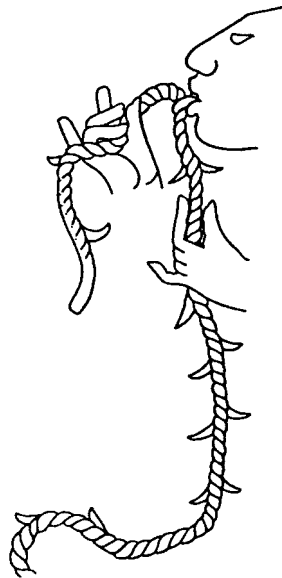


Figure 3. Late Classic bloodletting scene, Yaxchilan Lintel 24; detail of cord with possible acacia thorns at right (left, Graham and von Euw 1971:53; right, detail by author).

the large hollow thorns, the ants live off the small fruiting bodies and foliar nectar of the plant. In return, the ants attack other insects and larger predators that endanger the host. In addition, the ants remove any neighboring foliage encroaching upon the host plant. Field experiments by Janzen (1966:253, 1967) have demonstrated that the *Acacia cornigera* is entirely dependent upon the ants, and cannot survive without their presence.

Aside from fire ants, another stinging insect frequently makes its residence in swollen thorn acacia. Any individual familiar with the lowland Maya bush is surely all too aware of the frequency by which hornet nests appear in the branches of the bull's horn acacia (Figure 4). Should a hapless intruder strike such a plant, the hornets aggressively attack the face and other exposed parts of the body.

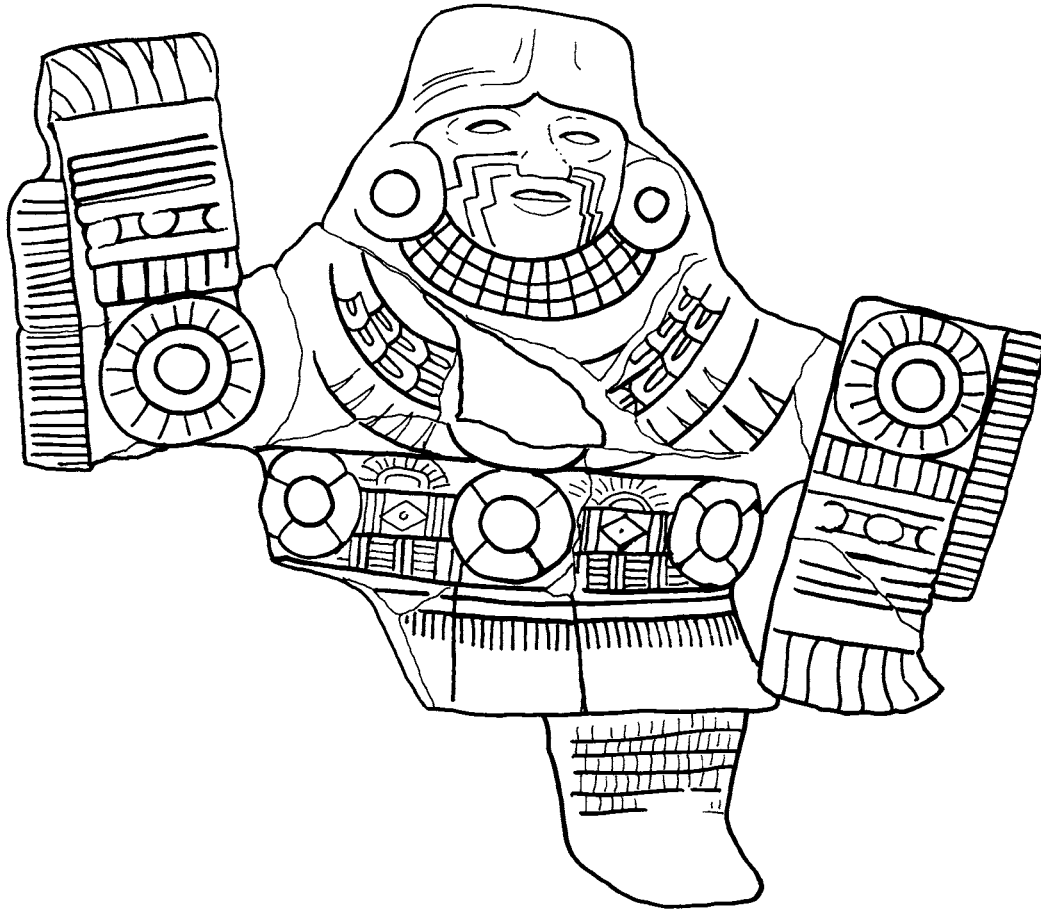
In the Classic Maya representation, a hornet nest is carefully depicted within the thorny acacia. In the Yucatan, the hornets inhabiting the bull's horn acacia are frequently known as *box xux*: "avispa que pone su avispero comúnmente en las matas del *subin*" (Barrera Vásquez 1980:66). In contemporary Yucatec, *box* signifies black, and *xux*, wasp or hornet. Thus the term is easily translated as black hornet. Specimens of hornets that I have collected from a thorny acacia of northern Yucatan are in fact black, with white-tipped wings. These hornets have been identified by Dr. James Carpenter as *Parachantergus aztecus* Willink. A fascinating question which remains is the relation between the hornets and the ants, which usually repel other insects. The common presence of the hornets makes for an especially complex symbiotic relationship between the ants and their acacia host. This question, however, pertains more to the fields of botany and entomology than archaeology. The principal objective of this study has been to identify and describe a particularly vivid glimpse into the natural world of the Classic Maya.

Acknowledgements

I am indebted to Dr. David Furth, entomologist at the Peabody Museum of Natural History, Yale University, for his generous assistance with technical references describing thorny acacias. I wish to thank Dr. James Carpenter, of the Museum of Comparative Zoology, Harvard University, for his identification of hornets collected in the Yucatan from a bull's horn acacia. Dr. Ellen Smart also provided useful comments. I also wish to thank Joann Andrews for her kind hospitality and expertise on the botany of the Yucatan.



Figure 4. Hornet nest in dry branch of bull's horn acacia, collected by author in vicinity of Chichen Itza, Yucatan, June 1985.



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The Temple of Quetzalcoatl and the Cult of Sacred War at Teotihuacan

The Temple of Quetzalcoatl at Teotihuacan has been the source of startling archaeological discoveries since the early portion of this century. Beginning in 1918, excavations by Manuel Gamio revealed an elaborate and beautifully preserved facade underlying later construction. Although excavations were performed intermittently during the subsequent decades, some of the most important discoveries have occurred during the last several years. Recent investigations have revealed mass dedicatory burials in the foundations of the Temple of Quetzalcoatl (Sugiyama 1989a; Cabrera Castro et al. 1988); at the time of this writing, more than eighty individuals have been discovered interred in the foundations of the pyramid. Sugiyama (1989a) persuasively argues that many of the individuals appear to be either warriors or dressed in the office of war.

The archaeological investigations by Cabrera, Sugiyama, and Cowgill are ongoing, and to comment extensively on the implications of their work would be both premature and presumptuous. Nonetheless, the recent excavations have placed an entirely new light on the significance of the Temple of Quetzalcoatl and its remarkable sculptural format. In this study, I will be concerned with the iconographic meaning of the Temple of Quetzalcoatl facade. In recent work, I noted that the temple facade represents serpents passing through a facade of circular mirrors (Taube 1986, 1988e). Two forms of serpents are present, Quetzalcoatl and an ancestral form of the Xiuhcoatl. In this respect, the Temple of Quetzalcoatl facade may be compared to the Postclassic wind temple of Ehecatl-Quetzalcoatl, which also appears with mirrors and serpents (Taube 1986). However, in this paper I will be concerned not with the feathered serpent and Quetzalcoatl but with the other entity, the early Xiuhcoatl. I will argue that on the Temple of Quetzalcoatl, this serpent head serves as an emblem of the office of war. Although decidedly Teotihuacano in origin, this serpent is commonly worn by Classic Maya rulers. In both effigy and natural form, this creature was a basic component of a Teotihuacan warrior complex introduced into the Maya area. It will be argued that at Late Classic Tikal, the Maya explicitly identified this serpent with Teotihuacan, and one structure in particular—the Temple of Quetzalcoatl. It will be noted that many of the Teotihuacan-derived warrior elements found in the Maya region also appear among the Classic Zapotec of Oaxaca. Finally, using ethnohistoric data pertaining to the Aztec, I will discuss the possible ethos surrounding the Teotihuacan cult of war.

The Temple of Quetzalcoatl and the Tezcacoac

Located in the rear center of the great Ciudadela compound, the Temple of Quetzalcoatl is one of the largest pyramidal structures at Teotihuacan. In volume, it ranks only third after the Pyramid of the Moon and the Pyramid of the Sun (Cowgill 1983:322). As a result of the Teotihuacan Mapping Project, it is now known that the Temple of Quetzalcoatl and the enclosing Ciudadela are located in the center of the ancient city (R. Millon 1976:236). The Ciudadela is widely considered to have been the seat of Teotihuacan rulership, and held the palaces of the principal Teotihuacan lords (e.g., Armillas 1964:307; R. Millon 1973:55; Coe 1981a:168; Cowgill 1983:316). According to Cowgill (*ibid.*), "it seems generally accepted that the Ciudadela combined political and religious significance, and the cult or cults associated with the Quetzalcoatl Pyramid were intimately connected with rulership of Teotihuacan." The excavations of 1918 to 1922 by Manuel Gamio at the Temple of Quetzalcoatl revealed that the Plataforma Adosada on the principal west face covered and preserved portions of an earlier facade (see Gamio 1922:1:145-156). This structure, often referred to as the Old Temple, is famed for its remarkable sculptured facade of projecting serpent heads and bas-relief sculpture (Figure 1). Although the Plataforma Adosada preserved much of the frontal west face, Millon (1973:Fig. 34, legend) stresses that the Old Temple was never entirely covered: "When the mural-decorated Adosada was built, it did *not*, as is commonly attested, cover all the carvings on the west facade, either on its sides or its upper bodies." Moreover, during the excavations of 1980 to 1982 by the Instituto Nacional de Antropología e Historia (INAH), remains of sculpture identical to the west face were discovered on the north and south sides of the pyramid (Cabrera and Sugiyama 1982:Plan 3). It thus appears that at least three if not four sides of the pyramid displayed the same sculptural format, with only the frontal west side being largely covered by the later Plataforma Adosada.

The Old Temple seems to have been constructed in either the terminal Miccaotli or early Tlamimilolpa phases, roughly in the mid-third century AD (Sugiyama 1989a). Recent INAH excavations have uncovered mass dedicatory burials in association with the erection of the Old Temple. One multiple burial on the south side, Burial 190, contained eighteen individuals, and there are reports of similar mass burials in other portions of the pyramid (Sugiyama 1989a; Cabrera et al. 1988). According to Sugiyama (1989a), the burial goods accompanying these and other dedicatory burials at the foundation of the Old Temple suggest that the individuals were warriors. Sugiyama cites the abundant presence of obsidian points, *tezcacuitlapilli* back mirrors, possible trophies or war emblems in the form of actual human maxillas and mandibles, and shell imitations of maxillas and teeth. Sugiyama (1989a) also notes that all of the eighteen individuals of Burial 190 and the single individual in Burial 203 were mature but not aged males, of appropriate age for warriors. Burial 190 contained mass amounts of worked shell, in all 4,358 pieces (*ibid.*). Aside from shell carved in the form of human maxillas and teeth, there were also rectangular plates drilled at either end (*ibid.*:Fig. 9, nos. 14-28). Berlo (1976) has suggested that similar items, found at Teotihuacan and in the Maya area, were platelets for shell armor. This platelet armor will be subsequently discussed in detail. In view of Burial 190, Burial 203, and other dedicatory interments in the Old Temple, it appears that even at its creation this structure was identified with war.

The iconographic program of the Old Temple appears in two distinct zones corresponding to the sloping *talud* and the vertical *tablero*, or entablature of Teotihuacan architecture. On the *talud*, the plumed serpent appears in profile, with marine shells flanking its curving body.



Figure 1. Detail of the Old Temple of Quetzalcoatl facade, Teotihuacan (photo by author).

The feathered body of Quetzalcoatl also occurs with shells on the *tablero*; here, however, the serpent body and shells are but a background to the most remarkable motif on the Old Temple—great serpent heads surrounded by feathered mirror rims (see Taube 1986, 1988e). In other words, the serpent heads are either placed on or passing through the surface of mirrors (Figure 1). Yet, in the *tablero* reliefs, only the Quetzalcoatl serpent is explicitly depicted

passing through the ring. A similar scene is found on the Teotihuacan-style Las Colinas Bowl, where the feathered serpent again passes through a mirror rim (Figure 2a). During the Late Postclassic period, the circular temple of Quetzalcoatl is found with mirrors placed on the conical temple roof, at times with serpents either lying on or passing through the circular mirrors (Figure 2b–c).

The concept of serpents passing through the surface of mirrors is a common convention in Postclassic Mesoamerican iconography. Thus on page 24 of the Codex Cospi, a yellow fire serpent passes out of a blue-rimmed mirror (Figure 2d). In the Cospi, similarly rimmed mirrors are frequently depicted at the back of the head or as *tezcacuitlapilli* back mirrors. At the Late Postclassic Maya sites of Santa Rita and Tulum, serpents are commonly found emerging from mirrors worn at the back of the head (Figure 2e). In outline, several of the Santa Rita serpent heads closely resemble an Aztec representation of a serpent emerging from a *tezcacuitlapilli* back mirror, here from the Tlaloc side of the Templo Mayor (Figure 2f). The partially effaced serpent is covered with the quincunx sign of turquoise, and it is likely that it represents the Xiuhcoatl, the turquoise serpent of fire.

Citing pre-Hispanic representations and sixteenth-century accounts, I have interpreted the mirrors on the Teotihuacan Temple of Quetzalcoatl in terms of the emergence (Taube 1986). Thus in the *Histoyre du Mechique*, people emerged when the sun shot an arrow at the House of Mirrors (Garibay 1945:7-8; León-Portilla 1963:107). The placement of serpents on the House of Mirrors denotes the act of lightning fertilizing or rending open the earth, an important episode in emergence accounts of Mesoamerica and the American Southwest

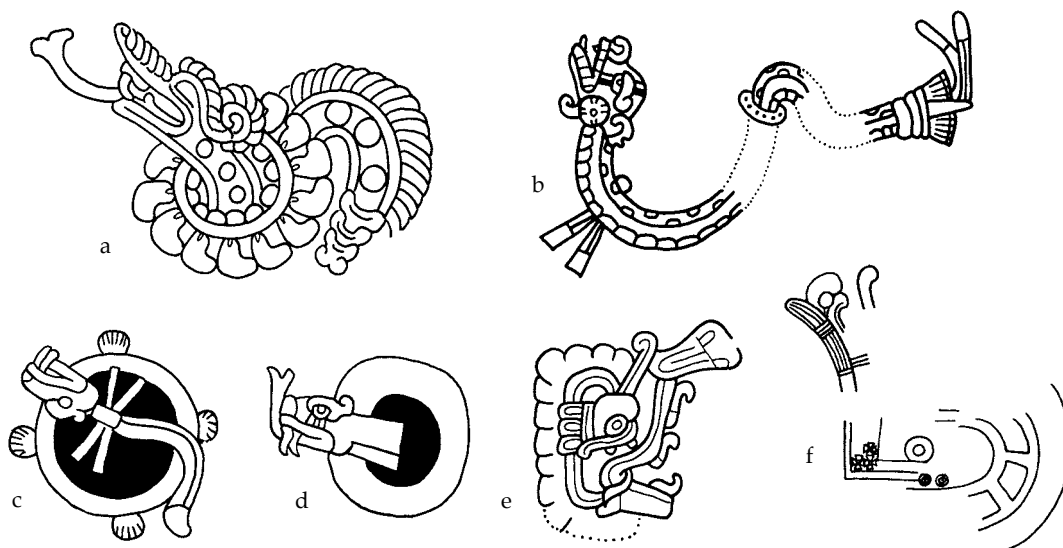
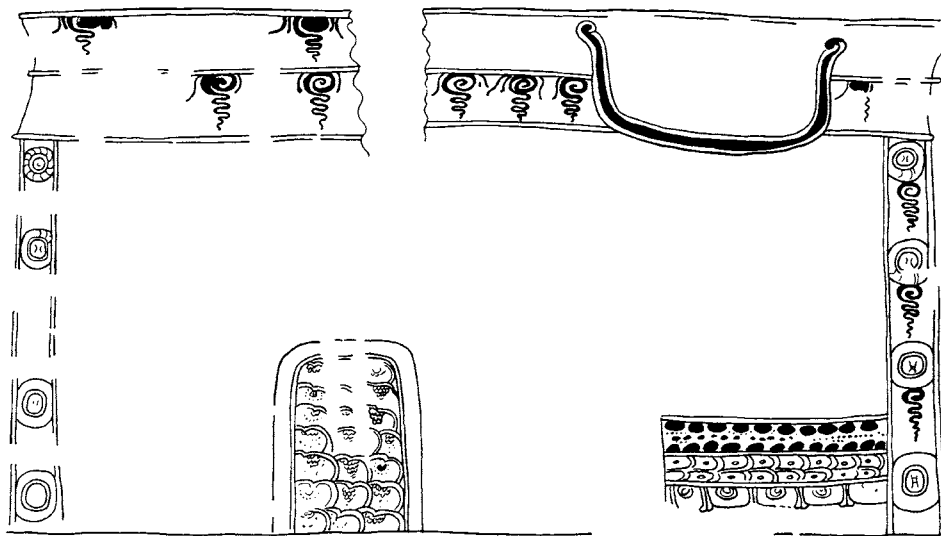


Figure 2. Representations of mirror serpents from pre-Hispanic highland Mexico: (a) Teotihuacan plumed serpent passes through feathered mirror rim, detail of Las Colinas Bowl (from Taube 1986:Fig. 8b); (b) lightning serpent with Xolotl head and Xiuhcoatl tail passes through mirror placed on wind temple roof, detail of Nochistlan Vase (after Seler 1902-1923:3:524); (c) *itzcoatl* lightning serpent on mirror placed on wind temple roof, Codex Borgia, 37; (d) serpent projecting through blue-rimmed mirror, Codex Cospi, 24; (e) serpent emerging from mirror, detail of mural from east half of north wall, Mound 1, Santa Rita, Belize (after Gann 1900:Pl. 29); (f) partially effaced Aztec representation of serpent emerging from mirror, detail of mural within early Tlaloc temple of the Templo Mayor, Tenochtitlan (drawing by author from copy in the Museo Templo Mayor).



a



b

Figure 3. Representation of the House of Mirrors emergence episode on a Late Classic Maya vase: (a) roll-out photograph of Codex Style vase, showing Chac with lightning foot of God K striking open House of Mirrors (photo © Justin Kerr 1985, courtesy of Barbara and Justin Kerr); (b) detail of vessel scene showing House of Mirrors, note petaled mirrors on sides of house and Caban curl earth signs on cleft roof.

(Taube 1986). A recently reported Late Classic Maya Codex Style vessel provides striking support for the episode of lightning and emergence at the House of Mirrors (Figure 3a–b). The complex scene depicts a temple structure marked with Caban curls, clearly denoting it as the earth. On both sides of the structure, alternating with the Caban-curl earth signs, there are round mirrors rendered with the curving petaled edges commonly found with Teotihuacan style mirrors. At our left, a composite form of two Maya lightning gods, the Classic Chac and God K, strikes at the structure with a smoking axe and an eccentric flint.

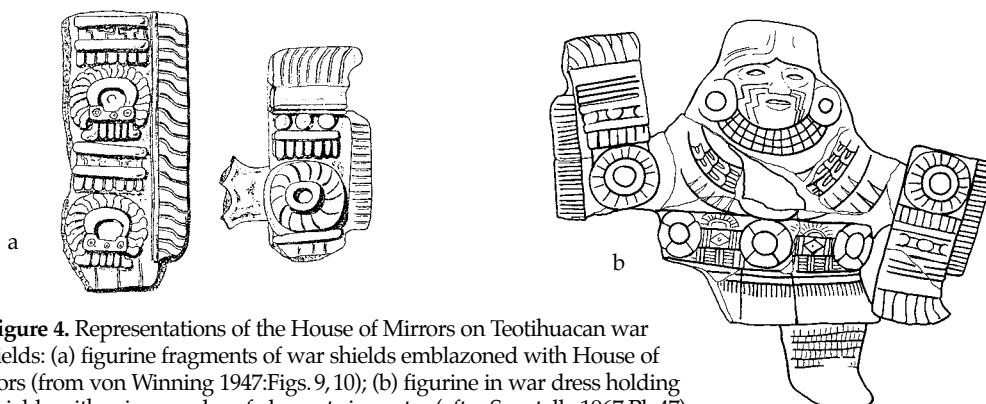


Figure 4. Representations of the House of Mirrors on Teotihuacan war shields: (a) figurine fragments of war shields emblazoned with House of Mirrors (from von Winning 1947:Figs. 9, 10); (b) figurine in war dress holding two shields with mirror and roof elements in center (after Soustelle 1967:Pl. 47).

Chac appears again on our right with the same lightning weapons in a cavelike hole on the roof. The composite Chac at the left has the serpent foot of God K, which coils up to cleave open the roof and penetrate the earth house. The burning serpent foot of God K is none other than lightning. Like examples from Central Mexico, this scene again represents the lightning serpent penetrating the House of Mirrors. The Headband Twins, Classic forms of the *Popol Vuh* Hero Twins Xbalanque and Hunahpu, kneel within the temple; the presence of the twins points to the creation saga of the *Popol Vuh* and the origin of mankind and maize (see Taube 1986:57-58).

It is clear that the House of Mirrors was a place of emergence, in both the Maya region and highland Mexico. In Postclassic Central Mexico, however, the House of Mirrors was also closely identified with war. In the Florentine Codex description of the ceremonial precinct of Tenochtitlan, the twentieth temple was the Tezcacalco, or House of Mirrors. The Nahuatl description of the temple is terse, and only mentions that captives were slain there (Sahagún 1950-1982:Book 2:183). However, Seler (1902-1923:2:495) points out that later in the Nahuatl account the structure is described as the Tezacoac Tlacoachcalco: "There was slaying there, only sometimes when there were many captives. And there spears, arrows were guarded. With them there were conquests" (Sahagún 1950-1982:Book 2:193). The name of this structure can be translated as Spear House of the Mirror Serpent. Seler (1902-1923:2:495) notes that this structure, the Spear House of the Mirror Serpent, served as an arsenal or citadel for the Aztec. It is highly interesting that in the sixteenth-century Mazapan maps of Teotihuacan, there is a place termed Tezacoac, or "Place of the Mirror Snake," although it is illustrated nowhere near the Ciudadela and the Temple of Quetzalcoatl (Kubler 1982:50). Nonetheless, there are indications that the Teotihuacanos did consider the House of Mirrors to be a war structure. One Teotihuacan figurine represents a warrior holding two rectangular war shields with mirrors placed in the center; both above and below each mirror there is the device denoting a temple roof (Figure 4b). The placement of the roof device against the mirror converts the disk into an architectural form, a House of Mirrors. Von Winning (1947), the first to note the architectonic significance of the roof device, illustrates other examples of the House of Mirrors on rectangular, feather-edged shields (Figure 4a).

* * *

The two types of serpent heads alternating on the *tablero* mirrors are strikingly different in both appearance and context at Teotihuacan. The naturalistically rendered Quetzalcoatl plumed serpent is widely depicted in mural painting, stone sculpture, and decorated vessels

throughout the city. The other head, however, has been difficult to identify for two reasons. For one, it is sculpted in a rigid and static quadrangular fashion, quite unlike the feathered serpent heads. Additionally, representations of this serpent are extremely limited at Teotihuacan; until now, it has been identified only at the Old Temple (Figure 5). Due to the two prominent rings at the upper center of the head, this creature has been frequently—and erroneously—identified as Tlaloc. In their classic study *Urnas de Oaxaca*, Caso and Bernal (1952:113-114) note that the circular devices are not eyes but rings; the actual eyes occur below. According to Caso and Bernal, the creature is actually a serpent, an early form of the Postclassic Xiuhtli. I agree with the Xiuhtli identification, although I will also stress that the serpent is closely identified with war as well as with fire. Although monumental depictions of the creature are extremely limited at Teotihuacan, it appears widely in Classic Maya iconography, both on stone monuments and on small, portable objects.

The Classic War Serpent

Unlike the almost canid snout of the Teotihuacan feathered serpent, the Teotihuacan entity identified by Caso and Bernal has a horizontally projecting nose with a slight upcurve at the end (Figure 5). The Old Temple creature lacks a lower jaw, but the slightly curving teeth of the mouth are large and closely set, resembling in this regard the teeth of Teotihuacan jaguars. The eyes are pronounced and round, and have the characteristic backcurved element of Teotihuacan serpent eyebrows. Above the eyes, there is a pair of rings frequently misidentified as the eyes of Tlaloc. Rather than eyes, these rings are the protective goggles commonly worn by Teotihuacan warriors. In Teotihuacan style warrior costume, the goggles may appear either over the eyes or on the brow (Figures 10b, 12, 16b, 19b, 19c). At the top of the head, there is a broad horizontal device partly obscured by a smaller element. Caso and Bernal (1952:113) consider the two forms to be a single large knot. Their identification appears to be correct, and an almost identical knot appears on a helmet headdress on the Estela Lisa of Early Classic Monte Alban (Figure 19a). Marcus (1980) notes that this figure and his three following companions appear to be Teotihuacan emissaries visiting Monte Alban.

In contrast to the projecting feathered serpent, which is depicted intact with a body and tail in the *tablero* scenes, the Old Temple entity lacks not only a lower jaw, but also a serpent body; only the head covers the surface of the mirror. The goggles and knot visible on the head also appear on Teotihuacan style headdresses. In the case of the Old Temple serpent, however, there is no differentiation between the upper portion of the head and a headdress (Figure 5).

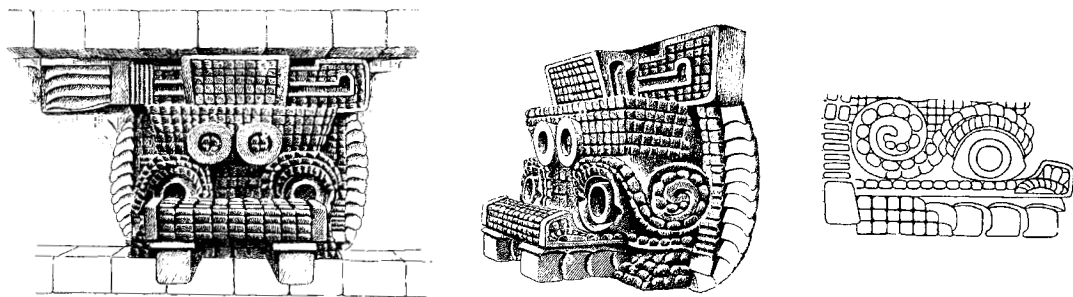


Figure 5. The War Serpent headdress from the Old Temple of the Pyramid of Quetzalcoatl, Teotihuacan. At right is a detail of Caso and Bernal's reconstruction drawing of the creature (from Caso and Bernal 1952:Fig. 184).

This is simply because the entire head constitutes a helmet mask to be worn.¹ The horizontal element immediately below the headdress probably refers to the shoulders of the wearer, whose face is largely covered by the serpent helmet-mask.² At the back of the serpent mouth, there is a bar with a pendant row of teeth. In terms of an actual mouth, this row of teeth makes little sense, because it corresponds not to the front of the mouth, but to the gullet. Rather than constituting part of the serpent teeth, this element probably refers to a nose bar pendant worn by the individual under the serpent mask. This nose bar pendant is a primary attribute of the Teotihuacan Spider Woman, a goddess closely identified with war (Taube 1983).

Perhaps the most striking attribute of the Xiuhcoatl creature at the Temple of Quetzalcoatl is the surface of the skin. It appears to be formed of mosaic platelets, and is comparable to the surface of the platelet helmets found at Teotihuacan, at Monte Alban, and among the Classic Maya. Kubler (1976) notes that among the Classic Maya, these helmets may be either a simple domelike form or in the zoomorphic form of a serpent. Berlo (1976) suggests that the simple and zoomorphic war helmets were fashioned from plates of shell. Easily worked, shell armor would provide a hard, tough, and relatively light protective surface. According to Berlo (1976), the many rectangular *Spondylus* shell plates from one portion of Piedras Negras Tomb 5 may have formed a platelet helmet. These plates are quite like the rectangles of worked shell found in the dedicatory burials in the Temple of Quetzalcoatl at Teotihuacan. It is also noteworthy that Tomb 5 also contained two circular pyrite mirrors and shells carved in the form of incisors, similar to examples from the Old Temple (see W. Coe 1959: Figs. 52p, 52x).³

In the Maya region, Classic rulers often wear the mosaic serpent helmet appearing on the Temple of Quetzalcoatl.⁴ In this case, the lower jaw is frequently intact, with the face of the wearer looking out from within the open jaws (Figure 6). On the hiatus period Lamanai Stela 9 (Figure 6a), a Maya lord wears a mosaic serpent headdress with the same tipped snout, large eye, and backcurved element found on the Old Temple example. The Lamanai platelet helmet is markedly similar to a roughly contemporaneous example appearing on a fragmentary vessel from Nohmul (Figure 6b). Here a Maya figure wears the serpent helmet, a *tezcacuitlapilli* back mirror, and a thick collar from which *Spondylus* shells depend; additional

¹ In a recent paper, Saburo Sugiyama (1988) has independently noted that the serpent head alternating with the feathered serpent is actually a headdress. Although we have reached many of the same conclusions, Sugiyama considers the headdress to be a representation of the feathered serpent; I argue that it is a distinct entity closely identified with war.

² The mask and shoulders of the Teotihuacan figure are notably similar to the series of six busts appearing on the East Building of the Nunnery Quadrangle at Uxmal (see Anton 1970: Pl. 243). Like the Teotihuacan example, the motif is a mask placed on a trapezoidal element representing the upper shoulders and chest. The Uxmal mask is quite similar to that worn by masked warriors appearing in the Lower Temple of the Jaguars at Chichen Itza (Maudslay 1889-1902:3: Pls. 46, 47). Although anthropomorphic, the Chichen and Uxmal masks appear to have the same mosaic surface found with Classic War Serpent headdresses.

³ Two Piedras Negras caches, 0-13-13 and 0-13-23, contained incised shell disks similar to the shell effigy "molars" discovered in the recent Old Temple excavations at Teotihuacan (cf. Coe 1959: Fig. 51t-v; Sugiyama 1989a: Fig. 9, nos. 47, 51, 60). It is possible that the Piedras Negras carved shell teeth originally formed imitation mandibles similar to those recently discovered at the Old Temple of Quetzalcoatl.

⁴ Mary Ellen Miller (personal communication, 1988) has made a number of independent observations regarding the Old Temple serpent and the Classic Maya serpent headdress. Although she does not argue that the Old Temple sculpture depicts a helmet mask, Miller also considers the serpent platelet headdresses found among the Classic Maya to be the same entity appearing at the Old Temple.

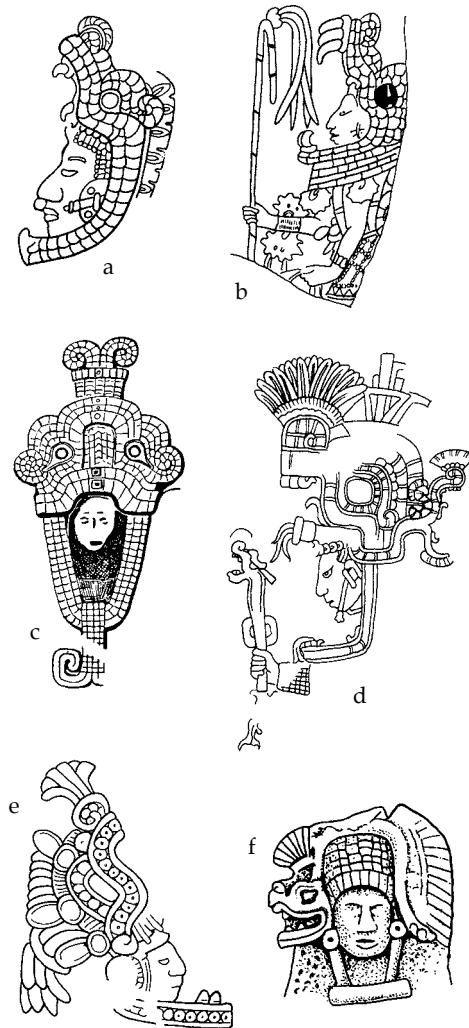


Figure 6. Classic Maya figures wearing platelet War Serpent headdress: (a) War Serpent headdress helmet worn by hiatus period ruler, Lamanai Stela 9 (after rubbing by Merle Greene Robertson, detail); (b) polychrome vessel sherd from Nohmul depicting Maya figure with War Serpent helmet headdress (after Gann and Gann 1939:Pl. 2, 1); (c) War Serpent helmet headdress worn by Ruler 1 of Piedras Negras, detail of Stela 26, Piedras Negras (after Spinden 1975:Fig. 251a); (d) Chaan-Muan with mosaic War Serpent headdress helmet, note burning War Serpent *atl-atl* (after Mathews 1980:Fig. 4); (e) Terminal Classic representation of Maya lord with War Serpent headdress, detail of doorjamb from northern Maya lowlands (after von Winning 1968:Pl. 465); (f) detail of Jonuta style figurine of warrior wearing platelet headdress with War Serpent (after Corson 1976:Fig. 24d).

Spondylus shells appear on the right wrist. The entire costume is markedly similar to Lacanja Stela 1, dated at 9.8.0.0.0, that is, in the year AD 593 (Proskouriakoff 1950:Fig. 44b). However, the Lacanja lord wears a simple platelet helmet, not the serpent headdress. At nearby Piedras Negras, rulers often appear as warriors wearing platelet helmets of both simple and zoomorphic form: the serpent helmet first appears on Stela 26 of Ruler 1 (9.9.15.0.0) and last on Stela 7 of Ruler 3 (9.15.0.0.0). In other words, the serpent helmets of Piedras Negras fall squarely within the Late Classic (Stone 1989). Berlo (1976), however, notes that an almost identical zoomorphic platelet helmet appears on an Early Classic figurine from Burial 1 of Mound 2 at Nebaj (Smith and Kidder 1951:Fig. 87a). Like the headdress from the Old Temple of Quetzalcoatl, the Nebaj example lacks a lower jaw. There are other Early Classic examples. A Teotihuacan style vessel from the Early Classic Tikal Burial 10 depicts the jawless serpent headdress (Coggin 1975:Fig. 53b). At Kaminaljuyu, another Early Classic example appears on a monumental stone sculpture, again without the lower jaw (Parsons 1986:Figs. 193, 194).⁵ In the Maya region, the jawless form of the serpent helmet is commonly found with Late Classic Jaina and Jonuta figurines (Corson 1976:Figs. 5d, 20c-d, 21a, 24a, 24c).⁶ In Classic Maya iconography, the serpent can appear both in platelet mosaic and as a more naturalistic creature. Both forms are present on Lintel 2 of Temple 1 at Tikal (Figures

⁵ On a number of Early Classic Escuintla style vessels, there are mold-made decorative panels depicting a warrior figure with a shell bivalve collar. Although it is difficult to see, it appears that he is wearing the jawless War Serpent headdress (see Hellmuth 1975:Pls. 17-18).

⁶ The platelet headdress is quite common in the Terminal Classic art of the northern Maya lowlands. Aside from the illustrated example from an unprovenanced doorjamb (Figure 6e), there are two excellent representations on Itzimte Stelae 1 and 7 (see von Euw 1977:9, 19). Both monuments represent a lord wearing not only the headdress, but also twisted platelet snakes that cover much of the figure's body. One of the Stela 1 serpents has a smoking rattle tail, clearly identifying it as a rattlesnake.

7a–b, 12). Although the scene is filled with depictions of the platelet serpent, a naturalistic form appears on the sandal of the ruler (Figure 7b). It can be readily seen that in outline this creature is identical to the platelet creature. Thus it has the same horizontal snout, prominent front teeth, and a greatly enlarged nostril topped with a tuft. Although the forehead is eroded, it is probable that a tufted crest originally ran across the back of the head. In Classic Maya iconography, the two forms of the serpent differ slightly in context. The mosaic version appears primarily as an object to be worn in the context of rulership and impersonation, whereas the other, more animate form can occur in isolation, as if it were a living mythical entity. Many Late Classic Codex Style vessels contain representations of the actual animate creature (Figure 7c), often with flames pouring out of the serpent mouth (see Robicsek and Hales 1981:215-217). Robicsek and Hales (*ibid.*) identify this entity as a form of Tlaloc. Although this creature may have attributes of both Tlaloc and the jaguar, it has the long snout and curving teeth of the serpent. In many instances, it has a curving tooth surrounded by a ball-like element resembling the poison gland of rattlesnakes and other vipers (Figure 7c). Aside from the unprovenanced Codex Style vessel renderings, a painted *olla* from Jaina Burial 169 bears a clear depiction of the same serpent, again with flames pouring out of the mouth (Figure 7d).

The serpent being is consistently identified with the iconography of war among the Classic Maya. Yaxchilan Lintel 25 depicts Shield Jaguar emerging out of a bicephalic form of this serpent, which hovers above a burning bowl of bloodied paper. Shield Jaguar appears

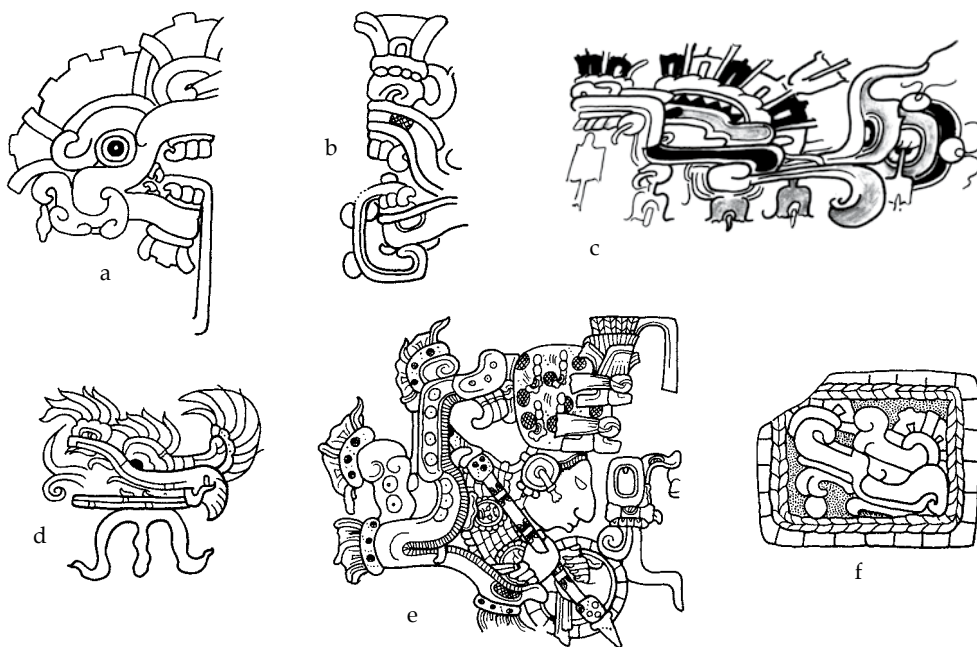


Figure 7. Representations of the War Serpent in Late Classic Maya iconography: (a) schematic view of War Serpent with mosaic pattern omitted from upper right portion of Lintel 2 Temple 1 at Tikal (after Jones and Satterthwaite 1982:Fig. 69, detail); (b) War Serpent worn on ankle of Ruler A, Lintel 2 Temple 1 at Tikal (after Jones and Satterthwaite 1982:Fig. 69); (c) War Serpent on Codex Style Maya vessel (after Robicsek and Hales 1981:216); (d) War Serpent from exterior of painted *olla*, Burial 169, Jaina (drawn after item on display in the Museo Nacional de Antropología, Mexico City); (e) Shield Jaguar emerging out of mouth of War Serpent, Yaxchilan Lintel 25 (after Graham and von Euw 1977:Fig. 55, detail); (f) War Serpent placed on surface of shield, Late Classic sculpture from La Canteada, Honduras (after Pahl 1987:Fig. 16).

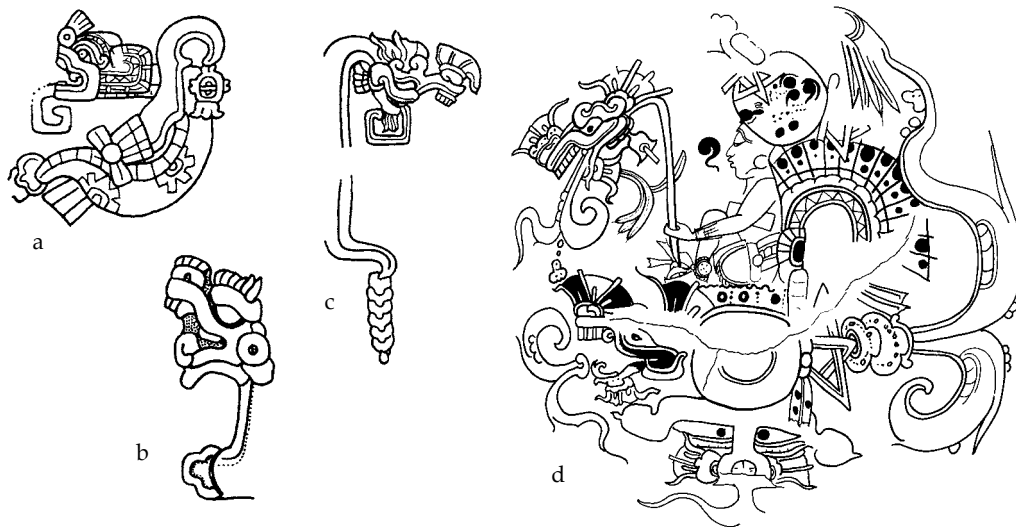


Figure 8. Classic Maya representations of the War Serpent as a rattlesnake: (a) Early Classic War Serpent with curving blade tipped with blood symbol (after Seler 1902-1923:5:Fig. facing p. 401); (b) detail of War Serpent on Jaina style figurine (after Piña Chan 1968:Fig. 69); (c) one of pair of War Serpents on side of balloon headdress, Piedras Negras Stela 9 (after Maler 1901:Pl. 18, 1); (d) interior scene of Codex Style dish depicting ruler seated on War Serpent, note smoking rattlesnake tail; another burning War Serpent tops curving staff carried by ruler, with a third possibly at front of balloon headdress (after Robicsek and Hales 1981:Vessel 107).

not only with a balloon headdress but also with a lance and shield (Figure 7e). On the Copan Hieroglyphic Staircase, a series of figures sit on thrones while wearing the War Serpent headdress (see Gordon 1902:Pls. 7, 10, 14, 15). The figures carry rectangular shields, in one case with an owl, and in another example with Tlaloc. In view of the shields and other costume details, it appears that the seated rulers are depicted as Teotihuacan warriors. A fragmentary sculpture from the nearby site of La Canteada, Honduras, depicts the serpent in profile on a shield, again an explicit reference to war (Figure 7f). On the west wall of Tikal Structure 5D-57, dated to the seventh century AD (Miller 1978:66), the serpent again appears in the context of war. Here two of the serpents pass out of goggles worn on the forehead of a frontally facing warrior (Miller 1978:Fig. 3).

Although the serpent entity may at times possess jaguar attributes, such as clawed limbs, it is most consistently represented as a serpent. Thus it commonly appears with a bifurcated tongue and the sinuous body of a serpent (e.g., Figures 6c–d, 8, 9a–c). The natural model of the serpent is based on the rattlesnake. At Acanceh, there is a fine Early Classic representation of the serpent with a rattlesnake body intertwined on a type of curving eccentric blade commonly found at Teotihuacan (Figure 8a).⁷ It is noteworthy that at Acanceh the

⁷ At Teotihuacan, obsidian eccentrics are frequently in the form of crested serpents. Gamio (1922:1:Pl. 102) illustrates two particularly large examples. Gamio identifies these large eccentrics as lizards, but clearly he mistakes the blade hafts for the lizard head and forelimbs. The reputed forelimbs are simply the flanges that commonly flare at the base of Teotihuacan points, just above the basal haft (cf. Sugiyama 1989a:Fig. 19). The actual head, with an open, tooth-filled mouth, is at the opposite end. I have suggested that the undulating obsidian serpent appearing at Teotihuacan is an ancestral form of the *itzcoatl* obsidian lightning serpent of Postclassic Central Mexico (Taube 1986:76). In view of the Acanceh scene representing the War Serpent intertwined on a curving obsidian blade, it is quite possible that the Teotihuacan creature was also identified with obsidian and lightning.

feathered serpent also appears in the same stucco facade, indicating that they are distinct entities. The creature also appears with a rattlesnake tail on Jaina style figurines (Figure 8b). On Piedras Negras Stela 9, this serpent flanks a balloon warrior headdress, again with a rattlesnake tail (Figure 8c). Another example may be found in the lower center of a Late Classic Codex Style dish. Although the central body is replaced with a disk, the rattlesnake tail appears opposite the serpent head (Figure 8d).

On the Codex Style dish, a Maya lord sits on the serpent disk. He holds a burning crooked staff depicting the same creature and wears the balloon headdress conventionally associated with warriors in Teotihuacan and Late Classic Maya iconography (cf. Berlo 1976; Schele 1986). Andrea Stone (1989:158) suggests that the short serpent staff may refer to an *alt-atl* spearthrower, and compares the staff to the serpent *alt-atl* of Bonampak Stela 3. On this Bonampak monument, Chaan-Muan stands above a prisoner while wielding a serpent *alt-atl* with a burning foot. The headdress worn by Chaan-Muan is a late form of the serpent platelet helmet, with a smaller serpent curling out from the mouth of the mask. In profile, these platelet headdress serpents are identical to the serpent *alt-atl* (Figure 6d). In other words, the burning *alt-atl* is a manifestation of the same creature. Yet, whereas the principal headdress serpent has an exaggerated nostril distinct from the horizontal upper lip, the smaller platelet serpents and the *alt-atl* have the nostril merged into a single backcurving snout. An abalone shell reportedly from Tula, carved in Late Classic Maya style, depicts a Maya lord wearing the serpent headdress with this same sharply curving nose (Schele and Miller 1986:Pl. 5).

In outline, the sharply backcurved snout of this serpent being is identical to the Xiuhcoatl, the turquoise fire serpent of Postclassic Central Mexico. To the Aztec, the Xiuhcoatl was pre-eminently the fire weapon of Huitzilopochtli, the solar war god. Seler (1902-1923:2:396) has noted that the Xiuhcoatl weapon is identical to the blue *xiuhatl* spear-thrower frequently wielded by Huitzilopochtli and Xiuhtecuhtli in Aztec manuscripts. With its identification with the *alt-atl*, the Aztec Xiuhcoatl fire serpent is very much like the burning serpent *alt-atl* held by Chaan-Muan. Although I do believe that the Classic entity is an ancestral form of the Postclassic Xiuhcoatl, they are not entirely equivalent. Thus, for example, the Postclassic creature is named "turquoise serpent," *xiiuitl* being the Nahuatl word for "turquoise." Turquoise could not have been a component of the Classic entity, because this stone was not widely introduced in Mesoamerica until the Early Postclassic. In view of the pervasive association of the Classic creature with war, I will call it by the more noncommittal term of War Serpent rather than Xiuhcoatl.

In Classic Maya iconography, the War Serpent is consistently identified with fire. Thus it has been noted that flames frequently exude from the mouth of the creature (Figures 7c-d, 8d). A Late Classic full figure glyph from Copan depicts the War Serpent as the serpent foot of God K (Figure 9a). In this case, God K is rendered as its Mexican counterpart, Tlaloc, another god of rain and lightning. The War Serpent in turn replaces the conventional Bearded Dragon serving as the flaming foot of God K.⁸ A column from Chichen Itza depicts a descending War Serpent with probable flames placed on the serpent body (Figure 9b). On the roughly contemporaneous Stela 7 at Terminal Classic Bilbao, the War Serpent appears frontally, with

⁸ At Copan, the War Serpent appears with another representation of Tlaloc. On Stela 6, the bicephalic serpent bar is composed of two War Serpent heads from which Tlaloc faces emerge (cf. Maudslay 1889-1902:1:Pl. 106). In this instance, the Copanecs are again substituting the Teotihuacan Tlaloc and War Serpent for the Classic Maya God K and Bearded Dragon.

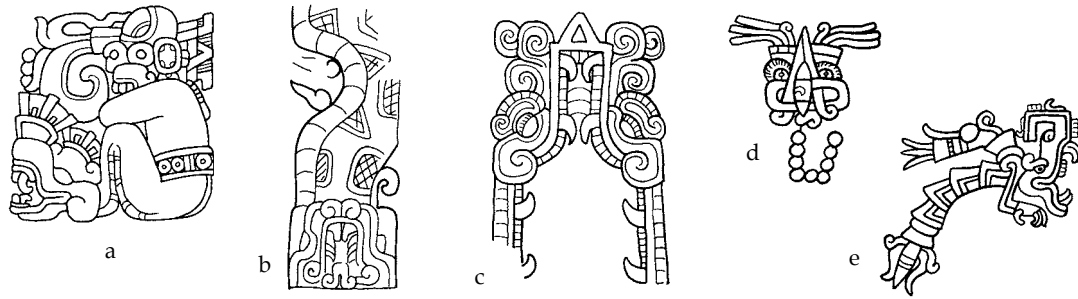


Figure 9. The fiery War Serpent and the Postclassic Xiuhcoatl turquoise fire serpent: (a) Maya full-figure glyph of Mexicanized God K, note replacement of Tlaloc for head of God K and War Serpent for burning serpent foot of God K (after Proskouriakoff 1950:Fig. 35); (b) descending serpent with frontal War Serpent face, note probable flames at upper portion of body, Chichen Itza (after Seler 1902-1923:5:304); (c) frontal War Serpent face with smoke curls on snout, Stela 7, Bilbao (after Parsons 1969:2:Pl. 34b); (d) conflation of trapeze and ray year sign with frontal Xiuhcoatl serpent face, compare flanking tassels with Xiuhcoatl, Codex Nuttall, 39; (e) Postclassic example of Xiuhcoatl, note feather tassel on shoulder, Codex Nuttall, 76.

curving serpent fangs and smoke volutes pouring off the snout (Figure 9c). The tip of the snout is pointed, much like the wedge-shaped ray of the Mixtec trapeze and ray year sign. I do not think this is fortuitous; both the War Serpent and the Postclassic Xiuhcoatl frequently appear with the trapeze and ray sign (e.g., Figures 6d, 8d). On the aforementioned Codex Style bowl, the year sign is placed on the tail of the basal War Serpent (Figure 8d). In the case of the Postclassic Xiuhcoatl, the year sign is frequently on the tail. For the Postclassic period, there is good reason for the turquoise Xiuhcoatl serpent to be identified with the year sign; in Nahuatl, the term *xiuitl* signifies “year” as well as “turquoise” (Molina 1977:160). Among the Postclassic Mixtec, the year sign can be depicted as a frontally facing creature, complete with eyes frequently backed by feather tufts. The feather tufts also appear on the Postclassic Xiuhcoatl, and it is probable that the Mixtec zoomorphic year sign is a representation of the Xiuhcoatl (Figures 9d–e).

The extensive background provided by the Classic Maya imagery makes it possible to identify other images of the War Serpent of Teotihuacan. The War Serpent headdress is commonly found on Teotihuacan figurines where it appears frontally, at times without the lower jaw (Figure 10e–f). In form, it is virtually identical to War Serpent headdresses known for the Classic Maya and Zapotec (e.g., Figures 6c, 17, 19d–e). A Thin Orange *olla* contains a molded representation of a platelet War Serpent headdress worn by Tlaloc A (Figure 10a). It appears that at Teotihuacan this headdress can be traced to as early as the Miccaotli phase. There are a number of Miccaotli modeled figurines representing a figure seated on a throne (Figures 10c–d). With later mold-made Teotihuacan figures (Figures 10e–f), the throne figures are usually warriors, and a similar case can be made for the Miccaotli examples. For one, they wear thick collars, but more important, the figures appear with the War Serpent headdress. Just below the frontal serpent face, there is a long horizontal knot, which brings to mind the horizontal knot appearing with the Old Temple War Serpent headdress. With the upturned snout and flanking horizontal eyes, the Miccaotli War Serpent headdresses closely resemble the trapeze and ray year sign. In fact, von Winning (1987:2:27) identifies the headdress not as a frontal serpent face, but as the year sign. The outline of the face, however, is virtually identical to the platelet War Serpent headdress appearing on the Thin Orange vessel (Figure 10a). Like the zoomorphic year sign of the Postclassic Mixtec, the Miccaotli figurine headdress seems

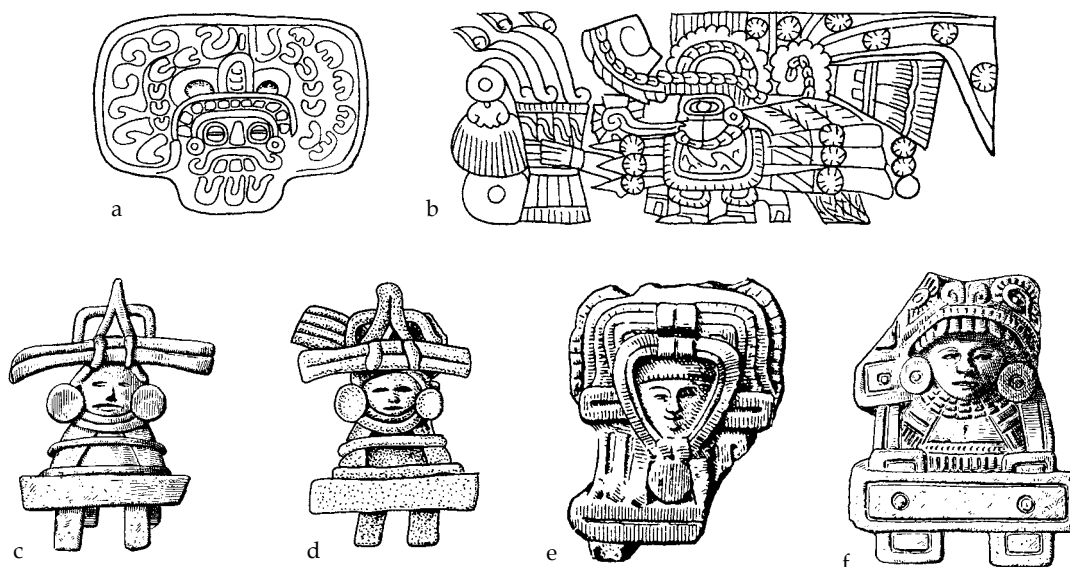


Figure 10. Teotihuacan depictions of the War Serpent headdress: (a) Teotihuacan Tlaloc wearing War Serpent headdress, molded device on Thin Orange vessel (after von Winning 1987:1:Chap. 6, Fig. 6c); (b) Teotihuacan warrior with goggles and platelet War Serpent headdress holding *atl-atl* darts and burning torch (after Séjourné 1964:Fig. 8); (c) Miccaotli phase warrior figure on throne with War Serpent headdress resembling trapeze and ray year sign, note large horizontal knot (from Seler 1902-1923:5:476); (d) Miccaotli phase throne figurine with tasseled War Serpent headdress and large knot (after von Winning 1987:2:Chap. 3, Fig. 1f); (e-f) Late Teotihuacan throne figures wearing plated War Serpent headdress, probable Metepec phase (from Seler 1902-1923:5:457).

to represent both the War Serpent and the year sign. One of the Miccaotli figurines originally had a pair of feather tufts behind each eye (Figure 10d), which is virtually identical to the pair of feather tufts appearing behind the head of the zoomorphic Mixtec year sign (Figure 9d).

Aside from the sculptures of the Temple of Quetzalcoatl, the cited representations of the War Serpent headdress at Teotihuacan have been frontal views. A profile view appears on a remarkable carved Teotihuacan vessel depicting a warrior with *atl-atl* darts and goggles wearing the War Serpent platelet helmet (Figure 10b). The zoomorphic headdress appears with the large eye, prominent nostril, and frontal teeth of the War Serpent, along with plating to suggest the mosaic armor. Like the platelet War Serpent headdress on the Temple of Quetzalcoatl, the headdress lacks a lower jaw.

If the examples from the Old Temple, figurines, and the ceramic vessel are headdress effigies of the War Serpent, are there representations of the actual being at Teotihuacan? René Millon (personal communication, 1989) has pointed out two possible instances of this entity in Teotihuacan mural painting (see Millon 1973:Figs. 20b, 48b). Both creatures possess a sharply upcurving snout and featherless serpent bodies. Clearly, these two figures are not the feathered serpent; they may well portray the War Serpent, but until more examples are known their identification remains tentative.

In highland Mexico, representations of the War Serpent continue well into the Late Classic period. A number of late or epi-Teotihuacan style examples bridge the gap between the Classic period War Serpent and the Postclassic Xiuhcoatl. Although these figures are provided with the feather crests found with other examples of the War Serpent, they are clearly

not Quetzalcoatl. At Arcelia, Guerrero, there is a stone monument identical in form to the La Ventilla ball court marker and the recent example found at Early Classic Tikal (Figure 11a). Like the Teotihuacan and Tikal monuments, the Guerrero example is a stone post supporting a disk, with a skirted ball placed at midsection. Although the upper portion of the Arcelia monument—the large stone disk—is missing, its resemblance to the Teotihuacan and Tikal examples is striking. On the lower portion of the monument, there is a human head wearing a crested War Serpent headdress, here without the platelet surface (Figure 11b). The snout of the creature is sharply upcurved, much like the Postclassic Xiuhcoatl. Cepeda Cárdenas (1970:Fig. 23) compares the headdress to that found on the fine *tecali* plaque from Ixtapaluca, Chalco (Figure 11c). The Ixtapaluca plaque headdress bears a clear resemblance to Classic Maya examples of the War Serpent, as both a platelet headdress and a living entity (Figures 6–8, 9a). When the Ixtapaluca plaque headdress is split into two profile views, it is readily evident that this serpent head is identical to the Arcelia example (Figure 11d). With their upturned snouts and prominent feather crests, the Arcelia and Ixtapaluca War Serpents are notably similar to the Xiuhcoatl serpents appearing on Early Postclassic Toltec back mirrors (Figure 11e). But although the War Serpent developed into the Postclassic Xiuhcoatl, the platelet serpent headdress appears to have ended during the Late Classic period.

Lintel 2 of Temple 1, Tikal

The War Serpent is widely found among both the Early and Late Classic Maya. If it is so endemic to the Maya region, did the Maya actually consider it as a foreign device? The contexts in which the War Serpent appears indicate that it was perceived as a decidedly foreign element; thus it frequently occurs with Teotihuacan style costume and gods, such as Tlaloc (e.g., Figures 9a, 17 left). Lintel 2 of Tikal Temple 1 provides perhaps the strongest evidence that even the Late Classic Maya regarded the War Serpent as a foreign being deriving from highland Mexico, and specifically from the site of Teotihuacan.

Carved of hard *sapote* wood, Lintel 2 was originally composed of four beams spanning the middle doorway of Temple 1 at Tikal (Figure 12). Whereas the lintel in the exterior doorway of Temple 1 was plain, both Lintel 2 and the still more interior Lintel 3 were beautifully carved (W. Coe et al. 1961:32). Both carved lintels bear similar scenes of a seated ruler backed by a great creature; in the case of Lintel 2, the creature is a serpent, and Lintel 3, a

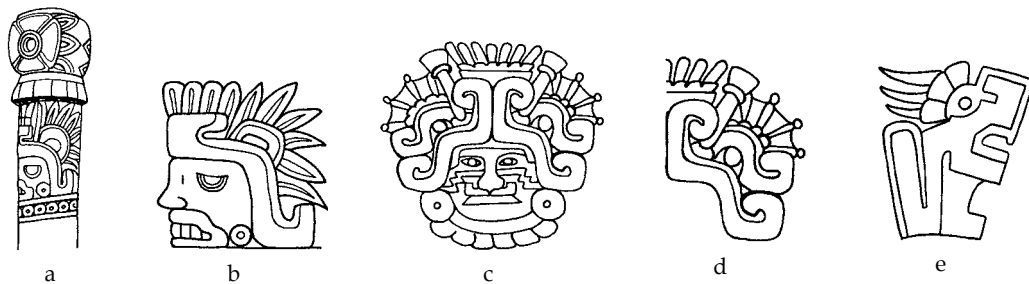


Figure 11. Late Classic and Early Postclassic depictions of the War Serpent and Xiuhcoatl: (a) ball court marker from region of Arcelia, Guerrero (after Cepeda Cárdenas 1970:Fig. 21); (b) detail of head with War Serpent headdress (after Cepeda Cárdenas 1970:Fig. 22, detail); (c) War Serpent headdress on Ixtapaluca Plaque (after Cepeda Cárdenas 1970:Fig. 23e); (d) profile of War Serpent face on Ixtapaluca Plaque headdress (after Cepeda Cárdenas 1970:Fig. 23e, detail); (e) Early Xiuhcoatl from rim of Early Postclassic Toltec style back mirror excavated at Chichen Itza (after Bernal 1969a:Pl. 98).

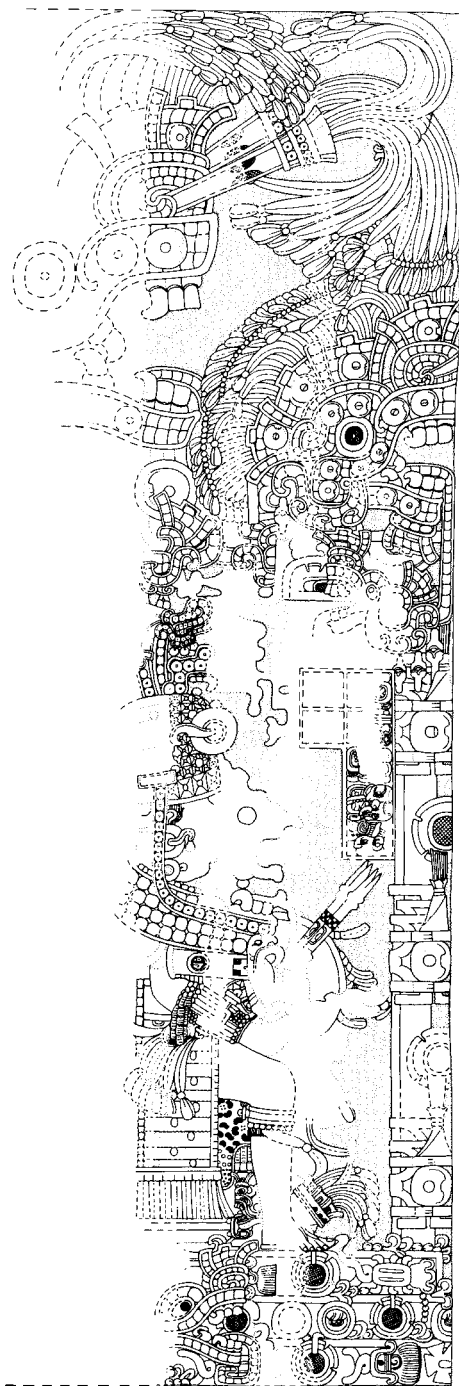


Figure 12. Lintel 2 of Tikal Temple 1: Ruler A with the War Serpent on a stepped structure marked with War Serpent, mirrors, and plants (from Jones and Satterthwaite 1982:Fig. 69). Drawing courtesy of the Tikal Project, The University Museum, University of Pennsylvania.

jaguar. Jones (1977) identifies the seated figure as Ruler A, also known as Ah Cacao, who acceded to rule on 9.12.9.17.16, or in the year AD 682. It is widely accepted that this is the same ruler buried in the sumptuous tomb within the Temple 1 foundations. Unfortunately, both Lintels 2 and 3 are only partly preserved. Two beams of Lintel 2, composing one-half of the total scene, are entirely missing. The surviving beams correspond to the front portion of the scene, with the seated lord facing out toward an ornamented vertical beam. Only the snout and lower jaw of the backing War Serpent are visible. Although it is possible to identify the head of this creature, the rest of the serpent's body cannot be reconstructed.

Lintel 2 depicts Ruler A seated before an architectonic element, evidently an ornamented post. Similar devices appear before Ruler A on Lintel 3 of Temple 1, and before Ruler B on Lintel 2 of Temple IV. In these two latter examples, the post element is topped with jaguar figures, the Waterlily Jaguar and G III of the Palenque Triad. The topping device on Lintel 2 of Temple 1, however, is the same War Serpent found looming above the seated lord. The surviving portion of Lintel 2 is filled with representations of the War Serpent; in all, there are eight now visible. Ruler A wears both a simple platelet helmet and a War Serpent mask. The lower jaw of the creature hangs on the thick Teotihuacan style collar covering his chest and shoulders. Ruler A is clearly portrayed as a warrior, and holds both a rectangular shield and series of short lances or darts of the type conventionally used with the Central Mexican *atl-atl*. Unfortunately, the object held in the ruler's right hand is effaced, but in view of the accompanying darts, it quite likely was an *atl-atl*.

Dressed in the battle regalia of the War Serpent, Ruler A sits on a pyramidal structure that fills the surviving lower portion of Lintel 2. Composed of three stepped platforms, the building is covered with iconographic motifs, the largest being the platelet serpent at the left portion of the surviving scene. I suspect that these elements describe and label a particular place and structure, that is, they serve as an iconographic toponym.

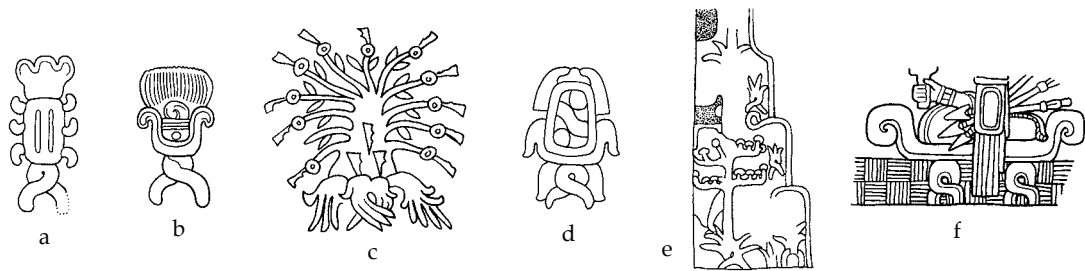


Figure 13. The twisted root motif in Classic Mesoamerica: (a–b) plants with twisted roots from basal portion of Lintel 2, Tikal Temple 1, turned 90 degrees for comparison (after Jones and Satterwaite 1982:Fig. 69); (c) Teotihuacan mural representation of tree with twisted roots, note maguery spines on trunk and flowers, entire device a possible toponym (after Berlo 1983a:Fig. 5); (d) maize cob with twisted root motif, detail of fragmentary sculpture from Las Parotas, State of Mexico (after García Payón 1939:Fig. 4); (e) mountain covered by maguery with twisted root motif, South Ball Court Panel 5, El Tajín (after Kampen 1972:Fig. 24); (f) figure seated in U-shaped bracket with twisted roots in tilled earth sign below, Xochicalco (after Selser 1902-1923:2:141).

Marcus (1976:Figs. 4.2, 4.15) notes that on Tikal Stela 1 and Yaxchilan Stela 4 the basal register of each monument bears an iconographic form of the main sign constituting the local emblem glyph. Thus, on Tikal Stela 1, there is a zoomorphic head with the bound hair knot typically forming the main sign of the Tikal emblem glyph. The cleft sky constituting the main sign of the Yaxchilan emblem glyph occurs as the cleft forehead of a Baktun sky bird at the base of Yaxchilan Stela 4. In recent groundbreaking work, Stuart and Houston (1987) demonstrate that toponyms are extremely common in Classic Maya epigraphy and art. Stuart and Houston (*ibid.*) note that in the Postclassic Dresden Codex, particular regions occurring in the basal portion of scenes are frequently also mentioned in the accompanying text (e.g., Dresden, pp. 66c–69c). Stuart and Houston (*ibid.*) describe a similar pattern on Classic monuments, where place names appear both as epigraphic toponyms and as iconographic elements in the accompanying scenes. According to Stuart and Houston (*ibid.*), emblem glyphs denote regional polities and frequently derive from the name of a particularly important place at the central site. In this perspective, the figures on Tikal Stela 1 and Yaxchilan Stela 4 are standing at the most venerated places of Tikal and Yaxchilan.

Many of the Classic toponyms identified by Stuart and Houston (1987) include not only regional centers and polities, but also supernatural regions and particular structures. In the Classic texts, Stuart and Houston have identified ball courts, pyramids, sweat houses, and even stone monuments. Often a particular structure or monument is labeled with a proper name. A similar situation occurs on Lintel 2 of Tikal Temple 1. Here, however, the place name of a particular pyramid is described not epigraphically but only iconographically; no epigraphic reference survives in the extant portion of the text. Nonetheless, the basal stepped structure provides a detailed description of a particular place and structure.

On Lintel 2, the upper and lower steps of the three-tiered platform contain a curious series of horizontal elements with a twisted device on their left side (Figures 12, 13a–b). Two intact examples appear at the right side of the structure, with others partially obscured behind the serpent at the left. The twisted element can be identified as a stylized representation of roots. This convention for roots can be found at Teotihuacan and other Classic period sites (Figure 13c–f). In the Lintel 2 scene, these roots are attached to two types of plants—one spiked, the other resembling a tufted ball. Kubler (1976:173) notes that the spiked plant is a Tikal representation of the *biznaga*, or barrel cactus of arid highland Mexico. Almost identical

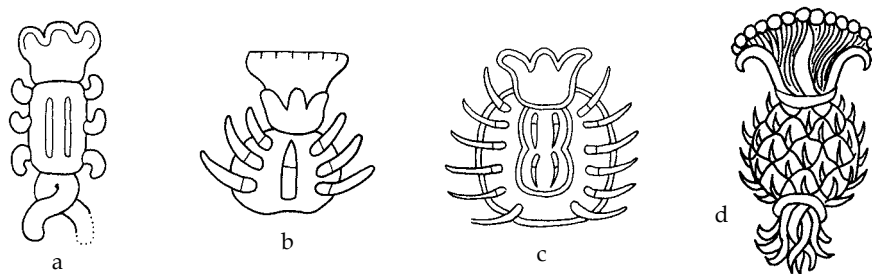


Figure 14. Representations of the *biznaga* barrel cactus: (a) barrel cactus from Lintel 2, Temple 1 of Tikal, note roots, flower, and curving spines; vertical elements in center possibly refer to deep channeling in cactus (after Jones and Satterthwaite 1982:Fig. 69); (b) barrel cactus from mural in Zacuala compound, Teotihuacan (after Séjourné 1959:Fig. 9); (c) mural rendering of barrel cactus, Atetelco compound, Teotihuacan (after Miller 1973:Fig. 356); (d) sixteenth-century depiction of barrel cactus, *Historia Tolteca-Chichimeca*, 5, *recto*.

examples appear in the mural paintings of Teotihuacan and later art of highland Mexico (Figure 14). First identified by Séjourné (1959:26-27), the Teotihuacan *biznaga* has the same ovoid outline, yellow capping flower, and curving red-tipped spines found with species of *Ferocactus*. According to Kubler (1976:173), the barrel cactus in Lintel 2 refers to the arid site of Teotihuacan.

Although Kubler (1976:173) notes that the spiked plant of Lintel 2 represents a barrel cactus with its roots, he considers the other plant to be a bird wing, and makes no mention of the accompanying roots. Kubler calls attention to a very similar device in the Acanceh reliefs (Figure 15b). I entirely agree with this comparison, although I consider both to be not bird wings but a plant—in particular, a species of coarse, tufted grass.⁹ The same U-bracket forming the lower portion of the plant also appears as a platform for a warrior on the Pyramid of the Plumed Serpent at Xochicalco (Figure 13f). In this case, two sets of twisted roots are placed below, on the sign for tilled earth. Unfortunately, the upper portion of the Xochicalco scene is missing, and it is impossible to discern if a plant originally rose behind the seated warrior. The tufted spire emerging from the top of the Acanceh examples is notably similar to Teotihuacan representations of grass (Figure 15c). Angulo (1972:50, 62) considers the tufted elements at Teotihuacan to be *malinalli* grass. This coarse grass, often used for rope and tumplines in Central Mexico, is frequently represented with tufted spires (Figure 15d). In a recent thorough study of *malinalli* grass, Peterson (1983) considers *malinalli* to be grass species of the genus *Muhlenbergia schrebneri*. Peterson (1983:116-117) notes that the *malinalli* grasses are native to arid highland Mexico: “Like many of the *Muhlenbergia* grasses, these species have a wide geographic distribution, up to Baja California in the north, throughout the western states, and south from Puebla to the state of Oaxaca; all display great tolerance for both arid and semiarid regions.” The area described for species of *malinalli* is virtually

⁹ In direct support of the plant identification, David Stuart (personal communication, 1989) notes that the Tikal and Acanceh examples are very similar to the T584 “inverted sky” glyph, a sign that Stuart reads as *pu*. Noting that *pu* means “bullrush” in a number of Mayan languages, Stuart suggests that the Acanceh examples represent rushes with cattails. However, the T584 element may have had a more generalized meaning, such as plant. On a fragmentary Late Classic relief from Jonuta, the sign is repeatedly placed on a cacao tree (see Mayer 1980:Pls. 23, 38). Although I find the *pu* value convincing, the Acanceh and Tikal forms bear more resemblance to Postclassic representations of grass than to rushes. However, if the bullrush identification proves to be correct, it is then possible that the Acanceh and Tikal plants refer to a Classic Tollan, or place of rushes.

identical to that of the barrel cactus.

Particular types of plants frequently appear in Classic and Postclassic toponyms of highland Mexico. A famous example is the nopal cactus of Tenochtitlan, but many others can be found in the Codex Mendoza and, evidently, at Classic Teotihuacan as well (see Berlo 1983a:15-16, Figs. 5-8). It appears that the barrel cactus and the coarse tufted grass serve to refer, almost in couplet form, to an arid region of highland Mexico, a place entirely foreign to the moist and humid Peten.

It has been noted that the Teotihuacan Temple of Quetzalcoatl contains a series of great feathered mirrors. Along with the highland plants, the stepped structure of Lintel 2 has a series of circular devices with notched rims. The center of these disks is crosshatched, probably to depict another material. The same notched disk is twice repeated on the post in front of Ruler A. On the middle tier of the basal structure, the notched elements alternate with disks containing a central eye (Figure 16a). Both disks probably represent mirrors. Both Klein (1976:208-213) and I (Taube 1988e) have noted the widespread association of mirrors with eyes in Mesoamerica. Frequently, human eyes can substitute for the mirror face. A clear example occurs on a Teotihuacan style vessel from Tikal Burial 10, where the center of a mirror chest piece is replaced by an eye (Figure 16b).

Unlike Teotihuacan mirrors, which tend to have rims smoothly circular in outline, Classic Maya mirror rims frequently have a notched or coglike appearance. With its notched rim, the other disk on the Lintel 2 structure resembles other Classic Maya mirrors placed on platforms. Two Piedras Negras accession monuments, Stelae 6 and 33, depict similar disks on the platform supporting the acceding lord (Figure 16e-f). Another architectonic example of the notched mirror occurs on Naranjo Stela 32, here on the tiers of a sky band platform (Figure 16g). The disks on Piedras Negras Stela 6 and Naranjo Stela 32 both have the central face broken into a series of elements resembling the platelet mosaic pattern. In this case, however, the mosaic refers to iron pyrite, not shell. In both Early and Late Classic Maya art, the segmented mosaic surface of the iron pyrite mirrors is frequently delineated by scalelike elements or widely spaced crosshatching (Figure 16c-d). The stepped structure at the base of Lintel 2 is a House of Mirrors.

Finally, there is the great serpent occupying the left side of the surviving portion of the Lintel 2 structure. I suspect that this element, even more than the plants, points to a particular place in Central Mexico. In concept, the serpent head is very much like the zoomorphic knotted heads at the base of Tikal Stela 1 and the recently discovered Stela 39, which refer to the site center of Tikal. In the case of Lintel 2, however, the serpent head refers not to

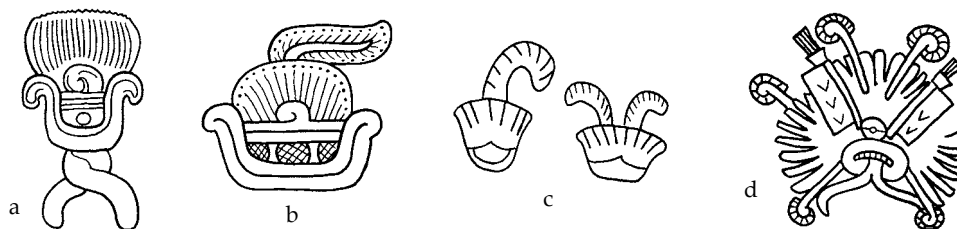
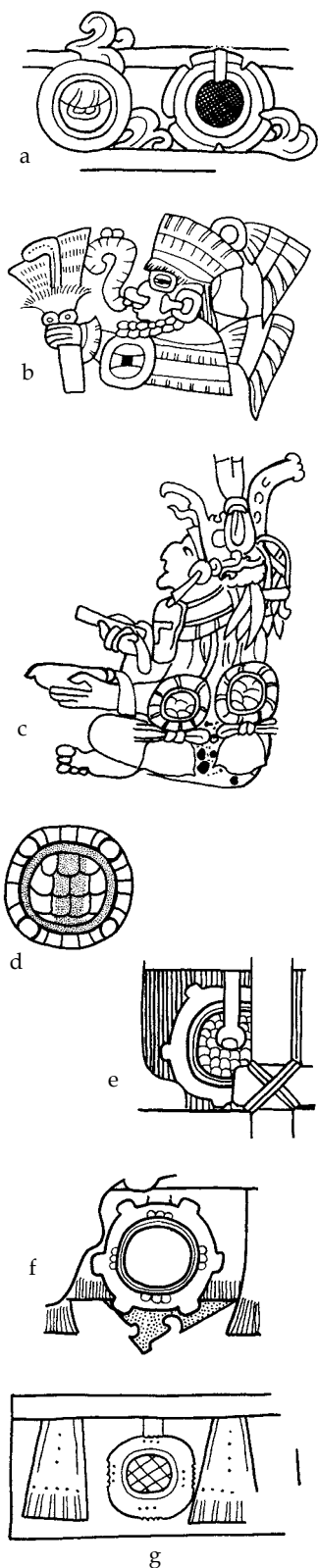


Figure 15. Representations of grass tufts at Tikal, Acanceh, and highland Mexico: (a) grass tuft from Lintel 2, Tikal Temple 1 (after Jones and Satterthwaite 1982:Fig. 69); (b) grass tuft with tassel, detail of stucco relief from Acanceh, Yucatan (after Seler 1902-1923:5:Sec. 2, no. 4, Table 11); (c) Teotihuacan representations of tasseled grass from Atetelco compound (after Villagra 1971:Fig. 18); (d) tasseled grass appearing as the Postclassic day sign for Malinalli (after Codex Borgia, 13).



Tikal, but to the center of Teotihuacan—the Ciudadela and the Temple of Quetzalcoatl. The only known Classic period structure emblazoned with the War Serpent in highland Mexico is the Temple of Quetzalcoatl at Teotihuacan. At Teotihuacan, monumental carvings of the War Serpent have been found only at the Temple of Quetzalcoatl. Although it is entirely possible that other representations will be encountered in other sectors of the city, it is highly unlikely that they will be of the monumental scale found at the Temple of Quetzalcoatl, the third largest pyramid at Teotihuacan. The arid plants, mirror medallions, and War Serpent emblazoned on the Lintel 2 platform all suggest highland Mexico and the Temple of Quetzalcoatl at Teotihuacan. It appears that this structure, devoted at its onset to a cult of war, was one of the more renowned pyramids of Classic Mesoamerica. The placement of Ruler A on this pyramidal structure suggests a conscious and direct affiliation with Teotihuacan. This association need not be taken too literally; it is unlikely that Ruler A actually visited Teotihuacan by pilgrimage, much less by conquest. Nonetheless, the tiered platform at the base of Lintel 2 does reveal a substantial knowledge of the environment and sacred architecture of Teotihuacan.

Teotihuacan War Iconography in Classic Oaxaca

Many researchers have noted that much of the Teotihuacan style iconography found in the Maya region is based on war (e.g., Kubler 1976; Berlo 1976, 1983b; Schele 1986; Stone 1989). Thus Berlo (1983b:80) notes a pervasive concern with warrior imagery in the Teotihuacan style art of Escuintla: "The figural incense burners and tripod vessels recovered from Escuintla emphatically depict a concern with a religious ethos based on militarism." Stone (1989) has recently noted that on the "warrior stelae" of Piedras Negras, local Maya rulers consciously identified themselves with a war complex from Teotihuacan. The

Figure 16. Classic representations of mirrors in the lowland Maya area: (a) mirror medallions from tiered structure at base of Lintel 2 of Temple 1, Tikal (after Jones and Satterthwaite 1982:Fig. 69); (b) Teotihuacan style rendering of warrior with eye occurring in center of mirror chest piece, Early Classic stucco-painted bowl, Tikal Burial 10 (after Coggins 1975:Fig. 53); (c) aged male wearing two pyrite mosaic mirrors, detail of Late Classic polychrome (after Robicsek and Hales 1982:No. 11); (d) pyrite mosaic mirror held by Tikal ruler Jaguar Paw, detail from looted Early Classic incensario (after Andre Emmerich and Perls Galleries 1984b:No. 45); (e) pyrite mosaic mirror placed on scaffold structure, detail of Stela 6, Piedras Negras (after Maler 1901:Pl. 15, 3); (f) mirror on scaffold throne, detail of Stela 33, Piedras Negras (after Maler 1901:Pl. 26, 2); (g) mirrors on throne structure, detail of Stela 32, Naranjo (after Graham 1978:85).

same situation occurs on Lintel 2 of Tikal Temple 1, where Ruler A is seated on a foreign Teotihuacan structure, probably the Temple of Quetzalcoatl. This is repeated on a smaller scale with Jaina style figurines depicting Maya lords seated within War Serpent structures (Figure 17). In these instances, it is clear that the Teotihuacan imagery represents not foreign invasion, but a local adoption and manipulation of Teotihuacan war regalia and iconography.

Like the lowland Maya, the Classic Zapotec of Oaxaca also adopted a complex system of Teotihuacan warrior iconography. Many of the foreign elements are identical to those also found among the Classic Maya. An example is the Jaguar Butterfly, an important iconographic entity among the Classic Maya and Zapotec as well as at Teotihuacan (Figure 18). Berlo (1983b) suggests that among the Zapotec the Jaguar Butterfly was a local Zapotec interpretation of the Teotihuacan warrior butterfly. However, the Jaguar Butterfly is also widely found in the Maya region. A Teotihuacan style mural from Xelha, on the Caribbean coast of Yucatan, depicts a warrior wearing a Jaguar Butterfly headdress (Figure 18b). This same iconographic entity is also found farther south, on polychrome vases from Altun Ha, here with both the curling proboscis and antennae found with Teotihuacan style butterflies (Figure 18c). At Teotihuacan, the Jaguar Butterfly also occurs in the form of butterflies displaying the characteristic fangs of the jaguar (Figure 18a).

Teotihuacan war regalia commonly appears on Classic Zapotec stone monuments, urns, and mural paintings. On the Estela Lisa relief discovered by Acosta (1958–1959), four individuals march toward a Zapotec lord backed by a temple structure (Figure 19a). Marcus (1980) notes that all four individuals appear to be Teotihuacan emissaries. Although they do not wield weapons, the Teotihuacan figures wear platelet headdresses and shell collars associated with Teotihuacan warriors. Males with platelet headdresses and the warrior eye rings appear on Classic Zapotec urns. At times these figures wear an asymmetric bird in



Figure 17. Late Classic Jaina style figurines depicting seated Maya lords wearing War Serpent headdresses. War Serpents are placed on the roofs of both structures; note Tlaloc on left structure (from Piña Chan 1968:Pl. 21, 20).



Figure 18. The Classic Jaguar Butterfly at Teotihuacan and in the Maya region: (a) butterfly with jaguar mouth, detail of incised Teotihuacan vessel (after Selser 1902-1923:5:515); (b) warrior wielding shield and *atl-atl* with Jaguar Butterfly headdress, detail of mural from Xelha, Yucatan (drawing by author from original); (c) Jaguar Butterfly appearing on Late Classic vase, Altun Ha, Belize (after Pendergast 1967).

the platelet headdress (Figure 19c). Berlo (1984) notes that the asymmetric bird headdress is found not only with warrior figures at Teotihuacan, but also on Stela 5 of Uaxactun.

The War Serpent headdress occurs frequently on Classic Zapotec urns and whistles (Boos 1966:92-111, 130-132). In form, it is almost identical to the frontally facing jawless War Serpent headdress found at Teotihuacan and the Maya region. One slight difference, however, is the occasional addition of profile serpent faces at the sides of the headdress. Additionally, the face may be topped with the eyes and proboscis of the butterfly. Among the Classic Zapotec, the War Serpent headdress also alludes to war. Thus one Zapotec urn depicts a female wearing the headdress while she wields a shield and weapon (Boos 1966:Fig. 83). In many examples, the serpent face is delineated with the platelet pattern, making it clear that the War Serpent platelet headdress was known among the Classic Zapotec (Figure 19d-e). In at least one instance, the Zapotec platelet headdress is topped with a horizontal knot—immediately recalling the War Serpent knot on the Temple of Quetzalcoatl at Teotihuacan and the Miccaotli phase figurines (Figure 19e).

During excavations in the patio overlying Tomb 103 at Monte Alban, a remarkable cache was discovered (Caso 1947b:181, 183). The cache contained sixteen figurines, five of which are relatively large and richly costumed. One of the smaller figures is a miniature Huehueteotl censer, virtually identical to examples found at Teotihuacan. The costuming of the five larger figurines also points to Teotihuacan. These individuals wear thick collars, back ruffs, and zoomorphic platelet headdresses. Two of the platelet headdresses depict the owl, a creature widely identified with war at Teotihuacan (von Winning 1948). The other three headdresses bear the War Serpent, with its upturned agnathic snout (Figure 20a). Aside from the beaked mask, which is found on all five figurines, the costume of the War Serpent figures

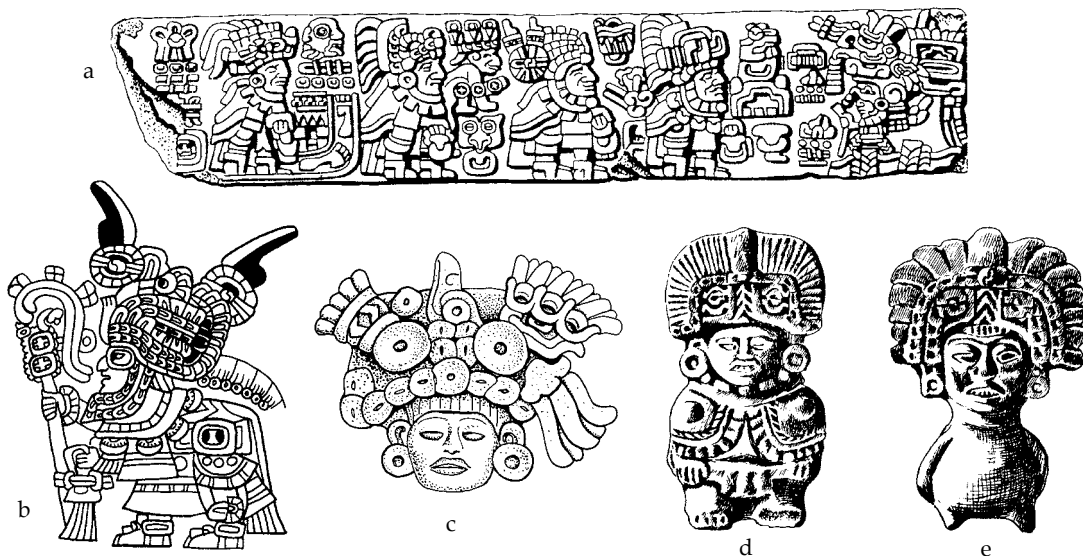


Figure 19. The platelet headdress in Classic Zapotec iconography: (a) Estela Lisa, Monte Alban, four Teotihuacan figures, at least three with platelet headdresses walk toward Zapotec ruler (from Acosta 1958-1959:Fig. 16); (b) Zapotec deity dressed as Teotihuacan warrior with platelet headdress, shell collar, goggled eyes, and back mirror; other possible burning mirrors placed in headdress, Tomb 105, Monte Alban (after A. Miller 1988:Fig. 4); (c) detail of Zapotec urn representing male wearing Teotihuacan warrior dress, note platelet headdress with goggles and asymmetric bird (after Boos 1966:Fig. 353); (d-e) figurine whistle wearing War Serpent headdress with platelet edging (from Caso and Bernal 1952:Fig. 294g-h).

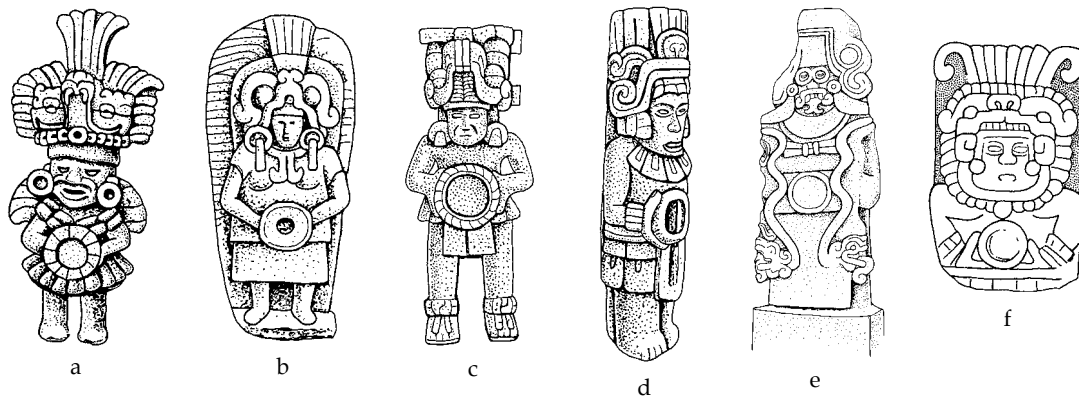


Figure 20. Late Classic and Early Postclassic figures wearing War Serpent headdresses while holding circular mirrors: (a) figure from cache in Patio of Tomb 103, Monte Alban (detail after Easby and Scott 1970:Fig. 163); (b) female figure from Xochicalco (after Nicholson and Berger 1968:Fig. 15); (c) figure with large petal-rimmed mirror, from Ixtacamaxtitlan, Puebla (after Nicholson and Berger 1968:Fig. 19); (d) figure possibly from Tlaxcala region (after Nicholson and Berger 1968:Fig. 18); (e) figure with burning serpents, La Morelia, Guatemala (after Clark 1978:Pl. 1); (f) figure with probable mirror, Tula (after de la Fuente et al. 1988:Pl. 133).

is strikingly similar to a Late Classic Jaina style figure seated within a War Serpent structure (Figure 17, right).

In addition to the Huehueteotl censer and the costuming, the Monte Alban cache contains another Teotihuacan-derived trait: three of the figures hold large circular mirrors to their torsos. Circular mirrors are fairly rare in Classic Zapotec iconography; when round mirrors do appear, they are frequently on figures exhibiting Teotihuacan traits (e.g., Figure 19b). With their raised segmented rims, the cache figurine mirrors are in strong Teotihuacan style.

Nicholson and Berger (1968) present a number of Late Classic monumental sculptures of standing figures holding large disks against their abdomens. At least three of the illustrated examples wear the War Serpent headdress. Like the figures from the Tomb 103 patio cache (Figure 20a), they appear to be holding large round mirrors (Figure 20b–d). The same theme also occurs on a probable Terminal Classic monument from La Morelia, Guatemala (Figure 20e). Bearing the visage of Tlaloc, the figure wears the War Serpent headdress and displays a prominent disk on the abdomen. In addition, the figure is flanked by two undulating serpents. Smoke emanates from the mouths of the snakes, and one of the creatures clearly bears flame volutes. It is quite likely that these undulating fire serpents represent the burning lightning bolts of Tlaloc. An Early Postclassic form of the mirror figure appears at Tula (Figure 20f); it is clear that the headdress is identical to that found with the crouching figures at Tula Structure B and the Temple of the Warriors at Chichen Itza. By the Early Postclassic period, this War Serpent figure can be regarded as the Xiuhcoatl, the same entity that appears in the encircling turquoise rim of Toltec pyrite mirrors (e.g., Figure 11e).

The Cult of Sacred War

Clearly, the Teotihuacan war iconography found among the Classic Zapotec and Maya does not derive from a naive use of alien and poorly understood elements gathered piecemeal from a foreign source. Instead the local manipulation of the Teotihuacan imagery by the Maya and Zapotec reveals an extensive understanding of the concepts underlying the iconographic

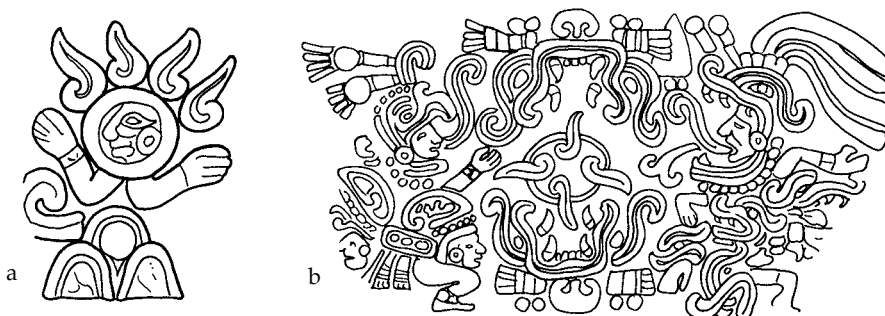


Figure 21. Escuintla representations of figures with burning disks: (a) detail of Early Classic Escuintla vessel depicting figure in burning disk (after Hellmuth 1978c:Fig. 14); (b) repeating scene from Early Classic Escuintla vessel depicting two figures flanking burning disk or hearth; figure to viewer's right wears War Serpent headdress with other War Serpent heads covering body (after Hellmuth 1978c:Fig. 12).

conventions. The ideological significance of this war imagery must have been profound, not only for the Zapotec and Maya, but obviously also for the inhabitants of Teotihuacan. Like the later Aztec, the Teotihuacanos appear to have linked the cult of war to the cosmogonic acts of creation. Moreover, just as the Aztec sources indicate, much of the symbolism surrounding the Late Postclassic war cult seems to have originated in the sacred pyre at Teotihuacan.

To the Teotihuacanos, war was closely identified with fire. Thus, in Teotihuacan mural paintings, flames often emanate from armed warriors (e.g., Miller 1973:Figs. 195, 336). Berlo (1983b:83) notes the almost exclusive representation of warriors on Teotihuacan style Escuintla censers. Berlo (1983b:83-86) also mentions the widespread association of Teotihuacan warriors with butterflies and argues convincingly that the butterfly warriors found among the Postclassic Toltec and Aztec were a legacy from Classic Teotihuacan. It is generally accepted that like the Aztec and other Postclassic peoples of highland Mexico, the Teotihuacanos identified butterflies with fire. Thus, like the individuals spouting flames, the Teotihuacan butterfly warriors were probably considered as fiery entities. The Teotihuacan War Serpent falls squarely within the Teotihuacan war/fire complex. An ancestral form of the Postclassic Xiuhtecuhtli, the War Serpent is frequently found with flames, and can be considered as a form of fire serpent. For the Late Postclassic inhabitants of Central Mexico, the fire serpent was identified with two important war gods, Huitzilopochtli and Xiuhtecuhtli. Seler (1963:1:90, 190) notes that as patron of the ninth day, Atl, Xiuhtecuhtli was a god of war, and thus is frequently depicted with the sign *atl-tlachinolli*, or "burning-water," a basic metaphor for war. According to Seler (1963:2:195), Xiuhtecuhtli was "el representante de la guerra."

Francisco Hernández (1946:1:65) mentions that the ritual battles of the Aztec flower wars were initiated by setting a pyre between the two warring groups. To the Aztec, the sacred flower wars, the *xochiyaoyotl*, owed their origin to the fiery creation of the sun at Teotihuacan. In the sixteenth-century accounts, the sun and the moon were created in a great sacrificial pyre at Teotihuacan. Due to the voluntary sacrifice of two particular gods—often named Nanahuatzin and Tecciztecatl—the sun and moon were born out of the flames.¹⁰ The Florentine Codex and the *Leyenda de los Soles* accounts suggest that the Aztec military orders of the eagle and jaguar also originated in the flames at Teotihuacan. In both accounts,

¹⁰ For citations of the important ethnohistoric accounts of the creation of the sun at Teotihuacan, see Nicholson (1971:401-402).

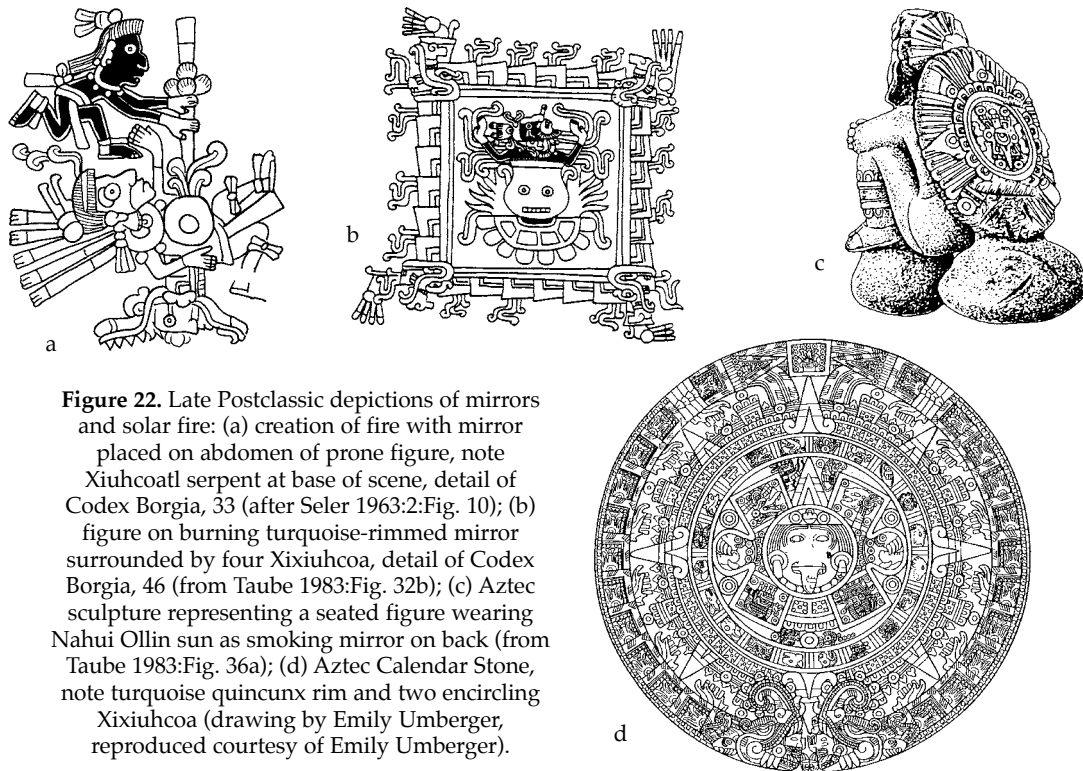


Figure 22. Late Postclassic depictions of mirrors and solar fire: (a) creation of fire with mirror placed on abdomen of prone figure, note Xiuhtcoatl serpent at base of scene, detail of Codex Borgia, 33 (after Seler 1963:2:Fig. 10); (b) figure on burning turquoise-rimmed mirror surrounded by four Xixiuhcoa, detail of Codex Borgia, 46 (from Taube 1983:Fig. 32b); (c) Aztec sculpture representing a seated figure wearing Nahuatl Ollin sun as smoking mirror on back (from Taube 1983:Fig. 36a); (d) Aztec Calendar Stone, note turquoise quincunx rim and two encircling Xixiuhcoa (drawing by Emily Umberger, reproduced courtesy of Emily Umberger).

the eagle and jaguar throw themselves into the hearth after the sun and moon (Sahagún 1950-1982:Book 7:6; Velázquez 1945:122). The following excerpt from the Florentine Codex describes this important episode following the voluntary immolation of the sun and moon:

It is told that then flew up an eagle, [which] followed them. It threw itself suddenly into the flames; it cast itself into them, [while] still it blazed up. Therefore its feathers are scorched looking and blackened. And afterwards followed an ocelot, when now the fire no longer burned high, and he came to fall in. Thus he was only blackened—smutted—in various places, and singed by the fire. (Sahagún 1950-1982:Book 7:6)

In the text it is stated that, because of this sacrificial event, valiant Aztec warriors were referred to as *quauhtocotl*, or “eagle-jaguar.” It is therefore evident that Aztec bravery in battle was compared to the self-immolation at Teotihuacan.

Following Séjourné (1960), Vidarte de Linares (1968), and others, Millon (1981:230) suggests that, during the Classic as well as Postclassic periods, Teotihuacan was considered to be the birthplace of the sun and moon. In support, Millon (*ibid.*) cites a number of mural paintings that may depict episodes of this cosmogonic event. A Teotihuacan style Escuintla vessel may represent an Early Classic form of this important myth (Figure 21b). In the vessel scene, two animated figures flank a burning circular disk or hearth from which flames emanate. Above and below the fiery device, there are frontal zoomorphic faces representing either the jaguar or, more likely, the War Serpent. The anthropomorphic figure to our left of the central fire sign appears with wings and a bird headdress, possibly a vulture or eagle; the antennae and curling proboscis of the butterfly top the bird head. The opposing figure is clearly dressed as the War Serpent, and wears a helmet mask quite similar to that found

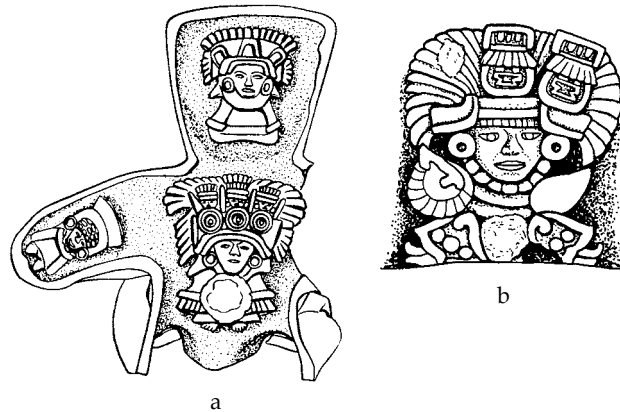
on Lamanai Stela 9 (Figure 6a). Aside from the War Serpent headdress, four additional War Serpent heads cover his body, as if he were enveloped in flames. I suspect the scene depicts the event of sacrificial self-immolation in the pyre at Teotihuacan. So far as I am aware, this vessel is the only known instance in which the War Serpent appears in a narrative mythical context. In another Escuintla vessel scene, an elevated human figure appears in a burning disk, quite possibly the fiery sun born from the sacred pyre (Figure 21a).

During the Postclassic period, circular pyres, fire serpents, and round mirrors frequently appear together in representations of the sun and its origins. In a recent study, Coggins (1987) argues that mirrors played an important part in Mesoamerican new fire ceremonies—the calendrical reenactment of the creation of the sun. Several scenes in the Codex Borgia illustrate the creation of fire on a mirror. In the nineteenth-century Kingsborough edition of the Codex Borgia, it can be seen that in the upper right corner of page 33 fire is being drilled on a mirror placed on the abdomen of a prone figure (Figure 22a). Selser (1963:2:28) suggests that the mirror represents either the heart, stomach, or navel of the prone victim. Almost surely it serves as the navel or center. Directly below the mirror, there is a Xiuhcoatl containing the face of Xiuhtecuhtli within its open mouth. Selser (1963:1:93) notes that the region of Xiuhtecuhtli is *tlalxicco*, meaning “earth navel,” the sacred center or axis of the world.¹¹ On Borgia page 46, fire is drilled on another disk placed on the center of Xiuhtecuhtli’s body; to either side, Tezcatlipoca and Quetzalcoatl appear as warriors wielding weapons as they stand on thrones with jaguar cushions. Directly above the prone Xiuhtecuhtli, there is a structure composed of four Xiuhcoatl serpents surrounding a pyre representing a burning, turquoise-encrusted mirror (Figure 22b). Selser (1963:Facsimile:46) labels the structure as a *xiuhcocalli*, or “house of the fire serpents.” In view of the prominent mirror, I would label the structure as the House of the Mirror Serpents. The turquoise-rimmed mirror in the center of the structure spouts yellow flames and clearly serves as a burning hearth. In the Florentine Codex, one term for the sacred hearth at Teotihuacan was the *xiuhtetzaqualco*, signifying “turquoise enclosure” (Sahagún 1950-1982:Book 1:84). I suspect the scene on page 46 refers to the turquoise enclosure and the fiery creation of the sun, an event reenacted every fifty-two years during the new fire ceremony.

In two studies, I (Taube 1983, 1988e) have argued that the great Aztec Calendar Stone represents a turquoise-rimmed pyrite mirror (Figure 22d). Near the rim, there is a ring of turquoise quincunxes, probably another allusion to the *xiuhtetzaqualco*. This identification finds support by the presence of two great Xiuhcoatl turquoise or fire serpents at the outer edge. The turquoise signs and serpents recall both Borgia page 46 and the Toltec style pyrite *tezcacuitlapilli* (Figure 11e), with its Xiuhcoatl serpents placed on the turquoise rim. The aforementioned Late Classic and Early Postclassic sculptures of War Serpent figures holding large mirrors are undoubtedly part of the same solar fire complex (Figure 20). The occurrence of these mirrors at the center of the body probably refers to the earth navel, or *tlalxicco*. The large scale of these mirrors partially obscures their placement on the body. When similar figures appear with smaller mirrors, however, they are clearly centered in the region of the navel (see Nicholson and Berger 1968:Figs. 20, 21).

¹¹ The Tlaltecuhltli earth monster occurring on the base of many important Aztec sculptures at times has a large rimmed and petaled disk strikingly similar to Teotihuacan style mirrors. In the center of this disk, there is the quincunx sign, probably labeling this region as the *tlalxicco*, or world center (see Pasztory 1983:Pls. 109, 113, 117).

Figure 23. Teotihuacan representations of the *tlalxicco* pyrite mirror within hollow ceramic sculptures: (a) interior of hollow Teotihuacan figure, note remains of pyrite mirror on abdomen of figurine at lower center, three more figures with mirrors in figurine headdress (from Séjourné 1966c:Fig. 193); (b) detail of central figure within Teotihuacan style hollow figure, American Museum of Natural History, New York; figure in form of anthropomorphic butterfly with pyrite mirror on abdomen, three House of Mirrors signs originally placed on headdress (after Ekholm 1970:48).



According to the eighteenth-century accounts of Boturini and Clavijero (cited in Seler 1902-1923:5:407), the Teotihuacan Pyramid of the Sun once had a great stone statue of a figure with a “gold mirror” on its chest to reflect the rays of the sun. Although no sculpture of this description now exists at the Pyramid of the Sun, two Teotihuacan style monuments from Tepecuacuilco, Guerrero, depict figures that appear to have mirrors corresponding to the region of the navel (see Díaz 1987:10, 42). Several of the small ceramic figures contained within the hollow ceramic figure from Becan, Campeche, also have mirrors over their abdomens (see Ball 1974:8). This theme is repeated with other Teotihuacan hollow figures, where actual miniature pyrite mirrors are placed on the abdomens of figurines placed in the interior navel region of the hollow figures (Figure 23). In other words, the pyrite mirror serves as the navel of both the figurine and the enclosing larger hollow figure. In one case, this motif is repeated three times in the headdress of the central figurine, which has three more figures with mirrors over their abdomens (Figure 23a). In another instance, the *tlalxicco* mirror-bearing figurine is portrayed with butterfly wings, possibly referring to a butterfly warrior (Figure 23b). Three mirrors again appear in the headdress, and with their capping roof elements they seem to represent the House of Mirrors. The butterfly nose piece occurring in the center of each mirror is found in other representations of Teotihuacan style mirrors (e.g., von Winning 1947:Fig. 6). This hollow figure appears to represent the House of Mirrors at the *tlalxicco* center of the Teotihuacan world.

Both Coggins (1987) and I (Taube 1983, 1988e) have noted the widespread association of solar fire with pyrite mirrors in ancient Mesoamerica. Supplied with encircling Xiuhcoatl serpents, the Toltec *tezcacuitlapilli* appearing on the warrior atlantean columns at Tula probably represent the sun (Taube 1988e). Similarly, there are Aztec sculptures depicting the sun as a mirror worn on the back. The famous Stuttgart Xolotl figure wears such a solar back mirror (see Pasztory 1983:Pl. 279). The Stuttgart figure is notably similar to an Aztec copy of a Toltec atlantid warrior, although in this case the back device is simply a petaled mirror, not an explicit solar disk (Pasztory 1983:Pls. 144-146). Another Aztec sculpture represents a seated figure wearing the Fifth Sun, Nahui Ollin, as a smoking mirror on the back (Figure 22c). I suspect that the *tezcacuitlapilli* commonly worn by Teotihuacan warrior figures had a similar meaning. By donning this device, the Teotihuacan warriors assumed the burden or office of the sun and, in a sense, became warriors of the sun.

Conclusions

The curious serpent head accompanying the plumed serpent at the Temple of Quetzalcoatl serves as one of the most important symbols of secular and sacred power at Teotihuacan. Due to Classic representations at Teotihuacan, in Oaxaca, and especially the Maya area, it is clear that the creature is closely identified with the office of war. Following the early identification by Caso and Bernal, I have argued that this entity is a solar fire serpent ancestral to the Xiuhcoatl of Postclassic Central Mexico. Unlike the Teotihuacan feathered serpent, or Quetzalcoatl, the Classic War Serpent is supplied with either a sharply upturned nose or a large, accentuated nostril placed at the tip on the snout. Although it is often supplied with feather crests or tassels, the feathers coat neither the face nor the body. At Acanceh, the War Serpent and the Teotihuacan feathered serpent appear simultaneously in the same scene, and it is clear that they are separate entities. The symbolic domain of the War Serpent is also distinct. Unlike the feathered serpent, the War Serpent is identified predominantly with fire and warfare; the platelet form is a direct manifestation of its war aspect. Both of these attributes, fire and war, continue to be essential elements of the Postclassic Xiuhcoatl, the weapon of the Aztec solar god Huitzilopochtli. Between the War Serpent and the Xiuhcoatl, there is a continuity of form as well as meaning. The Ixtapaluca Plaque, the Arcelia marker, and other terminal Classic representations of the War Serpent demonstrate clear morphological similarities to the Postclassic Xiuhcoatl.

The wearing of the platelet War Serpent headdress by rulers at Lamanai, Tikal, Piedras Negras, Bonampak, Copan, and other Classic Maya sites appears to be a conscious identification with the warrior complex of Teotihuacan and the Temple of Quetzalcoatl. Aside from the obviously highland Mexican plants depicted on the Tikal lintel scene, the antiquity of the Old Temple also argues for a Central Mexican origin for this creature. The facade was created in the second century AD, even before the Maya Early Classic period. For the Maya, the War Serpent appears to be directly associated with rulership. Thus it is specifically worn by rulers on the Classic Maya monuments. In Lintel 2 of Tikal Temple 1, Ruler A sits on the War Serpent structure as if he were on a throne. On the great Hieroglyphic Staircase at Copan, a series of rulers are seated on thrones while wearing the War Serpent headdress. Similarly, Late Classic Maya figurines frequently depict enthroned Maya rulers wearing the War Serpent headdress (e.g., Corson 1976:Figs. 5d, 20d, 24a, 24c). There are also Late Classic figurines depicting rulers wearing the War Serpent headdress while enthroned within temples emblazoned with the War Serpent (Figure 17). In the Maya region, this serpent is identified with one particular aspect of rulership, that of paramount war leader.

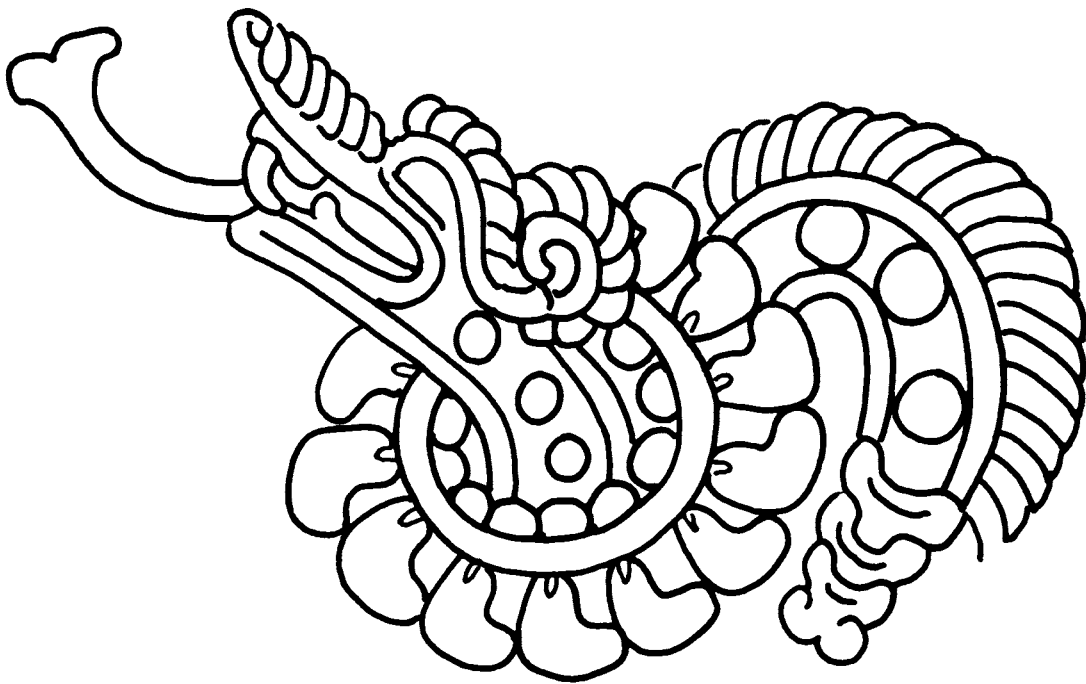
If the War Serpent reveals important aspects of rulership and statecraft among the Classic Maya, it has an even more profound significance at Teotihuacan. At Teotihuacan, the war headdress is prominently displayed on the central pyramidal structure of the Ciudadela, the sacred axis, or *tlalxico*, of Teotihuacan. The structure does appear to be an ancestral form of the Aztec Tezcacoac, or place of the mirror snake, a structure devoted at least in part to the office of war. It is possible that the alternating serpent heads, Quetzalcoatl and the War Serpent, refer to dual aspects of rulership, the feathered serpent with fertility and the interior affairs of the state, and the War Serpent with military conquest and empire. This could partly explain why the War Serpent is of far greater distribution than the feathered serpent in Classic Mesoamerica. In contrast to the War Serpent, the feathered serpent is notably rare among the Classic Maya and Zapotec. Like the later Aztec, the Teotihuacan sphere of influence may

have included a solar war cult carried by proselytizing emissaries and warriors.

The excavations at the Temple of Quetzalcoatl reveal that, even near the beginnings of Teotihuacan, war was a central component of Teotihuacan religion and statecraft. Clearly, there was not a contrast between secular military offices and religious ideology, because it was a cult of sacred war providing a divine charter for rulership. It may have been that offices of power and rulership were considered in terms of the penitent warrior, one who sacrificed individuality, personal interest, and even life in terms of the common good. Like the gods destroyed on the sacrificial pyre, the many slain warriors within the Temple of Quetzalcoatl may be a graphic representation of this code of ethics. The particular emotional states of these victims—willing or unwilling—is a moot point. What is important is that they are portrayed as Teotihuacan warriors. In terms of the state, the death of these individuals does represent a supreme act of self-sacrifice.

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The Iconography of Mirrors at Teotihuacan

From Olmec times to the period of Spanish contact, polished stone mirrors were an important component of Mesoamerican costume, ritual, and iconography. Although mirrors of the Formative and Postclassic periods are well known, there has been little interest in the intervening Classic Period of highland Mexico. In two previous studies, I noted that representations of mirrors are extremely common in the iconography of Teotihuacan (Taube 1983, 1986). However, until now, there has been no detailed discussion of mirrors at Classic Teotihuacan.¹ In this essay, I will describe particular forms and types of Teotihuacan-style mirrors, both actual examples in the archaeological record, and their representation in Teotihuacan art. I shall demonstrate that at Teotihuacan mirrors were more than simple ornaments of dress. These ancient mirrors expressed a rich body of esoteric lore, much of it also present among Postclassic and even contemporary peoples of Mesoamerica. The varied meanings and uses of mirrors at Teotihuacan will be elucidated by their form and contexts in Teotihuacan iconography, by data from archaeological excavations, and finally, by mirror symbolism known from other cultures of ancient Mesoamerica.

Formal Identification of Teotihuacan Mirrors

Actual Mirrors in Archaeological Contexts

Three types of mirror stone were used at Teotihuacan: mica, obsidian, and iron pyrite.² This study will focus upon the most elaborate mirror type, the circular mirror of pyrite mosaic. Circular mirrors of iron pyrite mosaic are fairly common in the archaeological remains of Teotihuacan. They are composed of iron pyrite tesserae glued upon a thin stone disk, usually

¹ Following the 1988 presentation of this paper at Dumbarton Oaks, Margaret Young-Sánchez (1990) published a study on Teotihuacan mirrors. Young-Sánchez has arrived at many of the same conclusions concerning the identification of mirrors at Teotihuacan.

² Rather than being formed of carefully cut mosaic, obsidian mirrors were of single slabs of fractured stone. Linné (1934: Figs. 320, 321, 323, 324) illustrates several examples from his Xolalpan excavations. Kidder, Jennings, and Shook (1946: Fig. 56) illustrate an ovoid piece of flaked obsidian excavated at Kaminaljuyu. Although they tentatively identify it as a scraper, one side of the item is formed by a single smooth flake; more likely, it is an obsidian mirror. Similar crude mirrors are embedded in the walls of Kaminaljuyu Structure D-III-1 (Rivera and Schavelson 1984: Fig. 1).



Figure 1. Kaminaljuyu mirror back depicting Teotihuacan Spider Woman; note mirror in bowl near base (after Kidder et al. 1946:Fig. 175a).

information describing their precise archaeological context. However, this is not true for the great site of Kaminaljuyu, which had intense and profound contact with Teotihuacan during the Early Classic period. Excavations by the Carnegie Institution of Washington uncovered a great many pyrite mirrors in Early Classic Esperanza phase burials at Mounds A and B of Kaminaljuyu (Kidder et al. 1946). Several of the mirror backs contained scenes rendered in pure Teotihuacan style (Figure 1).

The Kaminaljuyu excavators, Kidder, Jennings, and Shook (1946:130) did not consider the pyrite mosaic disks to be mirrors, because they lacked a smoothly reflective surface. However, although a single reflective surface is important for cosmetic use, this is by no means the only function of mirrors. It is clear that in ancient Mesoamerica, mirrors were also important in costume and divinatory scrying. Rather than being devices for personal cosmetic use, the circular pyrite mirrors functioned primarily in dress and divination.

Rimmed disks encircled by plumes are extremely common in the art of Teotihuacan (Figure 2). They are represented in polychrome murals, painted and carved vessels, ceramic *incensarios*, figurines, and monumental stone sculpture. Although these disks may differ in detail, they tend to have a rim that, when rendered in sculpture, is found to be raised slightly above the central disk. Plumes, rendered in a variety of ways, commonly radiate from the raised rim. Quite frequently, these feathered disks are depicted upon costumes, where they appear as medallions worn on the brow, chest, or the small of the back. Smaller ceramic

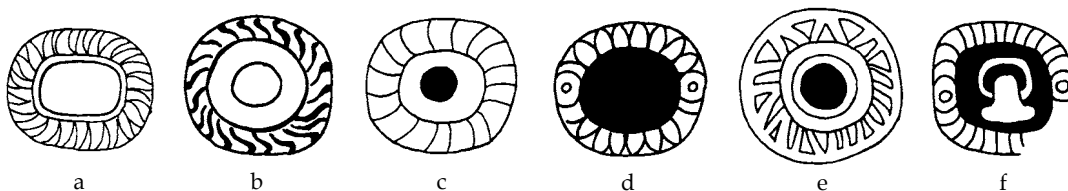


Figure 2. Examples of mirrors in Teotihuacan art: (a–b) mirrors with feathered rims (after Langley 1986:318); (c) mirror with feathered rim (after Miller 1973:Fig. 191); (d) back mirror with opposing flares on rim (after Miller 1973:Figs. 199–200); (e) headdress mirror (after Miller 1973:Fig. 210); (f) back mirror with central and flanking spools (after Miller 1973:Fig. 149).

of slate. Two pairs of holes for suspension are usually carved on opposite edges of the backing stone. At times, the exterior of the backing disk is richly carved or painted. The opposing side, the polished pyrite mosaic, originally would have provided a brilliant golden surface. However, because iron pyrite is not a stable mineral, at the time of discovery the mirror surface is heavily corroded, often no more than a yellowish or rusty red stain. Thus pyrite mirrors have been frequently misidentified as paint palettes, pot lid covers, or simply resin-painted disks.

Unfortunately, although mirrors are relatively common at Teotihuacan (cf. Seler 1902–1923:5:431; Linné 1934:154, 1942:136; Rubín de la Borbolla 1947:Fig. 14; Séjourné 1959:65; Heyden 1975:131, Fig. 2), there is relatively little

versions, evidently copies of the actual items found on Teotihuacan costume, appear as *adornos* on Teotihuacan *incensarios*. It is most telling that the better preserved of these circular *adornos* contain a central face of reflective mica (Berlo 1984:48), clearly to depict the shining surface of a mirror. In other words, the small, circular mica-encrusted *adorno* medallions are copies of actual round mirrors.³

Mirrors Worn at the Small of the Back

In costume, the largest and most complex of the circular medallions tends to be the back mirror. It occurs as a part of belt assemblages and frequently has a pendant tassel of cloth, feathers, or tails (Figure 3). It is quite clear that this device is an Early Classic form of the Postclassic *tezcacuitlapilli*, a mirror worn at the small of the back. In the art of Postclassic highland Mexico there are innumerable examples of back mirrors. Some of the finest examples appear with Early Postclassic Toltec figures. Long ago, Seler (1902-1923:5:275) interpreted these back elements as mirrors at Chichen Itza. Later excavations at Tula and Chichen Itza provided striking confirmation of his early identification. The large Atlantean warrior columns unearthed by Jorge Acosta at Tula each wear the back device, here rendered with smoking serpents within the four radiating quadrants (see Figure 12c). Actual mirrors of this design have been excavated at Chichen Itza. Here four Xixiuhtli—turquoise or fire serpents—appear in the turquoise rim encircling the central pyrite mosaic (see Figure 19d).

Numerous depictions of back mirrors occur in Classic Maya art, often on pieces exhibiting strong Teotihuacan influence.⁴ The Teotihuacan warrior figures on the sides of Tikal Stela 31 provide two views of an Early Classic back mirror (Figure 4a). Whereas the left figure displays the mirror face within its encircling rim, the opposing figure provides a view of the mirror back. The pair of short vertical lines near the edge of the disk probably depicts the holes drilled for suspension, now held by lashes of cord. Yet another Early Classic Tikal piece, a two-part effigy *incensario*, contains an excellent representation of a back mirror, complete with a pendant tassel (Figure 4b). The four Late Classic sculptures from Tikal Burial 195 each depict God K presenting a similar back mirror (Figure 4c).

³ A circular device virtually identical to Teotihuacan mirror medallions appears on a series of stone beads reportedly from the Rio Balsas region of Guerrero. In the center of the disk, corresponding to the pyrite mirror face, there is a small inlay of iron pyrite (see von Winning and Stendahl 1968:Pl. 46).

⁴ It is widely recognized that the stucco facade at Acanceh, Yucatan, is rendered in strong Teotihuacan style. No less than five of the stucco figures wear back mirrors (see Seler 1902-1923, Vol. 5).

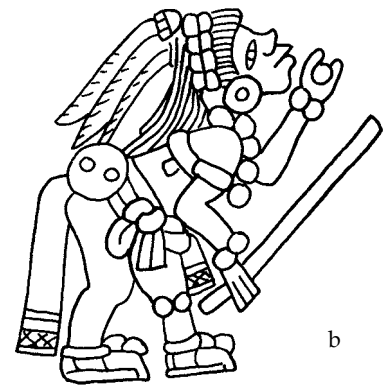


Figure 3. Representations of Teotihuacan-style back mirrors in Classic Mesoamerica: (a) back mirror worn by figure in Teotihuacan mural (detail from Miller 1973:Fig. 149); (b) back mirror worn by blowgunner, detail of incised Teotihuacan vase (after Linné 1942:Fig. 175).

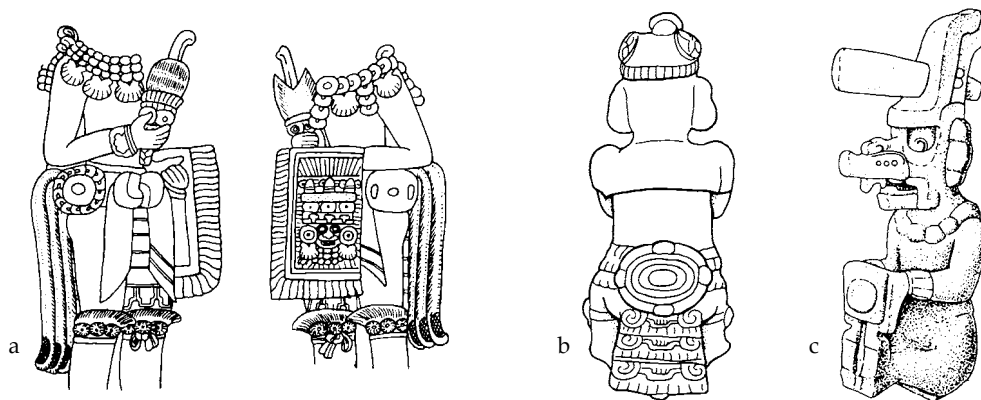


Figure 4. Classic Maya representations of mirrors at Tikal, Guatemala: (a) back mirrors worn by warriors on sides of Stela 31 (after W. Coe 1967:49, detail); (b) back mirror on Early Classic effigy vessel, Burial 10 (from Coggins 1975:Fig. 46b); (c) Late Classic God K figure holding tasseled mirror, one of four plastered wooden effigies from Burial 195 (from W. Coe 1967:57).

The Early Classic Esperanza phase tombs at Kaminaljuyu contain graphic information regarding the use and form of Early Classic pyrite mirrors. Two of the individuals in Tomb B-I were found with pyrite mirrors placed at the small of the back (Figure 5a). One of the mirrors, that found on Skeleton 2, had a backing richly ornamented in Classic Veracruz style (Figure 5b). The carved surface was placed face up, against the back of the body. This indicates that even with finely carved mirror backs, the pyrite facing, not the backing, was the displayed surface of Classic period back mirrors.

The archaeological occurrence of back mirrors in burials is not restricted to Kaminaljuyu.

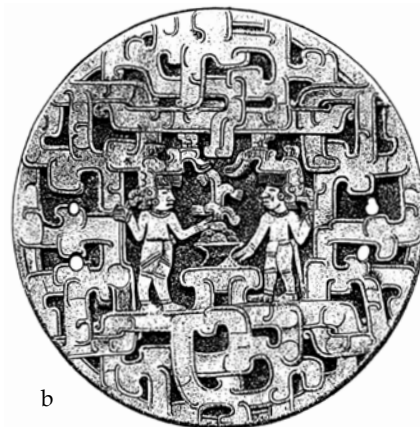
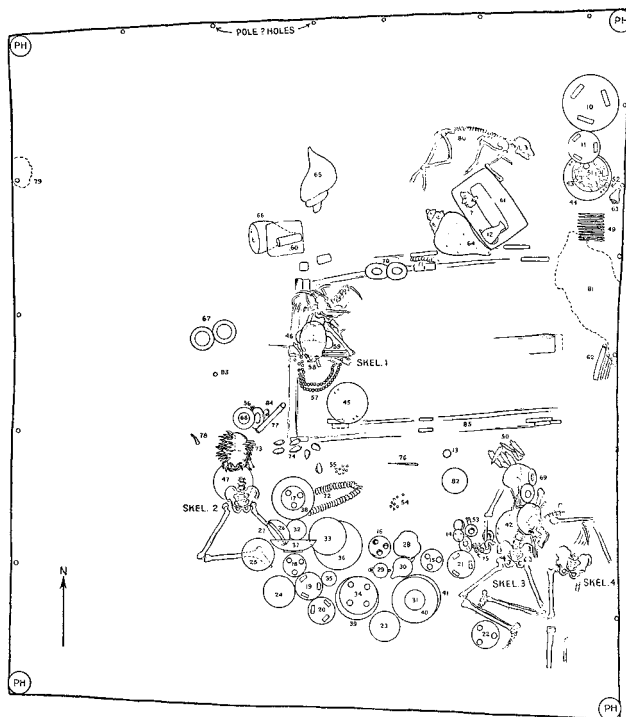


Figure 5. Early Classic pyrite back mirrors, Tomb B-I, Kaminaljuyu: (a) detail of tomb, note mirrors at lower backs of Skeleton 2 and Skeleton 3 (from Kidder et al. 1946:Fig. 31, detail); (b) back mirror in association with Skeleton 2 (from Kidder et al. 1946:Fig. 156).

In the recently discovered burials at the Temple of Quetzalcoatl at Teotihuacan, mirrors are similarly placed in the small of the back. In Burial 190, no fewer than fifteen individuals were interred with back mirrors (Sugiyama 1989a:97).

In a great many Teotihuacan representations of mirrors, the edges of the disks are separated into a series of petal-like curving bands (Figures 2, 6a–b). Although these bands often appear to represent feathers, in other instances, they may actually refer to a solid portion of the mirror. At Kaminaljuyu, the pyrite face of one Early Classic mirror was found to be composed of a central disk surrounded by six curving pieces (Figure 6a). A fragmentary Early Classic mirror excavated at Zaculeu bears a similar pattern, although here the curving petals appear to have been fashioned from single plates of iron pyrite (Woodbury and Trik 1953:233). The overall pattern of the Zaculeu piece is strikingly similar to mirrors represented in Teotihuacan art (Figure 6b).

Kidder, Jennings, and Shook (1946:127) note that during their excavation of the Kaminaljuyu Esperanza tombs, jade was found with most mirrors, usually in close association with the reflective pyrite surface. Due to the corrosion of the pyrite, it was frequently difficult to determine the original orientation of the jade. Nonetheless, they were able to reconstruct some of the original assemblages. The face of one pyrite mirror was flanked by jade flares, giving the overall impression of a pair of earspools (Figure 6c). This same assemblage appears with Teotihuacan-style representations of mirrors. On one *incensario*, the mirror and flares are modeled three dimensionally, with mica occupying the central mirror space (Berjonneau et al. 1985:Pl. 172). Mirrors with identical pairs of ear flares often occur as back mirrors in Teotihuacan murals (see Figures 2c, e). Here the stone spools are rendered as two concentric circles on the mirror rim.

In a great many representations of mirrors at Teotihuacan, a spool appears in the center of the mirror face (see Figure 2c). In this case, it is usually rendered in profile, with the bell-shaped outline clearly visible. At first sight, this could serve to discount a mirror identification; such an element would clearly inhibit the reflective quality of the mirror. Nonetheless, virtually identical jade spools have been found on actual

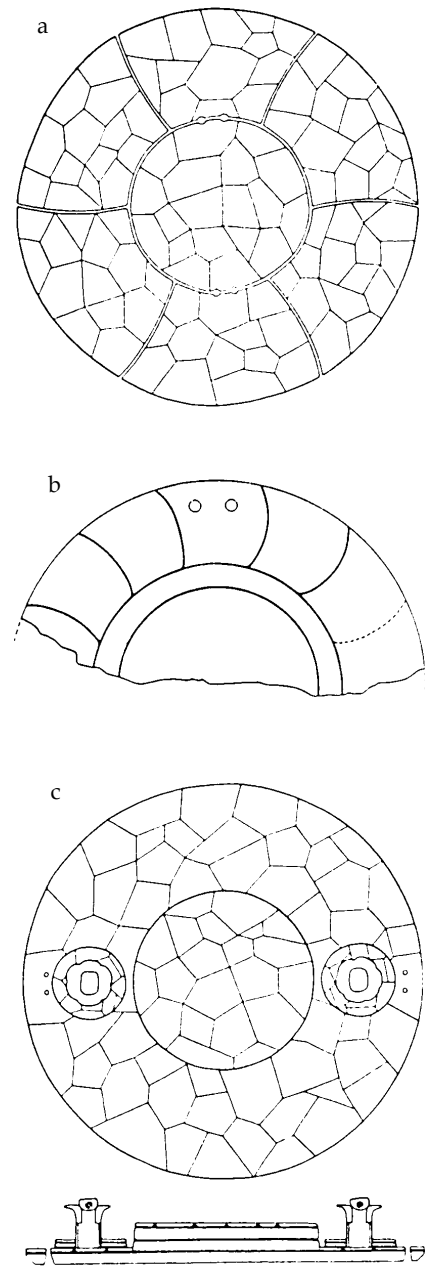


Figure 6. Examples of Teotihuacan-style mirrors from the Maya region: (a) mosaic pyrite mirror face, Tomb A-VI, Kaminaljuyu (from Kidder et al. 1946:Fig. 53d); (b) mosaic pyrite mirror face, Early Classic tomb in Structure 1, Zaculeu (from Woodbury and Trik 1953:Fig. 130); (c) pyrite mirror, ear flares on rim, Tomb A-III, Kaminaljuyu (from Kidder et al. 1946:Fig. 53c).

excavated Early Classic pyrite mirrors at Kaminaljuyu. In Tomb A-IV, a jade spool with a central carved disk was found on a pyrite mirror (Kidder et al. 1946:Figs. 26, 143b). Although making no mention of similar mirrors in Teotihuacan art, Kidder, Jennings, and Shook (1946:127) suggest that both this flare and another example were originally placed in the center of iron pyrite mirrors. On Yaxchilan Stela 11, there is a Late Classic Maya representation of an elaborate back mirror with the central spool or flare (see Figure 19c). In this case, a pendant tassel is pulled through the center of the flare.

A Teotihuacan mural currently on display in the De Young Museum of Art, San Francisco, displays an interesting version of the back mirror (Figure 7). Here the central mirror surface contains a glyph-like element probably representing a jade face pendant. In Teotihuacan murals, similar pendants are frequently found falling in streams. The placement of jade upon mirror faces appears to have been a relatively common practice in the Maya region. In the Esperanza phase burials at Kaminaljuyu, jade beads were found placed with pyrite mirrors (Kidder et al. 1946:127). A cache from Early Classic Quirigua was formed of three bowls with matching lids containing a vast amount of worked jade (Ashmore 1980:38, 39). Wendy Ashmore (personal communication, 1988) notes that at least two of the bowls appear to have contained the remains of pyrite mirrors. In one Late Classic Maya cache at San Jose, Belize, a single large jade bead was placed against a pyrite mirror (Thompson 1939:184).

The practice of placing carved beads and pendants on pyrite mirrors continued into the Early Postclassic period at Chichen Itza. A pyrite and turquoise mirror—of the type commonly worn as *tezcacuitlapilli* at Chichen and Tula—was discovered on the jade inlaid jaguar in the inner Castillo at Chichen Itza. A finely carved human-head pendant and other jades were placed on the central mirror face (Eroza Peniche 1947:248, Fig. 15). A cache in the Temple of the Chac Mool contained another pyrite and turquoise mirror; here a large jade sphere, a human-face jade pendant, and beads of jade and shell lay on the pyrite center (Morris et al. 1931:1:186-188, Fig. 120). The reason for the placement of pendants and other jade objects on pyrite mirrors may be partly due to the value of the pyrite mirrors.⁵ According to Kidder, Jennings,

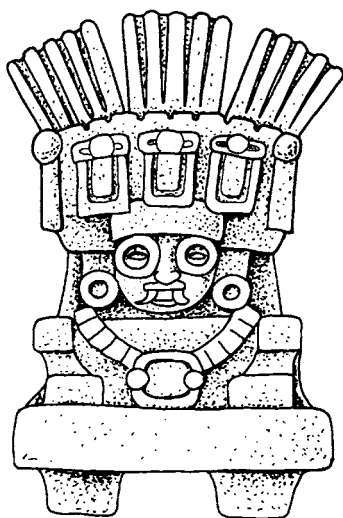


Figure 8. Breast mirror appearing on Teotihuacan figurine; note pair of flanking spools (from Séjourné 1966c:Fig. 96).

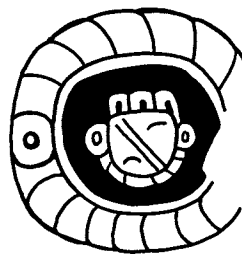


Figure 7. Detail of Teotihuacan back mirror with probable jade head in center, from a mural on display in the M. H. de Young Memorial Museum, San Francisco.

⁵ However, this may not be the only reason worked jade items were placed on mirrors; certain pieces of jade may have been prized for their divinatory powers. Thus the jade sphere found in the Temple of the Chac Mool cache was immediately identified by Yucatec Maya as a divinatory *sastun*. According to Diego de Landa, the Contact Period Yucatec had small divinatory stones termed *am*, meaning “spider” in Yucatec (Tozzer 1941:154, see n. 608, 775). Old jades or heirlooms may have been especially prized for scrying or sortilage. In many regions of Mesoamerica, beads and other items found in the fields are believed to have supernatural powers to be used for divination (e.g., Ramirez Castañeda 1913:354; B. Tedlock 1982:81).

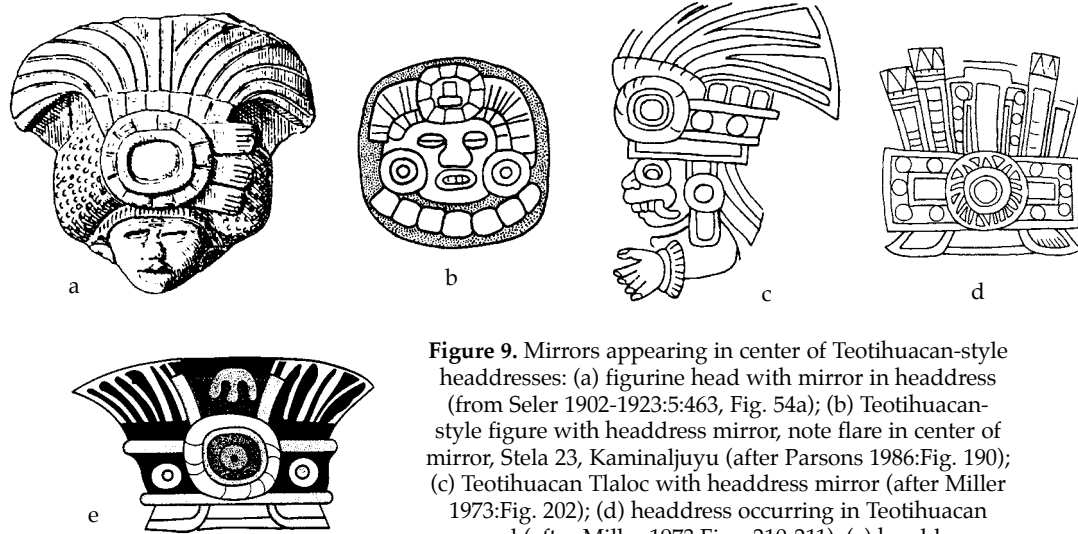


Figure 9. Mirrors appearing in center of Teotihuacan-style headdresses: (a) figurine head with mirror in headdress (from Seler 1902-1923:5:463, Fig. 54a); (b) Teotihuacan-style figure with headdress mirror, note flare in center of mirror, Stela 23, Kaminaljuyu (after Parsons 1986:Fig. 190); (c) Teotihuacan Tlaloc with headdress mirror (after Miller 1973:Fig. 202); (d) headdress occurring in Teotihuacan mural (after Miller 1973:Figs. 210-211); (e) headdress occurring in Teotihuacan mural (from Langley 1986:Fig. 32).

and Shook (1946:131), “nothing produced in aboriginal America seems to rival these plaques in the matter of skilled and meticulous workmanship.” In burials or dedicatory offerings, precious jade would be an especially appropriate item to accompany the obviously esteemed mirrors.

Mirrors Worn upon the Chest

Along with serving as back devices, circular mirrors are frequently worn on the chest of Teotihuacan figures. At times, they are supplied with the flanking pair of spools observed on many Teotihuacan back mirrors, thereby firmly identifying them as such (Figure 8). Breast mirrors with two rim flares are extremely common on Teotihuacan figurines; in a recent publication, von Winning (1987:2:57) considers this device, “el pectoral con dos bolitos de barro,” to be a specific trait of one figurine type. Kidder, Jennings, and Shook (1946:126) note that in the Early Classic tombs at Kaminaljuyu, large mirrors were often placed on the breast of the deceased. In the region of Escuintla, Guatemala, mirrors of similar scale often appear on the chest of *incensario* figures. Here they also occur with the flanking spools on the mirror rim (e.g., Hellmuth 1975:Pl. 23c). In a great many examples at Escuintla and Teotihuacan, the mirror face is occupied by forms of the Reptile Eye glyph, a sign that is still not fully understood (e.g., Hellmuth 1975:Pls. 26, 27).

Mirrors Worn in Headdresses

In Teotihuacan costume, mirrors are quite frequently placed in the center of headdresses worn by women, men, and gods (Figure 9). When worn by figures, these mirrors occur in a broad variety of headdress types. However, Teotihuacan headdresses also appear as isolated iconographic motifs. In this context, the headdress is of a very specific form (Figure 9d–e). This device, termed the Feather Headdress Symbol by James Langley (1986:114), is a broad headdress with a feather crest emanating from the top and frequently the sides. In the center of the Feather Headdress Symbol, circular mirrors may be prominently displayed.

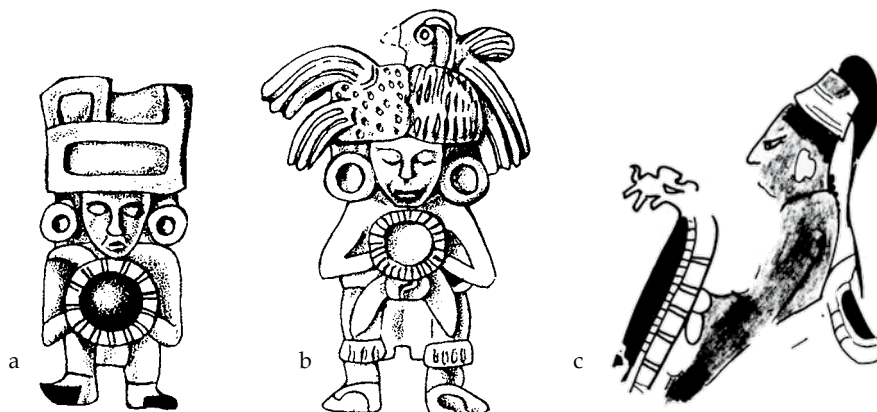


Figure 10. Classic figures holding out large circular mirrors: (a–b) Teotihuacan-style figurines with mirrors from Becan (from Ball 1974:8); (c) detail of Late Classic vase painted in “pink glyph style,” male holds large mirror with petalled edges and skeletal serpent head at top; note mirror worn at small of back (after Kerr 1989:89).

Large Mirrors Not Worn in Costume

Unlike mirrors made from a single stone, there is virtually no limit to the potential diameter of pyrite mosaic mirrors. Larger mirrors simply require a broader backing and more pyrite tesserae. Certain Teotihuacan mirrors were probably too large for personal adornment. Instead, they seem to have been placed on altars or held in the arms during particular rites. Three of the Teotihuacan figurines contained within the hollow figure from Becan, Campeche, hold very large mirrors to their chests (Figure 10a–b). A remarkable Late Classic cache excavated at Monte Alban contained sixteen figures, three holding large rimmed disks. Elizabeth Easby and John Scott (1970:Fig. 163) have identified these Zapotec circular devices as mirrors. The Classic Maya also seem to have fashioned extremely large circular mirrors. In one Late Classic scene, a man holds a great rimmed mirror that dwarfs the mirror worn upon his back (Figure 10c). Unfortunately, the lower portion of the mirror is effaced, but given the present appearance, the diameter was perhaps half a meter. Although the scale should not be taken too literally, it is entirely possible that pyrite mirrors of this size were fashioned in ancient Mesoamerica.

The Symbolic Significance of Teotihuacan Mirrors

The varied forms of Teotihuacan mirrors are interesting in their own right, but clearly they were more than articles of beauty and adornment. In many scenes, they appear in strange and still poorly known contexts, curiously combined with seemingly disparate elements. Given our limited understanding of the iconography, a symbolic interpretation of Teotihuacan mirrors is no easy task. However, there are constructive avenues of approach. For one, there is the complex iconography frequently appearing on actual Teotihuacan mirror backs. In addition, the form and archaeological context of excavated mirrors can provide valuable clues to their use and significance.

Aside from actual mirrors and their archaeological associations, Teotihuacan representations of mirrors also present detailed symbolic information. In the art, mirrors could be readily depicted not only as they appear but also as they were symbolically perceived,

frequently by the substitution or juxtaposition of other distinct elements. Although extremely important, direct substitutions frequently alter the form of the mirror. It is thus useful to have a firm context in which the varied forms interrelate. Costume serves this purpose very well, because the forms can be readily translated to the human plane. Thus, for example, circular pools or giant eyeballs can be readily identified as mirrors when they appear on Teotihuacan dress. I have noted three areas where mirrors commonly appear in Teotihuacan costumes: against the lower back, on the chest, and in the center of the headdress. In the context of these specific regions, many varied motifs substitute for the mirror face. Those to be discussed are mirrors as human eyes or faces, flowers, fiery hearths, pools, webs, shields, the world or the sun, and caves or passageways.

The Mirror as an Eye

Cecelia Klein (1976:208-213) has suggested that at Teotihuacan and in the later iconography of Central Mexico, the ringed eyes found on Tlaloc and other deities may refer to mirrors. In support, Klein (1976) cites abundant evidence that the Aztec identified mirrors with eyes. Thus, in Book 10 of the Florentine Codex, both the eye and pupil are described as *tezcacll*, or mirror. The association of mirrors with eyes is widespread in Mesoamerica. In contemporary Tzotzil Maya, one word for pupil or eye is *nen sat*, *nen* meaning "mirror" and *sat*, "eye" or "face" (Laughlin 1975:251).⁶ Nicholas Saunders (1988:14-19) notes that reflective mirror stones were used to represent eyes in Olmec, Maya, Teotihuacan, and Aztec sculpture. According to Saunders (1988), the Mesoamerican identification of mirrors with eyes may derive from the strongly reflective quality of jaguar eyes.

At Teotihuacan, mirrors were strongly identified with eyes. Along with the Teotihuacan use of pyrite, mica and obsidian are frequently used in Teotihuacan sculpture to represent the shining pupil. George Kubler (1967:9) notes that eyes in Teotihuacan iconography represent shining brilliance; thus they are commonly found in streams and other bodies of water. On one Teotihuacan-style mirror back excavated at Kaminaljuyu, a series of eyes encircles the rim (see Figure 1). Human eyes are also used to represent the gleaming mirror face. Thus, the shining center of both the headdress and breast mirrors can be replaced with a single large eye (Figure 11b-c). The Teotihuacan identification of mirrors with eyes is so widespread that they may be even rendered in the form of an eye, lenticular but with the raised rim and radiating feathers found with mirrors (Figure 11a).

The Mirror as a Face

Like the Tzotzil and other Maya groups, the Aztec words for eye and face are semantically related. Thus the Nahuatl word for eye, *ixtelotli*, derives from a word for face, *ixtli* (see Sahagún 1950-1982:Book 10:112). Similarly, Teotihuacan mirrors were identified not only with eyes but also with the entire face. It has been noted that mirrors are frequently flanked by a pair of flares resembling earspools (Figure 12a). I suspect that these spools serve to convert the mirror into an animate being or face. The use of earflares to create a face may also

⁶ In the creation account of Quichean *Popol Vuh*, the omniscient people of maize had their sight damaged by the creators. This adjustment of human eyes to their present limited state was compared to misting the surface of a mirror: "They were blinded as the face of a mirror is breathed upon" (D. Tedlock 1985:167). The Quichean phrase for "the face of the mirror," *u vach lemo*, can refer simultaneously to both the face and eye; in Quiche, *vach* signifies "eye" as well as "face" (Edmonson 1965:139).



Figure 11. Teotihuacan substitutions between mirrors and eyes: (a) Teotihuacan *incensario* *adorno* in the form of an eye with a mirror edging, from item on display in the Museo Nacional de Antropología, Mexico City (for photo, see Berlo 1984:Pl. 26); (b) warrior figure with eye replacing mirror of breast piece (after von Winning 1987:1:Fig. 1j); (c) eye replacing mirror in center of headdress motif (from Langley 1986:Fig. 33).

be seen on Teotihuacan-style braziers, where a prominent pair of spools converts the vessel into a human head (Figure 12b); at times, even a nosepiece and jade necklace are added (e.g., Berlo 1984:Pls. 35, 42). In one Teotihuacan mural, a netted, feather-rimmed mirror replaces the face of the Netted Jaguar (see Berlo 1992:Fig. 12). At Early Postclassic Tula, all of the Atlantean column *tezcacuitlapilli* have faces corresponding to the region of the pyrite mirror (Figure 12c). Although it is conceivable that this face is a reflection of an individual bending over or kneeling behind the Atlantean warrior, it is far more likely a deified personification of the mirror. Among the Huichol, who have perhaps the most complex mirror lore known for contemporary Mesoamerica, circular glass mirrors used in divination are referred to as *nealika*, a term meaning “face,” as well as the round mirror (Lumholtz 1900:108; Selser 1902-1923:3:363; Negrín 1975:18-19).

The Mirror as a Flower

Teotihuacan mirrors were also compared to flowers.⁷ Two of the Esperanza phase mirrors excavated at Kaminaljuyu bear representations of flowers. On one example, flowers are painted near the rim of the mirror back (Kidder et al. 1946:Fig. 205b). The other mirror depicts both frontal and profile views of flowers, here surrounding the mirror face (Kidder et al. 1946:Fig. 53e). On one Early Classic Maya vessel, the center of a tasseled back mirror contains two outcurving bands (Figure 13c). This same pair of curving bands frequently extrudes from the corolla of Teotihuacan-style flowers (e.g., Linné 1934:Fig. 25).⁸ The earflare occurring in the center of many Teotihuacan mirrors refers not to a face but to another natural form, a flower (Figure 13a). At times, this central device is notched, much like the funnel-shaped profile representations of flowers in Teotihuacan iconography (Figure 13b).

An *incensario* excavated in the Tetitla compound bears *adorno* butterflies upon mica-encrusted mirror medallions, as if the butterflies were gathering nectar off the mirror face

⁷ Although it may seem a great jump—from faces to flowers—it is not, because in Teotihuacan iconography even the human face may be rendered as a flower. One Escuintla *incensario* depicts a human face with pyrite eyes in the center of a great petaled flower; a butterfly is at the lower edge, as if to suck its nectar (see Hellmuth 1975:Cover). In another scene, the flower replaces a face placed in the center of a headdress (Linné 1934:Fig. 25).

⁸ At the Postclassic site of Tulum, Quintana Roo, petaled disks with two volutes rising out of the center alternate with similar disks containing eyes (see Miller 1982:Pls. 25, 28). It is probable that both petaled disks refer to mirrors, here metaphorically represented as both eyes and flowers.

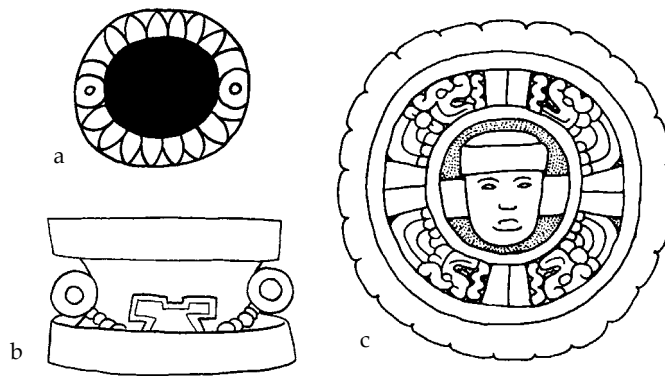


Figure 12. The identification of mirrors with faces: (a) Teotihuacan representation of back mirror with flanking flares resembling earspools (after Miller 1973:Figs. 199-200); (b) Teotihuacan-style *incensario* base with earspools, necklace, and nosepiece, Lake Amatitlan, Guatemala (after Berlo 1984:Pl. 232); (c) Early Postclassic depiction of *tezcauitlapilli* with face corresponding to area of pyrite mirror (from Tozzer 1957).

(Berlo 1984:Pl. 19). Another Tetitla *incensario* depicts butterflies upon similar mirror medallions, although here the inner rim is composed of a four-petaled flower (Berlo 1984:Pl. 23).⁹ It has been noted that there is a great deal of variety in the form of Teotihuacan mirror rims; a great many petaled rims do closely resemble flowers (Figure 13d). At times, the mirror rim appears to be simply rendered as a four-petaled flower, with the pyrite surface corresponding to the center of the flower. Mirrors of this type are found as breast ornaments, on the waist, and in the center of headdresses (Figure 13f–g). However, it is unlikely that all these four-petaled devices appearing on costumes are mirrors; smaller examples could easily refer to actual flowers.

⁹ A large Postclassic obsidian mirror in the American Museum of Natural History, New York, still retains its original gilt wooden rim. Both sides of the rim are carved with a repetitive series of four-lobed elements closely resembling flowers (see Saville 1925:Pl. 51).

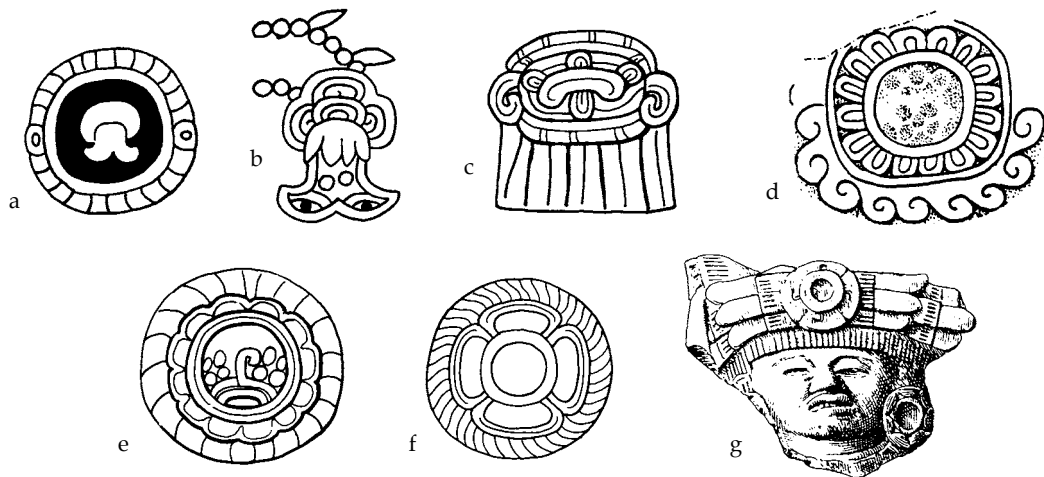


Figure 13. Early Classic representations of mirrors and flowers: (a) Teotihuacan back mirror with central flare resembling flower (after Miller 1973:Fig. 366); (b) profile rendering of flower, Tepantitla (after Miller 1973:Fig. 158); (c) detail of back mirror from Early Classic Maya vessel, note pair of elements curling out from center of mirror face (after Hellmuth 1987a:Fig. 495); (d) mirror with petaled rim, detail of bas-relief from Tepecuacuilco, Guerrero (after Díaz 1987:10); (e) mirror flower with Reptile Eye sign on mirror face (after Hellmuth 1975:Pl. 33); (f) four-petaled mirror flower with feather rim (after Caso 1966:Fig. 19c); (g) rimmed four-petaled flower worn in the headdress of a female figure (from Selser 1902-1923:5:463).

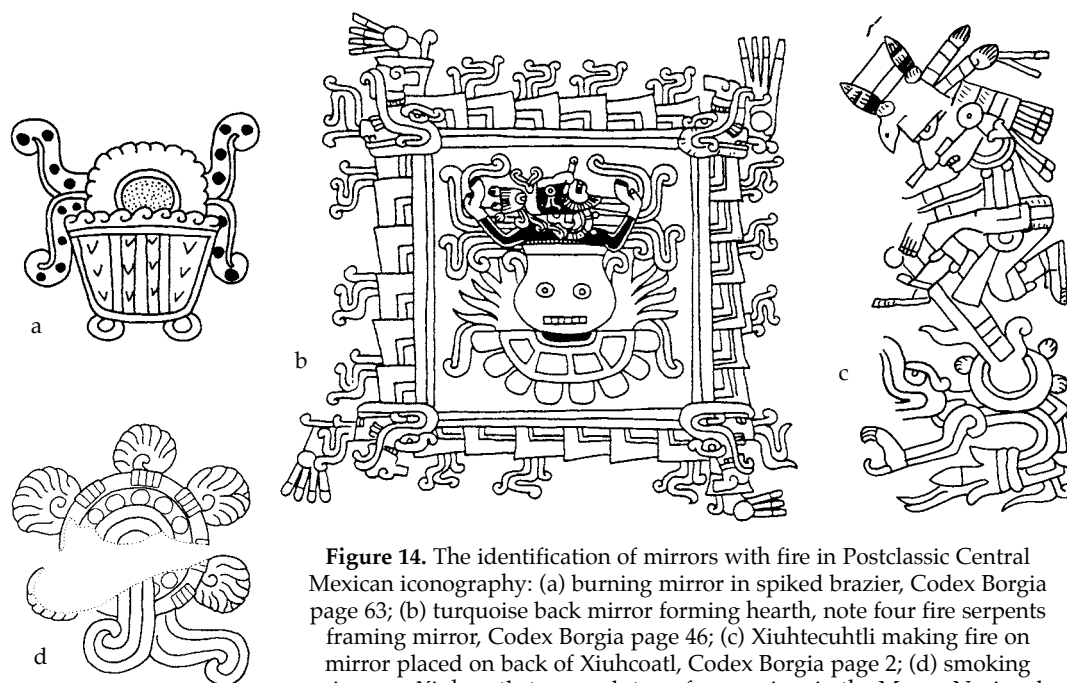


Figure 14. The identification of mirrors with fire in Postclassic Central Mexican iconography: (a) burning mirror in spiked brazier, Codex Borgia page 63; (b) turquoise back mirror forming hearth, note four fire serpents framing mirror, Codex Borgia page 46; (c) Xiuhtecuhtli making fire on mirror placed on back of Xiuhcoatl, Codex Borgia page 2; (d) smoking mirror on Xiuhcoatl stone sculpture, from a piece in the Museo Nacional de Antropología, Mexico City.

The Mirror as Fire

The common presence of butterflies and mirrors upon Teotihuacan *incensarios* is not coincidental; both relate to fire. In the iconography of Postclassic Central Mexico, butterflies are frequently identified with flames. Since the work of Seler (1902-1923:4:722), it has been generally recognized that butterflies were identified with flames at Classic Teotihuacan as well. At Teotihuacan, the bright, shining surface of mirrors was compared to fire.¹⁰ The back of one Teotihuacan-style mirror depicts a goddess covered with fire signs; pairs of burning torches flank her headdress and her body (see Berlo 1992:Fig. 20). Trapezoidal eyes conventionally associated with the rims of Huehuetectl censers can be discerned both on her costume and the large flanking torches.

In ancient Mesoamerica, mirrors widely appear with burning hearths or censers. At the Maya sites of Zaculeu and Nebaj, actual pyrite mirrors were placed in Early Classic ceramic censers (Woodbury and Trik 1953:233; Smith and Kidder 1951:69, Fig. 36, no. 21, Fig. 42, nos. 47, 48). Similarly, burning mirrors are placed within censers on Codex Borgia page 63 and on Vaticanus B page 66 (Figure 14a). In both instances, the mirrors and censers serve as hearths for Chantico, the Postclassic fire goddess. Codex Borgia page 46 depicts another burning mirror, here serving as hearth for a large *olla* (Figure 14b). With its blue segmented and petaled rim, the mirror is clearly derived from the Toltec pyrite *tezcacuitlapilli* (Figures 14c, 19d). Like the four smoking Xiuhcoatl serpents surrounding the Early Postclassic *tezcacuitlapilli* mirror face, the Codex Borgia mirror is framed by four burning Xixiuhcoa. On Codex Borgia page 2, Xiuhtecuhtli creates fire in a mirror placed on the back of a Xiuhcoatl (Figure 14c). This

¹⁰ In a recent study, Coggins (1987) stresses the association of pyrite mirrors with fire in ancient Mesoamerica and suggests that they were an important component of calendrical new fire ceremonies.

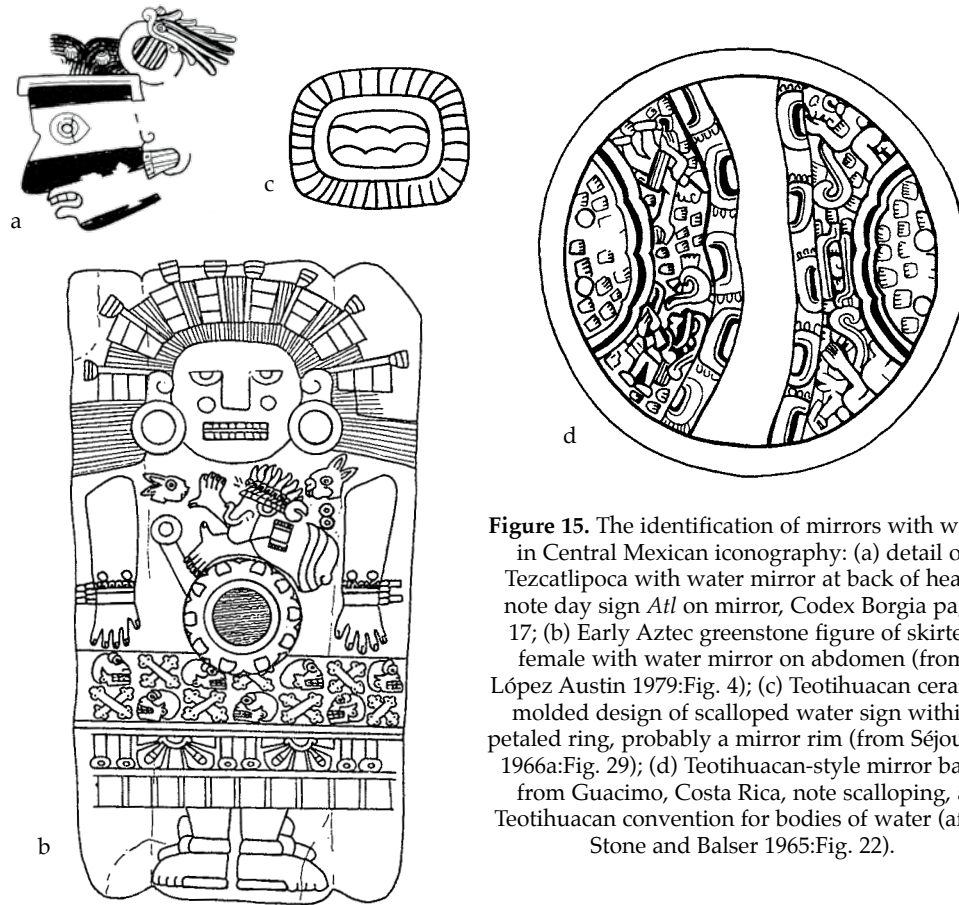


Figure 15. The identification of mirrors with water in Central Mexican iconography: (a) detail of Tezcatlipoca with water mirror at back of head, note day sign *Atl* on mirror, Codex Borgia page 17; (b) Early Aztec greenstone figure of skirted female with water mirror on abdomen (from López Austin 1979:Fig. 4); (c) Teotihuacan ceramic molded design of scalloped water sign within petaled ring, probably a mirror rim (from Séjourné 1966a:Fig. 29); (d) Teotihuacan-style mirror back from Guacimo, Costa Rica, note scalloping, a Teotihuacan convention for bodies of water (after Stone and Balsler 1965:Fig. 22).

serpent recalls an Aztec sculpture representing a *Xiuhcoatl* with burning mirrors on its back (Figure 14d). In the iconography of Late Postclassic Central Mexico, burning mirrors served as an emblem of Tezcatlipoca, whose name means “smoking mirror.” The contemporary Huichol also identify mirrors with fire. According to one Huichol myth recorded by R. M. Zingg (1938:702), fire first appeared as a mirror.

The Mirror as Water

Although the glint of the mirror was identified with fire in ancient Mesoamerica, the reflective surface was often compared to a pool of water. This may be seen on Codex Borgia page 17, where a water-filled mirror replaces the conventional smoking mirror worn at the back of Tezcatlipoca’s head; the day sign *Atl*, or water, is placed upon the mirror sign (Figure 15a). The early Aztec greenstone goddess recently discovered at the Templo Mayor is another example (Figure 15b). Although the large rimmed disk upon her abdomen contains a clear water sign, López Austin (1979:145) identifies it as a mirror.¹¹ An Early Classic Teotihuacan-style mirror excavated at Guacimo, Costa Rica, depicts a series of footprints and four individuals

¹¹ Fray Bernardino Sahagún (1950-1982:Book 2:183) describes an Aztec spring used for penitential bathing. This spring was termed *tezcaapan*, which Cecilio Robelo (1980:551) glosses as “en el agua de espejo o como espejo.”

next to scalloped chevron bands, a Teotihuacan convention for bodies of water (Figure 15d). This same water sign appears on an impressed stamp design from Teotihuacan, here within a petaled feather rim (Figure 15c). Like the cited Postclassic examples, this device seems to represent the mirror as a pool of water.

In Mesoamerica and the American Southwest, the reflective surface of water-filled bowls is frequently used for divinatory scrying. In the Colonial Yucatec *Motul Dictionary*, *nenba* is glossed as “mirarse al espejo, o en agua” (Barrera Vásquez 1980:565). At Teotihuacan and among the Classic Maya, mirrors were actually placed in bowls, as if they were shining pools of water. At the Maya site of Nebaj, mirrors were discovered within ceramic bowls (Smith and Kidder 1951:69). Similar mirror-bowls are found in Late Classic Maya polychrome palace scenes (Figure 16a). In Teotihuacan iconography, mirror-bowls are relatively common, with the mirror placed upright in a bowl rendered in profile. On one of the mirror backs from Kaminaljuyu, this composition appears beneath a frontally facing Teotihuacan goddess (see Figure 1). An Early Classic Escuintla style *incensario* contains an elaborate form of mirror bowl. Here a mirror with flanking ear flares serves as the body of a butterfly rising or perhaps shining out of a water-filled bowl (Figure 16b).

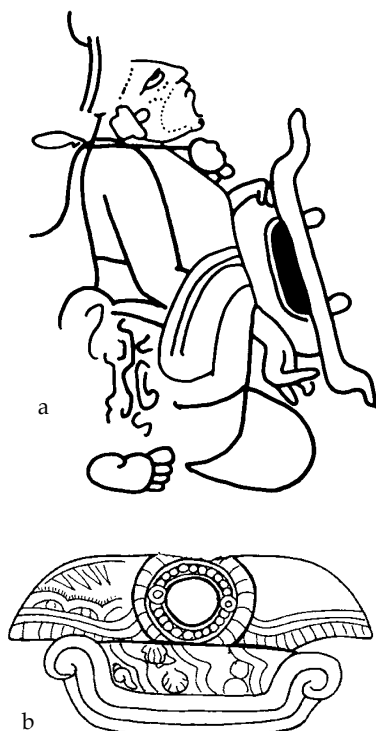


Figure 16. Representations of mirror-bowls in Maya and Teotihuacan art: (a) detail of Maya polychrome depicting individual holding mirror placed in bowl (after Coe 1975a:No. 12); (b) detail of Escuintla *incensario* representing mirror with butterfly wings in water-filled bowl (after Hellmuth 1975:Pl. 32).

The Mirror as a Web

The circular pyrite mirror also appears to have been compared to a woven disk or spider web. The netted disks appearing in Teotihuacan iconography constitute a form of mirror, here depicted with a loosely woven surface.¹² In one scene, a netted mirror with a central reflective eye is flanked by two types of plants (Figure 17a). One form is the waterlily, evidently to denote the disk as a pool of water. The other plant, flanking both sides of the disk, is probably cotton and may refer to the woven nature of the disk. The bolls appear in the form of notched circles in the center of florate forms. The same notched circle—Circle I of James Langley (1986:304)—commonly appears near the butts and tips of Teotihuacan darts, areas entirely appropriate for bolls of cotton.

Along with the netted disks, Teotihuacan mirrors are also identified with realistically depicted spider webs. In part, this may be due to the linear patterns created by the mosaic surface, which bear resemblance to cobwebs. In a number of instances, Teotihuacan representations of spider webs do closely resemble circular mirrors. James Langley (personal communication, 1988) has called my attention to an interesting example appearing on a painted stucco vessel in the Musée de L’Homme, Paris. In the partly effaced

¹² At El Tajin, male figures wear back mirrors having a simple form of the netted disk, here formed by two twisted cords (see Kampen 1972:Figs. 22, 23).

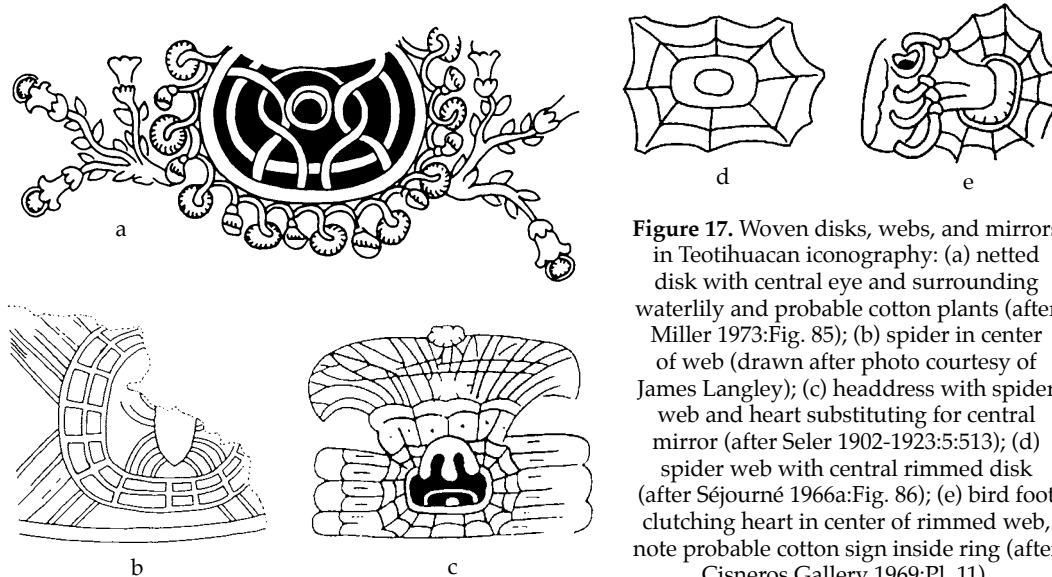


Figure 17. Woven disks, webs, and mirrors in Teotihuacan iconography: (a) netted disk with central eye and surrounding waterlily and probable cotton plants (after Miller 1973:Fig. 85); (b) spider in center of web (drawn after photo courtesy of James Langley); (c) headdress with spider web and heart substituting for central mirror (after Selser 1902-1923:5:513); (d) spider web with central rimmed disk (after Séjourné 1966a:Fig. 86); (e) bird foot clutching heart in center of rimmed web, note probable cotton sign inside ring (after Cisneros Gallery 1969:Pl. 11).

scene, a spider occurs in the center of a web rendered in the form of a segmented rim with diagonal stays (Figure 17b). The web closely resembles a mirror placed on a crossroads, a convention found at Teotihuacan. On one incised Teotihuacan vessel, a realistic spider web substitutes for the mirror in the center of a headdress, the usual location of the pyrite mirror (Figure 17c). The web center contains a heart surrounded by a circular rim. A good many realistic spider webs contain this central rim, which may refer to a mirror (Figure 17d–e).¹³ A fragmentary mural depicts the central rim with interior notching to denote cotton; a taloned foot clutching a heart emerges from the center of the device (Figure 17e).

The identification of mirrors with spider webs continued after Classic Teotihuacan and appears to have been present among the Postclassic Mixtec. Among the contents of Tomb 7 at Monte Alban was a gold mirror back representing a spider (Caso 1965:927, Fig. 57). A mosaic cache, reportedly from a Mixtec area of Puebla, contained a series of turquoise mosaic mirrors (Saville 1922). In the center of several examples, there is a device composed of radiating lines and concentric circles, a form closely resembling a spider web (Saville 1922:Pl. 23). John Pohl (personal communication, 1988) has pointed out to me an interesting series of entries in the sixteenth-century Pedro de Alvarado Dictionary. Whereas the Mixtec term for a bright or clean mirror is glossed as *yuudoo*, or “stone *ndoo*,” the word for spider web is “animal *ndoo*,” *ndoo* being a Mixtec term for clean or brilliant. In modern Huichol lore, mirrors and other *nealika* are identified with spider webs. According to one contemporary Huichol account, the first *nealika*, or “instrument for seeing,” was a spider web woven over a gourd bowl (Negrín 1975). One type of Huichol *nealika*, the “front shield,” closely resembles the centrally rimmed spider web of Teotihuacan iconography. Formed of thread woven upon radiating splints, the front shield contains a central rim, often with a mirror at its center (Zingg 1938:620; Furst 1978:32).

¹³ An unprovenanced silhouette monument, possibly from Kaminaljuyu, depicts an interesting form of the centrally rimmed web, here containing a crouching and possibly aged male (Parsons 1986:Fig. 151).

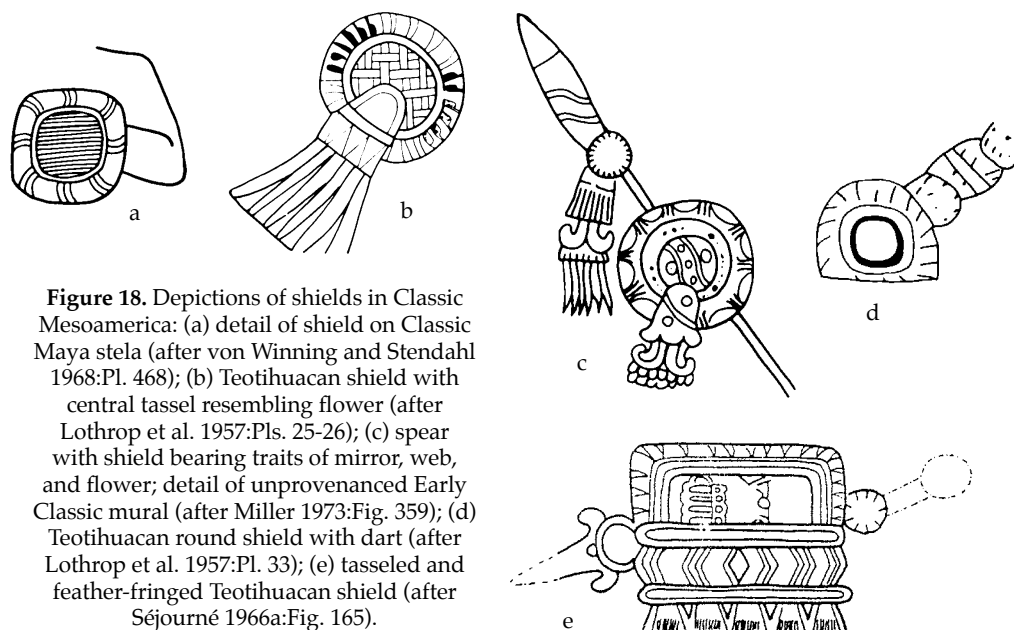


Figure 18. Depictions of shields in Classic Mesoamerica: (a) detail of shield on Classic Maya stela (after von Winning and Stendahl 1968:Pl. 468); (b) Teotihuacan shield with central tassel resembling flower (after Lothrop et al. 1957:Pls. 25-26); (c) spear with shield bearing traits of mirror, web, and flower; detail of unprovenanced Early Classic mural (after Miller 1973:Fig. 359); (d) Teotihuacan round shield with dart (after Lothrop et al. 1957:Pl. 33); (e) tasseled and feather-fringed Teotihuacan shield (after Séjourné 1966a:Fig. 165).

The Mirror as a Woven Shield

The Tetitla compound at Teotihuacan contains a series of murals representing an entity that has been identified as a spider goddess (Taube 1983). She stands within a U-shaped foaming bowl identical to the mirror bowls found in Teotihuacan iconography (see Berlo 1992:Fig. 2). Indeed, her outstretched upper garment suggests a mirror placed edgewise in the bowl (see Taube 1983:Fig. 5). However, her garment also refers to another circular item, a woven war shield with a pendant tassel. The tassel, appearing as the rhomboid forming her skirt, is frequently found on Teotihuacan shields (Figure 18e). At Teotihuacan, mirrors were identified with war shields to such a degree that frequently it is difficult to tell them apart. Like the mirror, Teotihuacan shields are frequently round with a raised rim surrounded by feathers (Figure 18). Circular Teotihuacan-style shields often have central tassels that not only resemble flowers but also the single spool often placed in the center of Teotihuacan mirrors (Figure 18b–c).¹⁴

The back mirrors commonly worn by Teotihuacan warriors do closely resemble tasseled shields. John Carlson and Linda Landis (1985:124) note that in the context of Classic Maya sky bands, mirrors are frequently infixed in the center of shields. In terms of war, mirrors placed on the chest and lower back of Teotihuacan figures could have had a protective function, to guard either against supernatural powers or the blows of actual weapons. However, the inherent qualities of the mirror itself may have also alluded to war. The Postclassic Tezcatlipoca, the god of the smoking mirror, was considered a warrior. Possessing both

¹⁴ The Aztec compared shields to flowers. In the *Cantares Mexicanos*, shields are described as blooming flowers: “Las flores del escudo abren sus corolas, se extiende la gloria, se enlaza en la tierra” (Leon-Portilla 1984:130). Then there is the Nahuatl *chimalxochitl*, or “shield flower,” the term for the giant sunflower (*Helianthus annuus*). With its large, central face and encircling petal rim, the sunflower is strikingly similar to Teotihuacan mirrors, all the more so when one compares the tightly packed, mosaic-like seed corolla to the pyrite mirror surface.

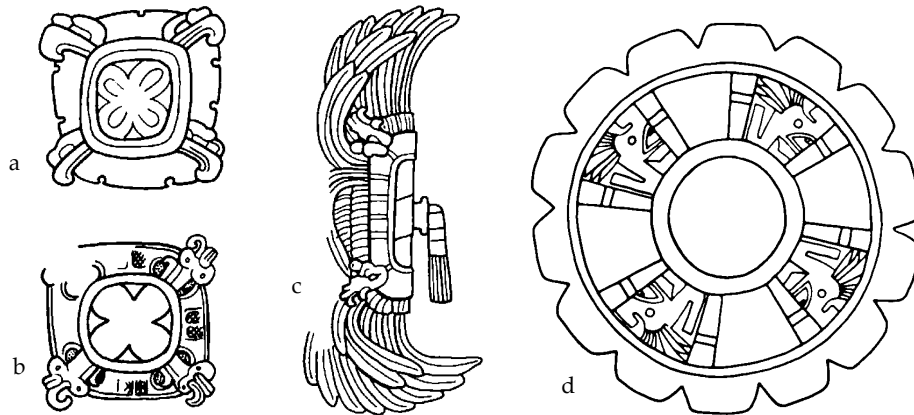


Figure 19. Representations of serpents surrounding solar mirrors in the Maya region: (a) Early Classic Maya solar *kin* sign with four hook-snouted serpents, Tikal Stela 1; (b) Late Classic Maya *kin* sign with four skeletal serpent snouts, Piedras Negras Stela 10; (c) Late Classic Maya back mirror with four skeletal serpent heads at corners, Yaxchilan Stela 11; (d) schematic rendering of actual turquoise and pyrite mirror from the Temple of the Chac Mool, Chichen Itza, note four Xiuhcoatl serpents surrounding mirror face (after Morris et al. 1931:1:Frontispiece).

attributes of fire and water, the Teotihuacan mirrors recall the Aztec concept of *atl-tlachinolli*, or “water-fire,” the Aztec phrase for war.¹⁵

The Mirror as the Sun

Given their association with a broad spectrum of disk-shaped objects found in the natural and cultural worlds, the round mirrors of Teotihuacan could well have expressed larger cosmological concepts, such as the world, the sun, or the moon. There are strong indications that among the inhabitants of Postclassic Central Mexico, the earth was perceived metaphorically as a great round mirror (López Austin 1979:145; Taube 1983:122-127). However, due to our limited understanding of Teotihuacan signs, it is difficult to make an explicit case for a similar concept among the ancient Teotihuacanos. John Carlson (1981:125) has suggested that concave Olmec mirrors represented the sun and, in support, notes that the contemporary Huichol identify mirrors with the sun. A similar belief is found among the modern Sierra Totonac, who refer to the sun as *Espejo Sol*, or “sun mirror” (Ichon 1973:107). Among the Classic Maya, mirrors were also identified with the sun. Solar mirror cartouches surrounded by four serpent heads occur in both Early and Late Classic Maya iconography (Figure 19a–b).¹⁶ On Yaxchilan Stela 11, Bird Jaguar wears such a cartouche as a back mirror (Figure 19c). This back device is clearly related to the Toltec-style turquoise and pyrite *tezcacuitlapilli*, with its four radiating Xiuhcoatl serpents at the rim (see Figures 12c, 19d).

¹⁵ In the description of the *veintena* festival of Pachtonli on Aztec Telleriano-Remensis page 6, there is an illustration of Tezcatlipoca with his smoking mirror foot. It is composed of a circular mirror with a burning serpent and water. The accompanying Spanish gloss describes the mirror as *agua y abrasamiento*, or water and fire, i.e., war.

¹⁶ The solar *kin* sign with the notched mirror rim also appears in the Initial Series introductory glyph for the month variant of Yaxkin (Thompson 1950:Fig. 22, nos. 31-32). The solar *kin* sign is generally considered to be a stylized representation of a flower (Thompson 1950:142). Thus the Classic Maya *kin* sign mirrors combine the concepts of mirror, sun, and flower.

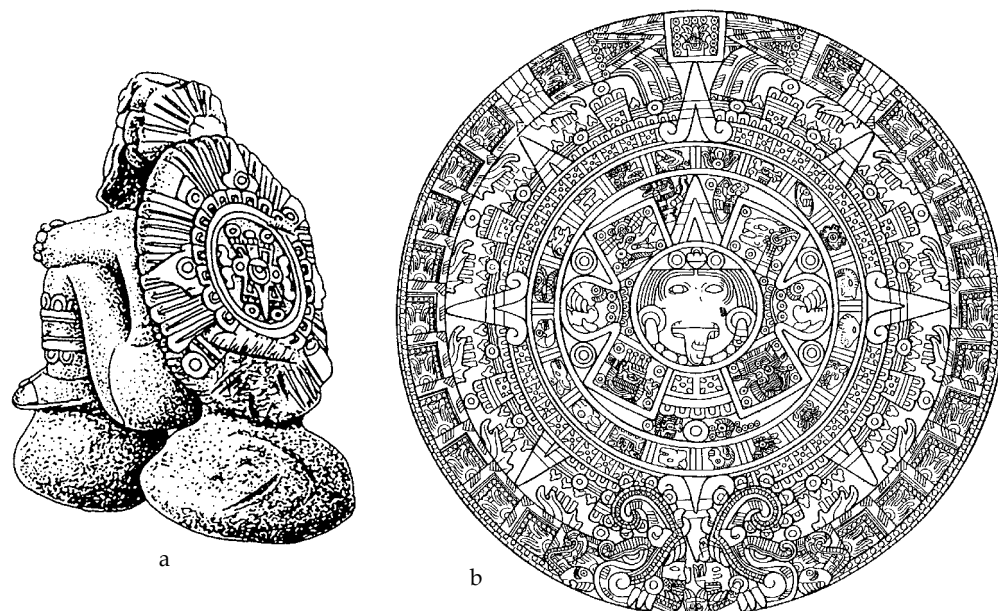


Figure 20. Aztec representation of solar mirrors: (a) figure wearing back mirror containing smoking fifth sun (from Taube 1983:Fig. 36a); (b) Calendar Stone with segmented rim containing day signs and encircling ring of turquoise quincunxes; two burning Xiuhtcoatl serpents lie at edge of disk (drawing by Emily Umberger, reproduced courtesy of Emily Umberger).

The Early Postclassic Toltec turquoise mirrors seem to represent the sun, and this is also true for certain Aztec mirrors of the Late Postclassic. Fray Diego Durán (1964:140) mentions a mirror that was to be fashioned for the Templo Mayor, “the shining mirror that was to represent the sun.” One Aztec sculpture depicts a seated figure wearing a smoking representation of the fifth sun as a mirror upon his back (Figure 20a). Long ago, Herbert Spinden (cited in Saville 1922:75) compared the Aztec Calendar Stone to a great turquoise mosaic disk, noting that the sculpture contains a band of quincunxes, the Aztec sign of turquoise (Figure 20b). Had Spinden been aware of the still undiscovered Early Postclassic turquoise back mirrors, he surely would have noted the shared presence of burning Xiuhtcoatl serpents on both the Calendar Stone and turquoise-encrusted mirrors. The format of the Aztec Calendar Stone appears to be primarily based on the Toltec style turquoise-rimmed pyrite mirror.

The Mirror as a Cave

The Aztec Calendar Stone represents the face of the fifth sun, Nahui Ollin, passing up through the surface of a turquoise-rimmed mirror. In Mesoamerica, mirrors are widely considered to be supernatural caves or passageways. The mirror presents a world to be looked into, but also one that living beings cannot pass. Thus the Huichol believe that mirrors serve as caves for the gods and ancestors to enter into the human world. On *nealika* disks, the Huichol can represent this passageway with a mirror or simply a hole placed in the center of the device (Negrín 1975:19; Furst 1978:32). Similarly, the Aztec Anahuatl chestpiece can be either a white-rimmed mirror or only a white ring (Nicholson and Berger 1968:20). In Classic Maya art, not only faces but entire bodies can be found in the center of mirrors. An example is Caracol Stela 5, where figures emerge out of burning petaled mirrors ornamented with

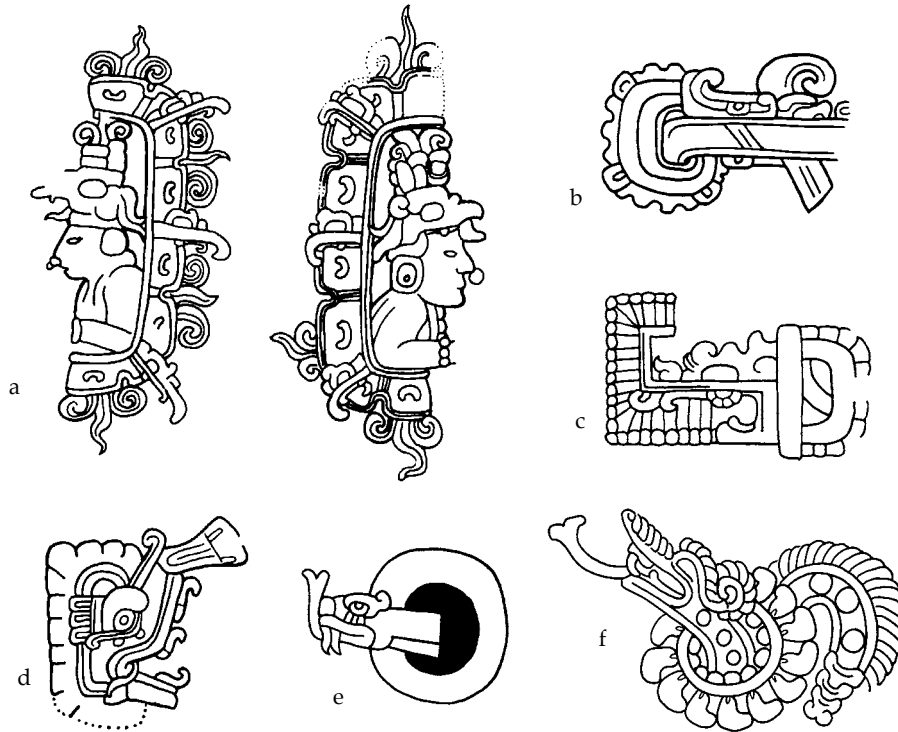


Figure 21. Pre-Hispanic representations of mirrors as passageways: (a) Classic Maya depiction of burning, petaled mirrors containing human figures, note hook-snouted serpents, detail of Caracol Stela 5 (after Beetz and Satterthwaite 1981:Fig. 6); (b) Protoclassic serpent emerging out of notched mirror, detail of Altar 14, Kaminaljuyu; (c) serpent emerging out of mirror with *nen* reflection sign, detail of Sarcophagus Lid, Palenque; (d) serpent head emerging from mirror worn at back of head, Mound 1, Santa Rita (after Gann 1900:Pl. 29); (e) serpent emerging out of surface of blue-rimmed mirror, detail of Codex Cospi page 24; (f) detail of ceramic bowl from Las Colinas, feather serpent passes through mirror rim (from Taube 1986:Fig. 8b).

hook-nosed serpents (Figure 21a).¹⁷ In Maya art, serpents are commonly found emerging through the face of mirrors (Figure 21b–d). Examples appear at Protoclassic Kaminaljuyu, Late Classic Palenque, and in the Postclassic murals of Santa Rita and Tulum.¹⁸ This concept was also present in Central Mexico. On page 24 of the Late Postclassic Codex Cospi, a serpent emerges through the face of a blue-rimmed mirror (Figure 21e).

At Teotihuacan, serpents were also identified with mirror caves. In one Teotihuacan headdress, a pair of plumed serpents flank a shining quatrefoil cave device substituting for the central headdress mirror (Taube 1986:Fig. 9). The Las Colinas Bowl depicts the Teotihuacan feathered serpent passing through a mirror rim (Figure 21f). This motif is repeated on a monumental scale at the Temple of Quetzalcoatl, where two forms of serpents, Quetzalcoatl

¹⁷ At Yaxchilan, figures impersonating the sun and moon sit within mirrors placed near the top of the monument. Tate (1986:63–67) terms the devices “ancestor cartouches,” noting that on Yaxchilan Stela 11, the figures are clearly ancestors of Shield Jaguar.

¹⁸ The examples from Santa Rita and Tulum are mirrors worn at the back of the head. Although this is not a Teotihuacan or Classic Maya convention, it is commonly found in Postclassic Central Mexican codices (e.g., Codex Fejérváry-Mayer page 1, Codex Laud page 13).



Figure 22. Feathered serpent passing through feathered mirror rim, Temple of Quetzalcoatl, Teotihuacan.

and an early form of the Xiuhcoatl appear on a great facade of feathered mirrors. Like the Las Colinas scene, the body of the feathered serpent is depicted passing through the feathered mirror rim (Figure 22). Far from being inert slabs of stone, Teotihuacan mirrors were vital passageways from which gods and ancestors communicated with the world of the living.

Conclusions

In this study, I have argued that pyrite mirrors are extremely common in the costume and iconography of Teotihuacan. The majority of feathered medallions found in Teotihuacan iconography are representations of mirrors. At Teotihuacan, pyrite mirrors were an important component of both ritual and dress. The wearing of circular mirrors on the chest and brow can be easily traced to the Early and Middle Formative Olmec period, although here the devices were usually fashioned of grey iron oxide ores, such as magnetite and hematite, not golden pyrite (Carlson 1981:123, 124; Heizer and Gullberg 1981:112). However, the use of large mirrors on the back seems to have been an Early Classic innovation. This may have been partly due to the increased use of pyrite mosaic, which allowed for larger mirrors to be fashioned. During the Classic period, pyrite back mirrors were widespread in Mesoamerica; they were especially popular at Teotihuacan and serve almost as a hallmark of Teotihuacan costume and influence.

In consideration of the Kaminaljuyu tombs and representations in Classic Maya art, it is clear that pyrite mirror plaques were an important cult object shared between the Teotihuacanos and the Classic Maya. Many of the same forms and attributes found with

mirrors at Teotihuacan were also present among the Classic Maya. Unfortunately, Classic Maya pyrite mirrors have received little recent attention. Although it is beyond the scope of this study, an iconographic analysis of Classic Maya pyrite mirrors could shed much light not only on Maya mirror use but also on that of Classic Teotihuacan.

It has been noted that Teotihuacan mirrors did not simply symbolize one object but were identified with a wide range of things, such as eyes, faces, flowers, butterflies, hearths, pools of water, webs, woven shields, and caves. At first sight, this may appear strange, but it is clear that among later peoples of Mesoamerica, mirrors were also thought of in a variety of ways. Thus, among the modern Huichol, mirrors are considered to be faces, fire, the sun, and caves, and they are linked to a wide variety of other objects having similar circular forms.¹⁹ Thus, like the Asian mandala, the mirrors are imbued with meaning and are causally linked to basic objects and even organizational principles of the world. With their identification with eyes, faces, and passageways, it is fairly clear that Teotihuacan mirrors were used in divination, a means of seeing into the supernatural world. The association of the diurnal flowers and butterflies with mirrors suggests that the golden pyrite disks were closely identified with the sun, an association found with the contemporaneous Classic Maya and later peoples of Mesoamerica. Although the mirrors of Teotihuacan display much that is innovative and unique, they also demonstrate the direct participation of this great center in the broader cultural sphere of Mesoamerica.

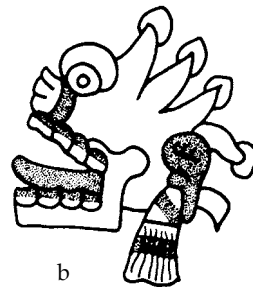
¹⁹ Seler (1902-1923:5:368-369) describes some of the overlapping meanings of the mirror and other circular forms among the Huichol: "Sun-disk, face, eye, mirror, full blown flower, are all cognate ideas. The sun's disk rising above the horizon is to the Huichol Indian, a *nealika* 'face,' and he also calls the round mirror which he buys of the Mexican dealer, a *nealika*. The moon, as Lumholtz heard, is a *sikuli* 'eye,' and this word *sikuli* is equivalent to 'mirror' as the same Indian told the traveller" (English trans. in Seler 1939:3:Pt. 3:11).



Figure 1. The Bilimek Pulque Vessel (from Nicholson and Quiñones Keber 1983:No. 14).



a



b

Figure 2. Comparison of face on front of Bilimek Vessel with Aztec Malinalli sign: (a) face on Bilimek Vessel, note *malinalli* hair (from Seler 1902-1923:2:915); (b) day sign Malinalli, *Codex Magliabechiano* (Boone 1983).

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The Bilimek Pulque Vessel: Starlore, Calendrics, and Cosmology of Late Postclassic Central Mexico

The Bilimek Vessel of the Museum für Völkerkunde in Vienna is a tour de force of Aztec lapidary art (Figure 1). Carved in dark-green phyllite, the vessel is covered with complex iconographic scenes. Eduard Seler (1902, 1902-1923:2:913-952) was the first to interpret its function and iconographic significance, noting that the imagery concerns the beverage pulque, or *octli*, the fermented juice of the maguey. In his pioneering analysis, Seler discussed many of the more esoteric aspects of the cult of pulque in ancient highland Mexico. In this study, I address the significance of pulque in Aztec mythology, cosmology, and calendrics and note that the Bilimek Vessel is a powerful period-ending statement pertaining to star gods of the night sky, cosmic battle, and the completion of the Aztec 52-year cycle.

The Iconography of the Bilimek Vessel

The most prominent element on the Bilimek Vessel is the large head projecting from the side of the vase (Figure 2a). Noting the bone jaw and fringe of *malinalli* grass hair, Seler (1902-1923:2:916) suggested that the head represents the day sign Malinalli, which for the Aztec frequently appears as a skeletal head with *malinalli* hair (Figure 2b). However, because the head is not accompanied by the numeral coefficient required for a complete *tonalpohualli* date, Seler rejected the Malinalli identification. Based on the appearance of the date 8 Flint on the vessel rim, Seler suggested that the face is the day sign Ozomatli, with an inferred *tonalpohualli* reference to the *trecena* 1 Ozomatli (1902-1923:2:922-923). However, it is now generally believed that the head is actually the day sign Malinalli (e.g., Klein 1980:162; Nicholson and Quiñones Keber 1983:62; Pasztory 1983:260; Umberger 1981:120). Moreover, I will suggest later that the Malinalli sign carries a coefficient, in this case the number 1.

In his argument for the tentative date of 1 Ozomatli, Seler (1902-1923:2:923) called attention to a damaged but still reconstructible date of 8 Tecpatl on the vessel rim. According to Seler, this date alludes to 1 Ozomatli, as it is the eighth day of the Ozomatli *trecena*. However, Umberger (1981:121) has argued that the date refers to the disastrous flooding of Tenochtitlan during the year of 8 Tecpatl, corresponding to AD 1500. However, rather than alluding to 1 Ozomatli or the 1500 flood, the 8 Flint date refers directly to maguey. Caso (1959:94) notes that in one of the seventeenth-century Nahuatl chants recorded by Ruiz de Alarcón, maguey is explicitly labeled as *chicuetepacuiatzin*, or “Lady 8 Tecpatl” (Coe and Whittaker 1982:172-174). The personification of maguey was the goddess Mayahuel, patron of the thirteen-day *trecena* 1 Malinalli.

Just above the protruding Malinalli sign, a 4 Ollin solar disk is partly eclipsed by a

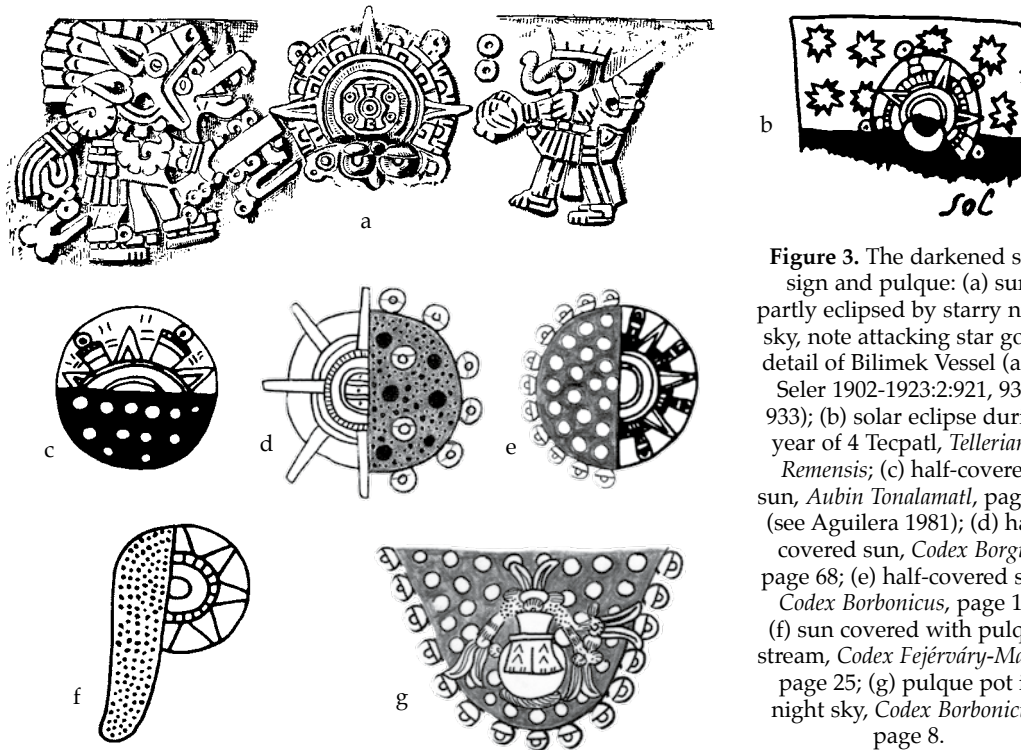


Figure 3. The darkened sun sign and pulque: (a) sun partly eclipsed by starry night sky, note attacking star gods, detail of Bilimek Vessel (after Seler 1902-1923:2:921, 932-933); (b) solar eclipse during year of 4 Tecpatl, *Telleriano-Remensis*; (c) half-covered sun, *Aubin Tonalamatl*, page 11 (see Aguilera 1981); (d) half-covered sun, *Codex Borgia*, page 68; (e) half-covered sun, *Codex Borbonicus*, page 11; (f) sun covered with pulque stream, *Codex Fejérváry-Mayer*, page 25; (g) pulque pot in night sky, *Codex Borbonicus*, page 8.

spotted device at the lower rim (Figure 3a). Seler (1902-1923:2:921) noted that the spotted portion represents the starry night sky, and that in many scenes of pulque gods, there is a similar half-darkened sun (Figure 3c–e). According to Seler, this device may refer to the dawn or perhaps to the drunkenness and loss of control caused by the drinking of pulque. The Bilimek device differs slightly from the other illustrated examples in that the night portion is curved, much like the outline of the moon during a solar eclipse. In the *Telleriano-Remensis* (see Hamy 1899) representation of a solar eclipse during the year of 4 Tecpatl, the lower portion of the sun is similarly obscured by a curving disk, here marked by a lunar crescent against a field of black (Figure 3b). Rather than referring to the dawn, the Bilimek sign probably represents a solar eclipse. On each side of the solar device, there are deity figures menacing the sun with staffs and stones. As shown below, these figures are *tzitzimime*—star demons that threaten to destroy the world during solar eclipses and other periods of darkness.¹

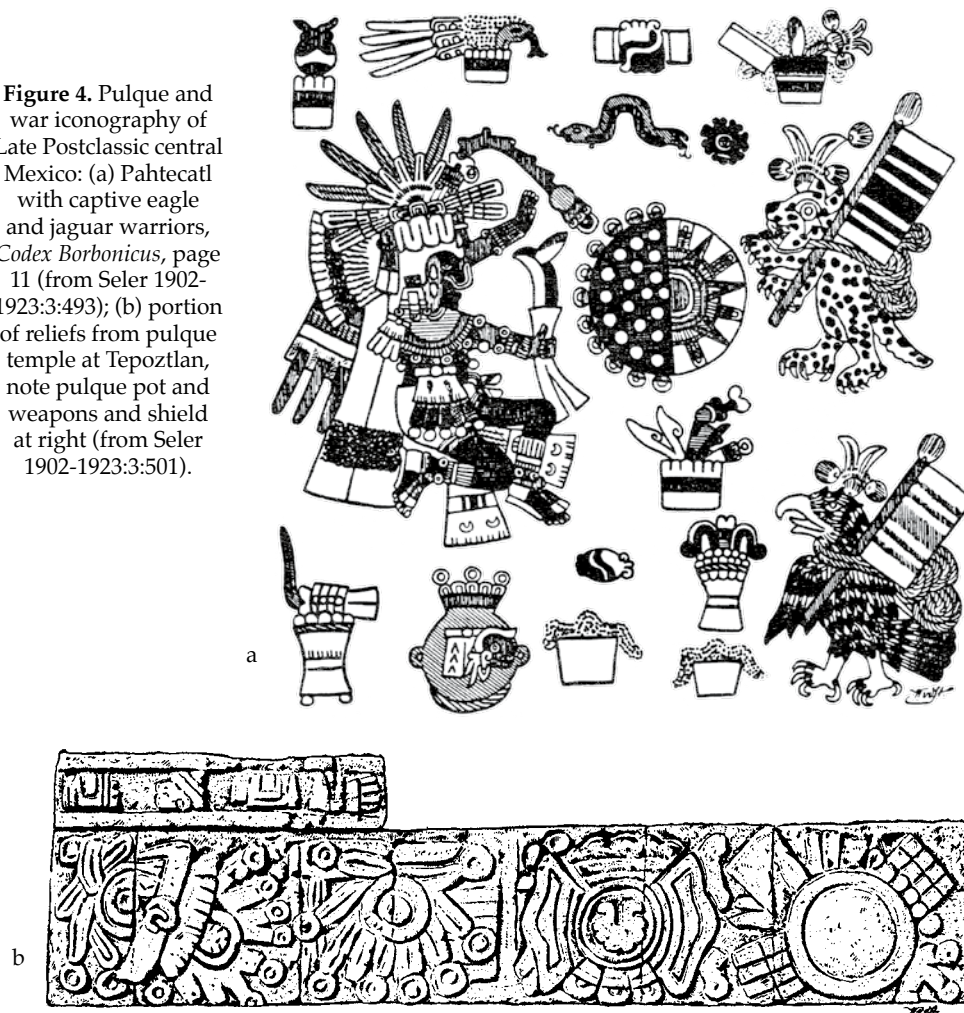
In central Mexican thought, pulque was identified with the moon and the night. For example, lunar crescents commonly appear on pulque vessels and as the *yacametzli* nose pieces worn by pulque gods (Goncalves de Lima 1978; Nicholson 1991:172). According to the *Florentine Codex*, the ceremonial drinking of pulque by old men and women was usually performed at night (Sahagún 1950-1982:Book 4:118). The same manuscript also mentions specific festivals involving the nocturnal drinking of pulque (Sahagún 1950-1982:Book 2:21,

¹ The depiction of *tzitzimime* star demons attacking the sun recalls pages 23 and 24 of the *Maya Codex Paris*. Here a series of figures—widely interpreted as constellations (see Love 1993)—are shown attacking solar eclipse signs. Dicken Everson (personal communication 1991) has pointed out that during total solar eclipses, stars are visible in close proximity to the sun, as if these celestial bodies were menacing the sun.

95, 110, 168, Book 4:47). In the *Codex Borbonicus* (see Nowotny and Durand-Forest 1974) illustration of the *trecena* 1 Malinalli, dedicated to the pulque goddess Mayahuel, the starry night sky surrounds a pulque pot (Figure 3g). One of the most direct identifications of pulque with night appears on page 25 of the *Codex Fejérváry-Mayer* (see Burland 1971) (Figure 3f). Here the night portion of the darkened sun is not represented as a body of stars, but instead, as a curving stream of foaming pulque. The *Fejérváry-Mayer* scene suggests that pulque may have served as a metaphor for the “milky way.” Although this remains to be proven, pulque and the night were linked clearly in central Mexican belief.

To the ancient Aztec, pulque was also identified with defeated and sacrificed warriors. According to Pasztory (1983:260), the pulque gods were the patrons of warriors destined for sacrifice. Just before the gladiatorial *temalacatl* sacrifice, captive warriors were served pulque (Sahagún 1950-1982:Book 2:52). Pulque was widely consumed following the Panquetzaliztli sacrifice of captive warriors (Sahagún 1950-1982:Book 2:148). In pre-Hispanic and colonial illustrations of the *trecena* 1 Ozomatli, captive warriors in the form of the eagle and jaguar military orders commonly stand before the half-darkened sun and the presiding pulque god Pahtecatli (Figure 4a). The bas-reliefs from the pulque temple of Tepoztecatli at Tepoztlan,

Figure 4. Pulque and war iconography of Late Postclassic central Mexico: (a) Pahtecatli with captive eagle and jaguar warriors, *Codex Borbonicus*, page 11 (from Seler 1902-1923:3:493); (b) portion of reliefs from pulque temple at Tepoztlan, note pulque pot and weapons and shield at right (from Seler 1902-1923:3:501).



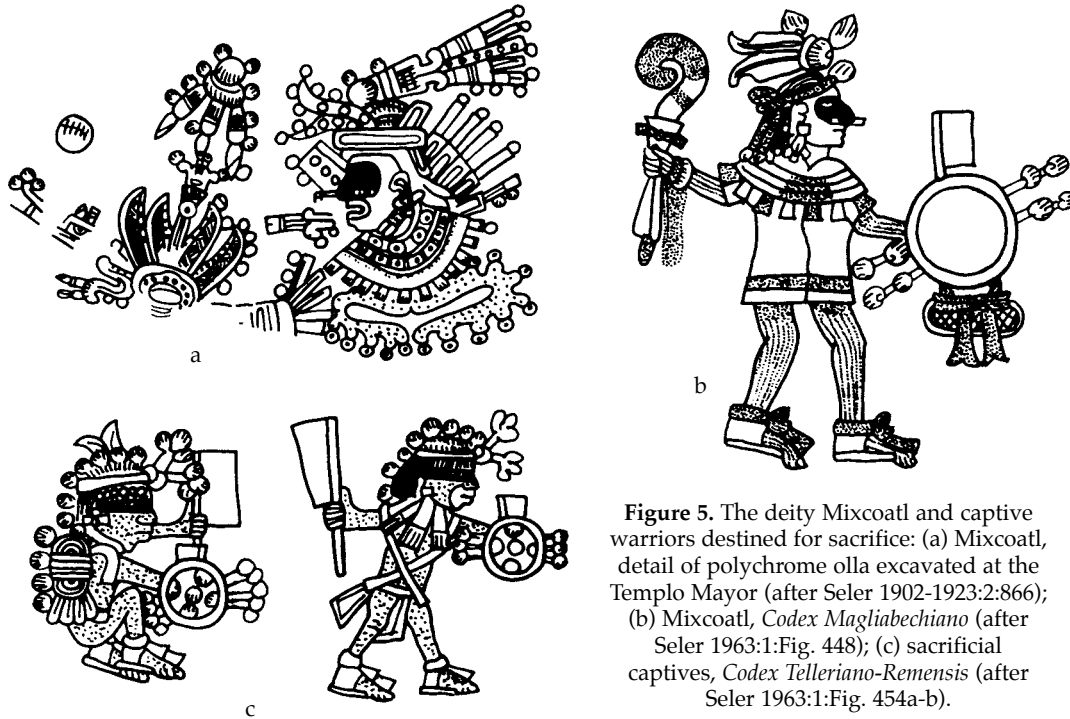


Figure 5. The deity Mixcoatl and captive warriors destined for sacrifice: (a) Mixcoatl, detail of polychrome olla excavated at the Templo Mayor (after Selser 1902-1923:2:866); (b) Mixcoatl, *Codex Magliabechiano* (after Selser 1963:1:Fig. 448); (c) sacrificial captives, *Codex Telleriano-Remensis* (after Selser 1963:1:Fig. 454a-b).

Morelos, display explicit references to pulque, war, sacrifice, and the spirit of the dead warrior (Figure 4b; see Selser 1902-1923:3:487-513).

According to the Aztec, the souls of sacrificed warriors became stars personified by the star god Mixcoatl (Nicholson 1971:426; Selser 1963:1:196). In the *Historia de los mexicanos por sus pinturas*, Mixcoatl-Camaxtli is said to have discovered pulque (Nicholson 1991:160) and, in the same account, this god created the 400 drunken Chichimec that were killed to nourish the sun. Three depictions of Mixcoatl appear on a polychrome olla, possibly for pulque, excavated at the Aztec Templo Mayor (Figure 5a). Mixcoatl, or “cloud serpent” was not simply a star or constellation but seems to have represented the great Milky Way (Beyer 1965a:325; Robelo 1980:279). Rather than being entirely benevolent, Mixcoatl was also identified with the *tzitzimime* star demons who dove headlong to the earth during times of darkness. As Selser (1963:1:193) noted, the *Telleriano-Remensis* and *Codex Vaticanus A* (see Corona Núñez 1964) specify that the *veintena* of Mixcoatl, Quecholli, concerned the *tzitzimime*: “*la caída de los demonios que dicen que eran estrellas.*” In Aztec art, captives destined for sacrifice commonly appear in the guise of Mixcoatl (Figure 5c).

Selser (1963:1:196) suggested that the identification of sacrificed warriors with Mixcoatl corresponds to the mythical episode of the newly born Huitzilopochtli slaying Coyolxauhqui and the Centzon Huitznahua, the “400 southerners” (see Sahagún 1950-1982:Book 3:4). According to Selser (1902-1923:2:967), the killing of the Centzon Huitznahua by Huitzilopochtli describes the conquering of the stars by the dawning sun. In other words, the souls of dead warriors and the Centzon Huitznahua represent the forces of night and darkness, the enemies of the solar Huitzilopochtli.

The Centzon Huitznahua were conceptually related to the pulque gods known as the Centzon Totochtin, or 400 Rabbits. Along with being identified with pulque and

drunkenness, the sign Tochtli, or “rabbit” is the southern year bearer, the obvious direction of the Centzon Huitznahua. The Quichean *Popol Vuh* mentions an episode in which Zipacna slays 400 drunken youths. At their death, these youths were turned into the Pleiades, or Motz in Quiche (Recinos 1950:101). According to Brasseur de Bourbourg (cited in Recinos 1950:101), these 400 drunken youths are identical to the pulque gods, the Centzon Totochtin. This episode also relates to the death of the 400 drunken Chichimec mentioned in the *Historia de los mexicanos por sus pinturas*. Both this account and the *Popol Vuh* suggest that along with being the night stars, the Centzon Huitznahua are also gods of drunkenness, that is, the Centzon Totochtin.

The Huitzilopochtli side of the Templo Mayor contains strong contextual evidence that the Aztec equated the Centzon Totochtin with the Centzon Huitznahua. The Templo Mayor greenstone figure representing a pulque goddess and Ome Tochtli—the generic name of the 400 pulque gods—was discovered in direct association with the famed relief of Coyolxauhqui, the sister and leader of the Centzon Huitznahua (Figure 6; Pasztory 1983:155-157). Accompanying the Stage IVb sculptures of Coyolxauhqui and the greenstone pulque goddess, Offertory Cache 6 contained a seated stone image of a pulque god, complete with the square ear ornaments, *yacametzli* nose piece, and pointed headdress often found with pulque gods (see Nicholson and Quiñones Keber 1983:No. 27). Eight standing male sculptures were discovered leaning against the base of the earlier Stage III Huitzilopochtli temple stairs (Matos Moctezuma 1988:Color Pl. 9, Illos. 112-113). Matos Moctezuma (1988:73) suggests that these figures represent the defeated Centzon Huitznahua. With their pointed headdresses, square ear ornaments and frequent nose pieces, the figures are notably similar to the seated Stage IVb pulque god, and can be also identified as pulque gods. Six of the eight standing pulque gods are standard bearers with the right arm upraised, and very closely resemble Monument 1 from Poza Larga, Veracruz. This monument also represents a standard bearer with the *yacametzli* nose piece, square ear ornaments, and pointed crown (see Solís 1981:Pl. 56). The chest of this figure bears the date Ome Tochtli, the sign of the Centzon Totochtin. Like the later Coyolxauhqui relief, the eight sculptures from the Phase III temple steps represent the defeated enemies of Huitzilopochtli, here as the Centzon Totochtin.

The reverse side of the Bilimek Vessel displays a goddess of fearsome aspect (Figures 7 and 8a). Appearing with jaguar hands and feet, she clutches a pair of personified flint blades in her taloned hands. The sunken eyes, crenelated nose, and exposed teeth denote that she is at least partly skeletalized. The position of her head—inverted but facing frontally—suggests decapitation (Seler 1902-1923:2:946). A pair of Xiuhcoatl fire serpents displaying the attributes of the *atl-tlachinolli* fire sign appear to originate from her loins (Figures 7 and 9a). Snake attributes may also be seen in her skirt, which is fringed with serpent heads.

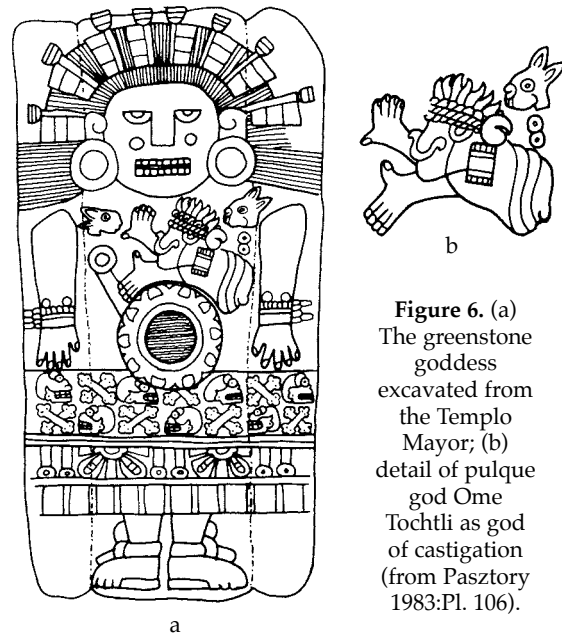


Figure 6. (a) The greenstone goddess excavated from the Templo Mayor; (b) detail of pulque god Ome Tochtli as god of castigation (from Pasztory 1983:Pl. 106).



Figure 7. Bas-relief scene on back of Bilimek Vessel (composite after Seler 1902-1923:2:932-933, 944).



Figure 8. Comparison of pulque goddess with *tzitzimil* and *Ilamatecuhtli-Cihuacoatl*: (a) head of pulque goddess, note skeletal mouth and paper banners (from Seler 1902-1923:2:944); (b) female goddess upon *xiuhmolpilli* year bundle (after Moedano K er 1951:Fig. 1); (c) *tzitzimil*, *Codex Magliabechiano*; (d) *Ilamatecuhtli-Cihuacoatl* during *Tititl* burial of year bundle, *Codex Borbonicus*, page 36.

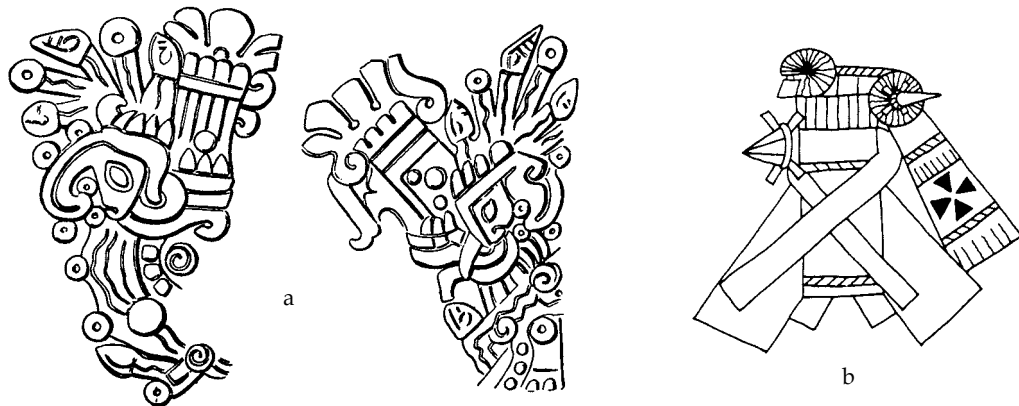


Figure 9. The *xihmolpilli* year bundle: (a) pair of year bundles appearing on Bilimek Vessel (after Seler 1902-1923:2:946); (b) year bundle of completed 52-year cycle displayed during final month of Tititl, *Codex Borbonicus*, page 36.

Because of the serpent skirt, Seler (1902) identified the Bilimek goddess as Coatlicue, or She of the Serpent Skirt. However, although Seler noted the pulque vessel between her outstretched legs (Figure 10), he missed an especially important detail. Nicholson and Quiñones Keber (1983:62) point out that two streams of liquid squirt from the hanging breasts of the goddess into the pulque pot below, illustrating that the viscous white pulque is her milk. In central Mexican thought, pulque is closely identified with the milk of women. According to one Aztec cure for eye worms, either the drops of pulque or women's milk were to be placed in the eyes (Sahagún 1950-1982:Book 10:144). The *Vaticanus A* describes Mayahuel, the goddess of pulque and the *trecena* 1 Malinalli, as having virtually innumerable breasts; *una señora que tenía cuatrocientos tetas* (Corona Núñez 1964:3:74). According to the *Histoire du mechique*, the grandmother and guardian of Mayahuel was the paramount leader of the *tzitzimime*, the star demons who threaten humanity with universal destruction (Garibay 1965:107). The Bilimek figure represents the pulque goddess as a devouring, beastlike *tzitzimitl*.

The Bilimek goddess corresponds to descriptions and depictions of *tzitzimime*. According to the *Códice Zumárraga* (cited in Robelo 1980:709), the *tzitzimime* were sky-dwelling skeletal women, recalling the skeletal face of the Bilimek figure. The *Codex Magliabechiano* (see Boone 1983) provides an excellent depiction of an explicitly labeled *tzitzimitl* (Figure 8c). The figure appears as a taloned skeletal woman with a snake emerging from her loins. Although in this scene only one snake is illustrated, this may not differ from the pair of snakes found with the Bilimek figure. In Nahuatl, the term *coatl* refers to "twin" as well as "snake" (Simeón 1977:115). Among the ancient Mexicans, twins were considered with a horror accorded to a monstrous birth, and it is possible that the serpents allude to this fearsome condition. Supplied with paper banners and curling hair, the head of the Bilimek figure is quite similar to that of the *Magliabechiano* *tzitzimitl*.

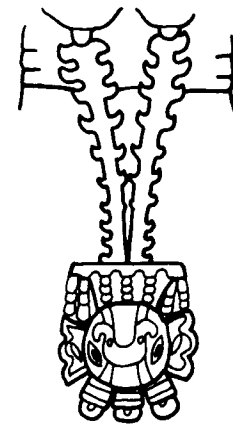


Figure 10. Pulque streams pouring from breasts of Bilimek goddess into pulque pot (after Seler 1902-1923:2:944).

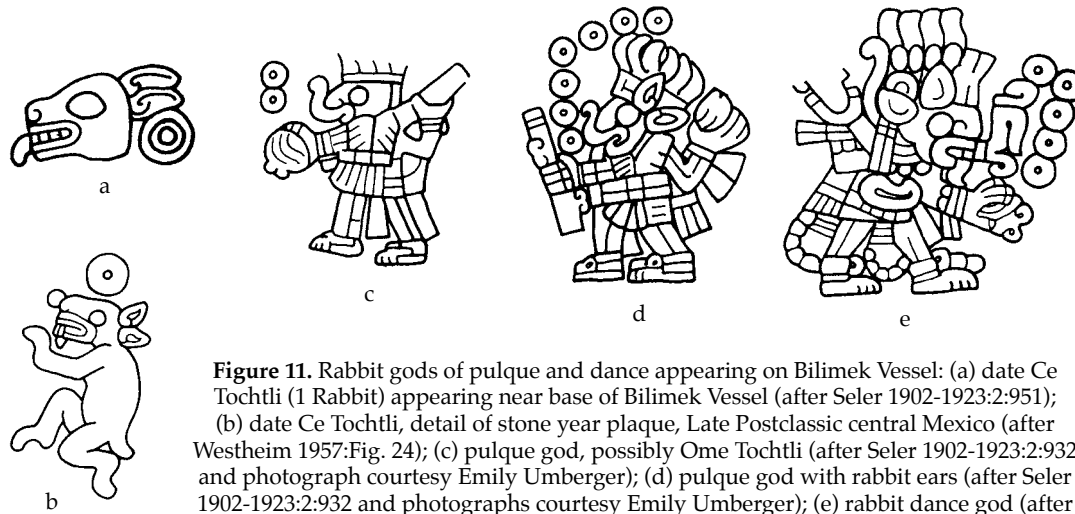


Figure 11. Rabbit gods of pulque and dance appearing on Bilimek Vessel: (a) date Ce Tochtli (1 Rabbit) appearing near base of Bilimek Vessel (after Seler 1902-1923:2:951); (b) date Ce Tochtli, detail of stone year plaque, Late Postclassic central Mexico (after Westheim 1957:Fig. 24); (c) pulque god, possibly Ome Tochtli (after Seler 1902-1923:2:932 and photograph courtesy Emily Umberger); (d) pulque god with rabbit ears (after Seler 1902-1923:2:932 and photographs courtesy Emily Umberger); (e) rabbit dance god (after Seler 1902-1923:2:933 and photographs courtesy Emily Umberger).

One of the best known times for the appearance of the *tzitzimime* was during the vigil marking the end of the 52-year cycle (see Sahagún 1950-1982:Book 7:27). A stone representation of the *xiuhmolpilli* year bundle for the 52-year cycle depicts a *tzitzimitl* as a spider descending from the night sky (Moedano Köer 1951:Fig. 1). Immediately below the spider, there is the head of a skeletalized goddess much like that appearing on the Bilimek Vessel (Figure 8b). Like the Bilimek and *Magliabechiano* figures, the entity displays twisted hair, paper banners, and paper ear pendants. Although Moedano Köer (1951:106) identified this figure as Mictlantecuhtli, Nicholson (cited in Nicholson and Quiñones Keber 1983:45) considers it a *tzitzimitl*. The *xiuhmolpilli* entity is probably a *tzitzimitl* as the aged earth and death goddess known by such epithets as Ilamatecuhtli, Cihuacoatl, and Quilaztli. Caso (1940) noted that Ilamatecuhtli-Cihuacoatl plays an important role in the *Codex Borbonicus* illustration of the burial of the year bundles during the month of Tititl (Figures 8d and 9b). In one Aztec song, Cihuacoatl, or “serpent woman,” is referred to as a female warrior and war goddess (Seler 1902-1923:2:1048-1051). It will be recalled that a pair of *atl-tlachinolli* war serpents emerge from the loins of the Bilimek figure. According to Durán (1971:210), Cihuacoatl is identical to Quilaztli. Along with being a goddess of twin births, Quilaztli was also referred to as a *tzitzimicihuahatl*, or “woman *tzitzimitl*” (Robelo 1980:85, 449). Klein (1980:162) notes that the Bilimek figure closely resembles Ilamatecuhtli-Cihuacoatl. This identification is probably correct, although the figure is also a monstrous, devouring *tzitzimitl*.

Cecelia Klein (personal communication 1991) suggests that the Bilimek pulque goddess is the same entity represented on the aforementioned greenstone sculpture discovered at the Templo Mayor (Figure 6a). Although López Austin (1979) identified the figure as Mayahuel, Klein (1990) notes that she is probably the demonic *tzitzimitl* grandmother of Mayahuel. This female figure probably represents Ilamatecuhtli-Cihuacoatl. Like the Bilimek figure, the greenstone goddess has a fleshless mouth and paper banners in her hair. The band of stars running along the edge of her skirt corresponds to the dress of Ilamatecuhtli-Cihuacoatl who, according to Sahagún (1950-1982:Book 2:155), wore a “starry skirt,” or *citlalli icue*.

A smaller figure appears on the upper abdomen of the greenstone goddess (Figure 6b). López Austin (1979) notes that this represents the well-known pulque god Ome Tochtli, or 2

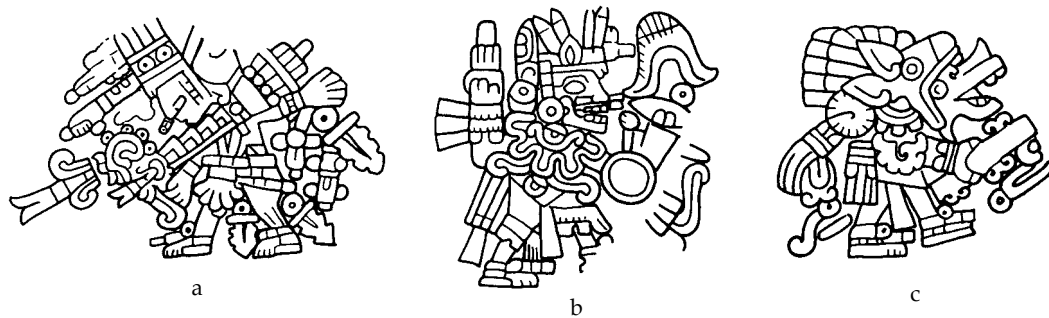


Figure 12. Central Mexican gods appearing on the Bilimek Vessel (after Selser 1902-1923:2:932-933 and photographs courtesy Emily Umberger): (a) Xiuhtecuhtli with burning Xiuhcoatl fire serpent; (b) Tlahuizcalpantecuhtli with smoking star on chest; (c) Ehecatl-Quetzalcoatl wearing probable rabbit headdress.

Rabbit. Thus the figure not only displays the characteristic nose piece and headdress of the pulque gods, but is also accompanied by the name 2 Rabbit. Nonetheless, the figure displays two unusual characteristics, these being the outstretched position of the arms and the form of the lower body, which is rendered as the Mexican sign for “stone.” It will be subsequently noted that both the hand positioning and the reference to stone probably refer to *tzitzimime*, here as diving gods of castigation.

On the upper sides of the Bilimek Vessel, facing out from the central pulque goddess, is a series of eight anthropomorphic beings (Figure 7). It has been mentioned that two of these figures appear to be menacing the eclipsed sun. The other six figures also face the sun; together, they probably represent an army of *tzitzimime* star demons attacking the sun. The majority of these figures are accompanied by lines of circular elements that have generally been interpreted as numerical coefficients. Based on his incorrect interpretation of the projecting Malinalli head as the date 1 Ozomatli, Selser (1902-1923:2:929) interpreted the circles as referring to dates occurring in the *trecena* of 1 Ozomatli. According to Selser, these reconstructed dates serve as the calendrical names of the illustrated gods. However, aside from the fact that the projecting face does not refer to 1 Ozomatli, there is no reason why the requisite day names are not illustrated. I suggest later that rather than being coefficients, these lines of circles probably have an entirely different meaning.

Four of the eight figures hold stones and wooden staffs in their hands (Figures 11c–e, 12c). Selser (1902-1923:2:934) noted that this corresponds to the Nahuatl expression *tetl-cuahuitl*, or “wood and stone,” a reference to castigation. Two of the staff and stone wielders wear the *yacametzli* nose piece, identifying them as pulque gods (Figures 11c–d). Their circular eyes resemble those of the rabbit, or *tochtli*, and one of the figures clearly supports a pair of rabbit ears (Figure 11d). In costume, these figures are very similar to the representation of Ome Tochtli upon the greenstone goddess (Figure 6). However, in this case, the stone sign for castigation is not held in the hand, but forms the body of the god. Considering the vices and dangers that the Aztecs associated with pulque (see Sahagún 1950-1982:Book 6:68-71), it is entirely appropriate that these pulque gods are depicted as gods of punishment.²

² During the drinking that followed the Panquetzaliztli sacrifice of captive warriors, the leaders of the *tepochcalli* drank pulque in secrecy. If they were caught, they were struck with sticks and stones, the same weapons held by the Bilimek figures (Sahagún 1950-1982:Book 2:148).

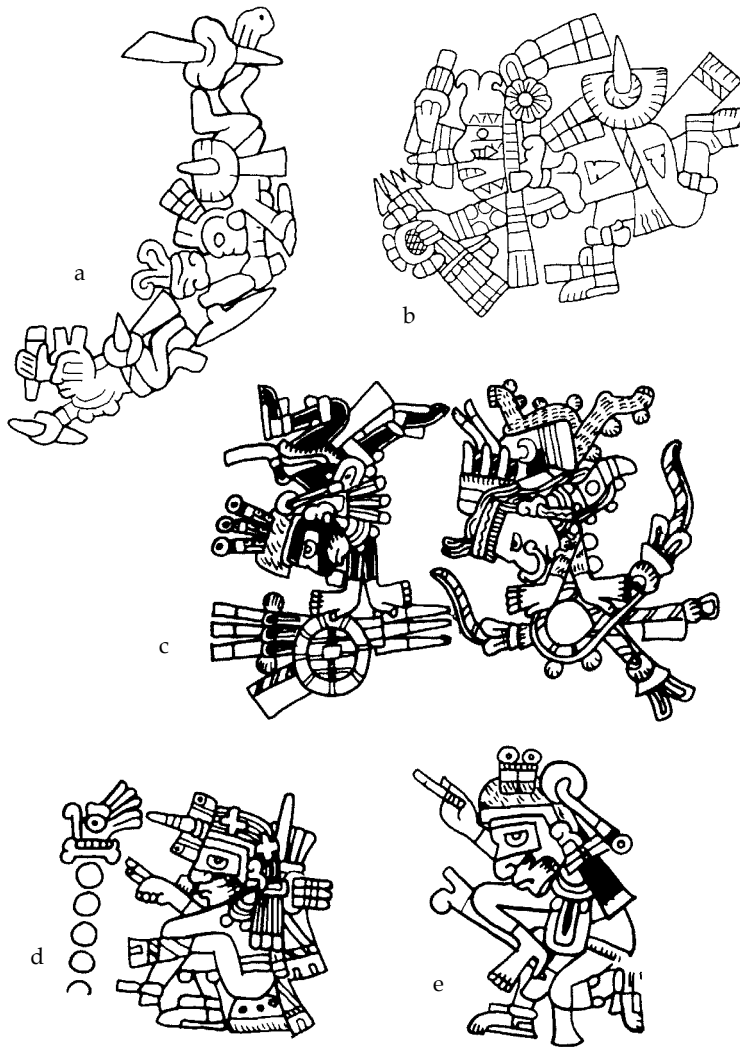


Figure 13. *Tzitzimime* and *ahuiateteo* in Aztec sculpture and the *Codex Borgia* year-bearer pages: (a) pair of *tzitzimime* figures, note horned coiffure and conical paper elements on back, detail of Bilimek Vessel (after Seler 1902-1923:2:932 and photograph courtesy Emily Umberger); (b) *tzitzimiltl* figure, possibly a synthesis of Mixcoatl and Tezcatlipoca; carving on back of greenstone plaque from the Templo Mayor (after Bonifaz Nuño 1981:Pl. 27b); (c) *ahuiateotl* and *chuateotl* couple as diving *tzitzimime* pair, *Codex Borgia*, pages 49–52; (d) *ahuiateotl* named Macuilmalinalli, *Codex Borgia*, page 52; (e) Macuilmalinalli letting blood (detail), *Codex Borgia*, page 53.

Directly below the two pulque gods, a pair of small diving figures wear conical paper elements upon their backs (Figure 13a). Both hold probable weapons in their outstretched hands, and horizontal facial banding can be discerned on the lower figure. According to Seler (1902:342), these figures represent the *tzitzimime* star demons who descend headfirst from the heavens to punish mankind. They are notably similar to an entity appearing on a greenstone pectoral from the Huitzilopochtli side of the Aztec Templo Mayor (Figure 13b). Like the Bilimek pair, the entity has a banded face, wields weapons, wears the conical paper back element, and has his hair pulled into two hornlike projections.³ This pectoral was found in the same cist containing the greenstone sculpture of the skeletal goddess and Ome Tochtli (Figure 6).

The other side of the vessel depicts a figure wearing a headdress similar to that of the

³ The figure holds the netted hunting bag of Mixcoatl-Camaxtli, and it is possible that this *tzitzimiltl* is portrayed as a combination of Mixcoatl and Tezcatlipoca.

pair of pulque gods (Figure 11e). However, in this case he has the cut shell *oyohualli* pendant and the tasseled loincloth found with a dancing figure on page 52 of the *Vaticanus B* (Seler 1902-1903). Accordingly, Seler (1902-1923:2:945) suggests that this entity is a god of dance. Aside from his particular dress, he seems to be bearded and has a smoking element, probably a cigar, projecting from his mouth. This figure is clearly part rabbit, and displays the long ears, round eye, buck teeth, and lolling tongue frequently found with Aztec representations of rabbits (Figure 11a–b).

The final three figures near the upper rim of the vessel are well-known Aztec gods (Figure 12). On the vessel side displaying the pulque gods and descending *tzitzimime*, an entity wields a burning Xiuhcoatl fire serpent (Figure 12a). Because of the Xiuhcoatl and the projecting pair of fire sticks in the headdress, Seler (1902-1923:2:932) correctly identified this as Xiuhtecuhtli, the god of fire. The corresponding figure on the other side of the great pulque goddess is skeletal and wields a shield and spearthrower; a smoking star sign appears prominently displayed on the abdomen (Figure 12b). Seler (1902-1923:2:942) noted that this is Tlahuizcalpantecuhtli, the *atlatl*-wielding god of the morning star. The third and final figure holds the stone and wooden staff associated with the dance and pulque gods (Figure 12c). The entity wears a mammalian headdress, probably a rabbit. Although Seler (1902-1923:2:944-945) noted that the figure displays the prominent cut-conch, “wind-jewel” pectoral of Ehecatl-Quetzalcoatl, he neglected to point out the characteristically billed face of Ehecatl projecting out of the headdress. Based on the Ehecatl face and shell pectoral, this figure can be securely identified as Ehecatl-Quetzalcoatl.

The Bilimek Vessel and the 52-Year Cycle

The night vigil marking the end of a 52-year cycle constituted one of the most dramatic and renowned rites of the ancient Aztec. Occurring during the month of Panquetzalitzli in the year of 2 Acatl, this was the New Fire ceremony known as the “binding of the years,” *toxiuhmolpia*. An important element of the New Fire rites was the making of a faggot bundle, with each stick representing a year in the 52-year cycle (Figure 9b). Two such *xiuhmolpilli* bundles appear on the Bilimek Vessel, emanating from the mouths of the Xiuhcoatl serpent pair (Figure 9a). One bundle is clearly marked with the *xiuhuitl* turquoise quincunx, identifying it as a *xiuhmolpilli* year bundle. The Bilimek bundles are paired with gouts of water, and together, the burning bundles and water refer to *atl-tlachinolli*, or war. However, this use of burning year bundles to allude to the fire aspect of *atl-tlachinolli* is unique. The appearance of year bundles on the Bilimek Vessel concerns more than simply war. It will be seen that this vase contains other references to the completion of the 52-year cycle.

The primary and most frequently cited account of the Aztec New Fire ceremony appears in the *Florentine Codex* (Sahagún 1950-1982:Book 7:25-32). Many of the ritual episodes mentioned in this text are graphically illustrated in the *Codex Borbonicus* (see Caso 1940). However, these two sources by no means exhaust the available information pertaining to the 52-year cycle of ancient Mexico. Important passages also appear in two pre-Hispanic screenfolds, the *Borgia* (pages 49–52) and *Vaticanus B* (pages 17–23) codices. In the *Borgia* passage, the 20 day names are grouped according to the four directions, with particular trees, gods, and temples associated with each direction. Both Seler (1963:2:101) and Thompson (1934) mentioned that the four scenes beginning on *Borgia* page 49 are notably similar to

the well-known New Year pages appearing in the Postclassic Maya *Codex Dresden* (see Thompson 1972). Pages 25–28 portray representations of specific trees, gods, and temples oriented to the glyphs of the four directions. The succession of four yearbearer days beginning the new year is repeated 13 times on each *Dresden* page, thus providing an entire round of 52 years.

In the *Dresden* New Year pages, the day preceding the year bearer is also represented 13 times. Beginning on page 25, the day sign Eb precedes the year bearer Ben, the day Caban before Edznab, Ik before Akbal, and finally, Chicchan before the year bearer Lamat on page 28.

In the cited *Borgia* and *Vaticanus B* passages, the year bearer and preceding day are also carefully delineated. In the upper right corner of *Borgia* page 49, a sky bearer stands atop the Mexican year bearer Acatl, corresponding to the east (Figure 14). The preceding day Malinalli is placed in the night sky directly above. Beginning on page 49, the order runs as follows: Malinalli to Acatl, Ollin to Tecpatl, Ehecatl to Calli, and finally, Mazatl to Tochtl. Precisely the same pattern appears with the sky bearers illustrated on pages 19–22 of the *Vaticanus B*. It is especially noteworthy that these day names correspond entirely to those appearing in the *Dresden* New Year pages. Thus the day sign Malinalli is equivalent to Eb, Acatl to Ben, and so on. In other words, in both the Mexican and *Dresden* manuscripts, Malinalli or Eb is depicted before the first and eastern year bearer.

The day immediately preceding the new year bearer probably had special import as it not only corresponds to the last day of the old year, but also appears in the same cardinal direction.⁴ Thus as the last day of the year bearer Tochtl, Malinalli is also a southern sign. With the appearance of the year bearer Acatl, the annual as well as day direction shifts from the south to the east. The sky bearers illustrated in the *Borgia* and *Vaticanus B* codices may well illustrate this climactic shifting of world directions and associations at the onset of the new year. In view of the placement of the preceding day in the night sky, the *Borgia* and

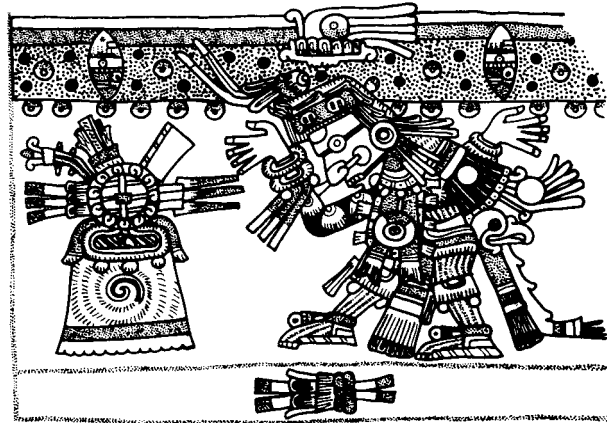


Figure 14. Tlahuizcalpantecuhtli as sky bearer associated with eastern year bearer Acatl; note Malinalli day sign in night sky. *Codex Borgia*, page 49.

⁴ For the Postclassic Yucatec Maya, there is abundant evidence that the year was named after the appearance of the year bearer on the first day of the year, or 1 Pop. However, Caso (1967:59) suggested that for the Aztec, the year was named by the occurrence of the year bearer on the final day of the last 20-day month, in other words, the day immediately before the five-day *nemontemi* (Broda de Casas 1969:35-36). Nicholson (cited in Nicholson and Quiñones Keber 1983:45) noted that the stone *xiuhmolpilli* bundle published by Moedano Köer (1951) provides support for the Caso interpretation. Thus, the date appearing on the bundle, 1 Acatl, corresponds in the Caso system to the final day of the *veintena* Panquetzaliztli for the year 2 Acatl. However, there is no indication that the Aztec system was used in the *Borgia* and *Vaticanus B* codices. In the present discussion of the *Borgia* and *Vaticanus B*, I will follow the Yucatec Maya system of the year being named by the appearance of the year bearer on the first of the year.

Vaticanus B sky-bearer scenes may refer to a night vigil, quite like that recorded for the end of the 52-year cycle. In this regard, it should be noted that both the contact-period Yucatec and contemporary highland Maya mark the appearance of the new year bearer with a night vigil (Barrera Vásquez 1965:72; de la Garza ed. 1983:2:37; Oakes 1951:99; Tedlock 1982:99-100).

In the *Borgia* year-bearer pages, there are other scenes that recall the Aztec New Fire ceremony. At the bottom right of each page, an individual drills new fire, an important component of the Aztec New Fire ceremony. Selser (1963:2:97) compared these scenes to an episode in the *Historia de los mexicanos por sus pinturas*. After the heavens and stars were created, Tezcatlipoca in the guise of Mixcoatl fashioned new fire in the year of 2 Acatl; the text states that this was the origin of the New Fire ceremony (Garibay 1965:33; Nicholson 1971:400). As in the case of the suggested annual night vigil, the appearance of the New Fire rite in the *Borgia* year-bearer pages implies that the making of new fire may not have been limited to only the 52-year ceremony but was a common component of Mexican new-year ceremonies.⁵

In each of the *Borgia* year-bearer pages, a pair of descending figures appear immediately above the fire-making scene (Figure 13c). In their hands, they carry such symbols as the *tetlcuahuitl* castigation sign, the cord of strangulation, weapons, and the *atl-tlachinolli* sign for war. In other words these beings appear as agents of divine castigation. The diving figures are clearly analogous to the *tzitzimil* pair appearing on the Bilimek Vessel. Although making no mention of the Bilimek examples, Selser (1963:2:96) also identified the *Borgia* figures as *tzitzimime*. The hand positions of the *Borgia* examples are identical to the greenstone representation of Ome Tochtli, probably also rendered as a *tzitzimil* (Figure 6).

Selser (1963:2:96-97) noted that the descending male figures in the *Borgia* year-bearer pages are identical to the series of male gods represented on the immediately preceding pages 47 and 48.⁶ Although Selser mentioned that the first four of the five figures on pages 47 and 48 correspond perfectly in color and order to the diving males in the year-bearer pages, he neglected to point out that the attendant divinatory symbols of castigation are also identical. On page 48, the fifth green-painted figure is accompanied by a symbol of corn. Although not represented as a diving god on the four following year-bearer pages, the figure lets blood in front of a great maize plant on page 53, the final portion of the year-bearer passage (Figure 13e). This green individual is also in the bottom left corner of the preceding page 52, corresponding to the final southern year bearer Tochtli. In this case, he is explicitly named Macuilmalinalli, or 5 Grass (Figure 13d). Clearly, the five gods appearing on *Borgia* pages 47 and 48 are inextricably linked to the following year-bearer passage.

Selser (1963:2:63) identified the five figures on *Borgia* pages 47 and 48 as the *ahuiateteo*, gods of excess pleasure and attendant punishment. Each of these five gods is named by the coefficient of five, or *macuil*. Selser (1963:2:76) noted that for the Aztec, the number 5

⁵ Landa (in Tozzer 1941:152-153) mentions that the ancient Yucatec Maya performed an annual New Fire ceremony at the installation of the 365-day year. Song 12 of the colonial Yucatec *Cantares de Dzitbalche* describes the seating of the new 365-day year. The song refers to the extinction of the old fire along with mentioning a night vigil (Barrera Vásquez 1965:71-73).

⁶ Selser (1963:2:96) also noted that the female figures accompanying the diving *ahuiateteo* on *Borgia* pages 49-52 correspond to the five female *cihuateteo* illustrated on pages 47 and 48. However, although the diving females do probably also refer to *cihuateteo*, the correspondences between the two groups of *ahuiateteo* are far more developed. For example, the *cihuateteo* on pages 47 and 48 lack the symbols of castigation wielded by the diving women on pages 49-52.

signified excess, and in support cited the *Florentine Codex* account in which a Huastec king consumed a fifth cup of pulque, causing him to become shamefully drunk (Sahagún 1950-1982:Book 10:193). Beginning with the first on page 47, the *ahuiateteo* are calendrically named as follows: Macuilcuetzpalin (5 Lizard), Macuilcozcacuauhtli (5 Vulture), Macuiltochtli (5 Rabbit), Macuilxochitl (5 Flower), and finally, Macuilmalinalli (5 Grass). Seler (1963:2:63) noted that the second portion of the calendrical names also have something in common: all five of the day names correspond to the direction south. In addition, they also occur in the five southern *trecenas* of 1 Xochitl, 1 Malinalli, 1 Cuetzpalin, 1 Cozcacuauhtli, and 1 Tochtli. Thus, along with being gods of drunkenness, dance, and sexuality, the *ahuiateteo* were also identified with the south. In view of the symbols of castigation in their hands, the Bilimek pair can best be identified as *tzitzimime* demons in the form of punishing *ahuiateteo*.

To the ancient Aztec, the *tzitzimime* were greatly feared star beings that dove to the earth at certain astronomical and calendrical events:

The Tzitzimime were stars, constellations, or planets in the heavens, who were considered under certain circumstances to be baneful. During eclipses of the sun, they were believed to descend headlong to earth to devour human beings; in other words, they were considered to be visible through the darkening of the heavens. (Thompson 1934:231)

It has been noted that the eight *tzitzimime* figures on the upper portion of the Bilimek Vessel are attacking the partially eclipsed sun. To the Aztec, solar eclipses were related thematically to another event, the night vigil marking the end of a 52-year cycle. In the *Vaticanus A* and *Telleriano-Remensis* illustrations of the 2 Acatl New Fire event of 1507, a solar-eclipse sign is prominently displayed. Rather than being limited to only solar eclipses, the *tzitzimime* could also appear during the New Fire vigil. According to Sahagún (1950-1982:Book 7:27), the *tzitzimime* would descend if new fire was not created on the hill of the star:

It was claimed that if fire could not be drawn, then [the sun] would be destroyed forever; all would be ended; there would evermore be night. Nevermore would the sun come forth. Night would prevail forever, and the demons of darkness [*tzitzimime*] would descend, to eat men.

Rather than referring to an eclipse of the sun, the *tzitzimime* appearing on the Bilimek Vessel and *Borgia* scenes concern calendrical-period endings, the completion of the vague year and the 52-year cycle.

Seler (1902-1903:89-90, 1963:2:105) first mentioned that the sky bearers appearing in the *Borgia* and *Vaticanus B* codices probably refer to stars and constellations that descend to earth in the form of *tzitzimime*. In support, Seler cited the *Crónica mexicana* of Tezozomoc, which refers to the Tzitzimimec Ilhuicatzitziquie, the *angeles de aire, sostenadores del cielo*. Seler (1902-1903:85-88) noted that the series of sky bearers appearing in the *Borgia* and *Vaticanus B* are virtually identical. Beginning with the year bearer Acatl, Seler identified the sky bearers as follows: Tlahuizcalpantecuhtli, Huitzilopochtli, Ehecatl, and finally, Miclantecuhtli with the year bearer Tochtli. Thompson (1934) essentially agreed with these identifications, although he noted that the figure appearing with the year bearer Tecpatl bears no clear attributes of Huitzilopochtli. Thompson (1934:217) identified this god as a rare representation of Otontecuhtli. However, this deity is not Otontecuhtli but the god of fire, Xiuhtecuhtli. In fact, Seler (1963:2:107) noted that the being displays the attributes of Xiuhtecuhtli. However,

because of the blue coloring of the *Borgia* example, Seler argued that the figure represented the fire god in the form of Huitzilopochtli. Body coloring alone is not a reliable criterion for deity identification. In the *Borgia*, Xiuhtecuhtli appears with a wide variety of facial patterning and body coloration. For example, in the upper right corner of *Borgia* page 46, Xiuhtecuhtli is also depicted with a blue body.

Although unnoticed by Seler and subsequent researchers, the Bilimek Vessel depicts at least three and probably four of the sky bearers appearing in the *Borgia* and *Vaticanus B* codices. Tlahuizcalpantecuhtli and Xiuhtecuhtli, corresponding to the year bearer Acatl and Tecpatl, flank the head of the pulque goddess (Figures 7, 12a–b). Ehecatl, god of the third and western year bearer Calli, appears in front of Tlahuizcalpantecuhtli, as if to menace the half-darkened sun appearing on the front of the vessel (Figure 12c).

Three of the four codical sky bearers are clearly delineated on the Bilimek Vessel; however, there remains the sky bearer Mictlantecuhtli, corresponding to the fourth and final year bearer Tochtli, the sign of the south. In view of the calendrics upon the Bilimek Vessel, the skeletal death god should have an especially prominent position. The date 1 Tochtli actually appears on the front of the Bilimek Vessel, here marking the abdomen of the Tlaltecuhltli earth monster placed at the vessel base (Figure 11a). According to the *Historia de los mexicanos por sus pinturas*, the earth was fashioned in the year 1 Tochtli, the year immediately before the first New Fire ceremony held in the year of 2 Acatl (Garibay 1965:32-33; Nicholson 1971:400). It will be recalled that the day name Malinalli is displayed prominently at the front of the vessel (Figures 1 and 2). Along with Tochtli, Malinalli is a southern day sign. Moreover, as we have observed in the *Borgia* and *Vaticanus B* sky-bearer scenes, Malinalli is the day immediately prior to the eastern year bearer Acatl.

At first appearance, the Malinalli sign on the Bilimek Vessel is an anomaly in Mesoamerican calendrical notation. To have calendrical meaning, the day sign must be accompanied with a numerical coefficient. It will be recalled that the date of 8 Flint appearing on the vessel rim refers to Mayahuel, the goddess of maguey. I strongly suspect that the great Malinalli sign forms part of the reference to the day 1 Malinalli, the specific *trecena* of Mayahuel. If this is correct, where is the necessary coefficient of 1? There are two possible, mutually exclusive references to a coefficient of 1 above the Malinalli sign. Seler (1902-1923:2:951-952) called attention to a perforated area at the central crest of the Malinalli hair (Figure 1). According to Seler, this cavity may have held an inlay. A disk of shell, metal or other material placed in this circular depression may well have served as the coefficient of 1. Another, albeit less likely, possibility is the solar disk appearing immediately above. As the numeral 1, this disk would correspond well proportionally to the size of the Malinalli day sign. The dual use of the solar sign as a reference to the number 1 would not be entirely unique in Aztec calendrics. Similar visual punning may be observed on the Calendar Stone, in which the four lobes of the central Ollin sign refer simultaneously to the four previous creations. At present, the sunken region or the solar disk cannot be confidently identified as the coefficient of 1. Nonetheless, the day 1 Malinalli would have special significance for the Bilimek Vessel. Not only is 1 Malinalli the *trecena* of Mayahuel, but it is also the day immediately preceding the day naming the year 2 Acatl, the year in which the New Fire rites were performed. Moreover, for the year of 2 Acatl, 1 Malinalli appears as the second to the last day of Tititl, the *veintena* of Ilamatecuhtli-Cihuacoatl.

With the pair of *ahuiateteo* figures and the prominent references to the southern day



Figure 15. Forms of the goddess of death and night, Ilamatecuhtli-Cihuacoatl: (a) Ilamatecuhtli-Cihuacoatl presiding over *veintena* of Tititl, *Codex Magliabechiano*, page 45r; (b) Ilamatecuhtli-Cihuacoatl surrounded by stars, detail of Hackmack Box (from Seler 1902-1923:2:734); (c) scene of darkness and death associated with five southern day signs, note death goddess at right, *Codex Borgia*, page 18.

names Tochtli and Malinalli, the Bilimek Vessel appears to correspond to this direction. The skeletal goddess splayed across the back of the vessel probably refers to the death god as the southern sky bearer (Figure 7). However, rather than representing Mictlantecuhtli, this figure depicts his female counterpart in the form of Ilamatecuhtli-Cihuacoatl. Klein (1980:162) notes that the female consort of Mictlantecuhtli, Micticacihuatl, is “essentially identical to Ilamatecuhtli-Cihuacoatl.” According to Veytia, one aspect of Cihuacoatl was Teoyaominqui, *diosa que recoge las almas de los difuntos* (Robelo 1980:85). This identification with the souls of the dead is also found in the *Codex Magliabechiano*, which describes the Cihuacoatl ceremony held during Tititl as the celebration of the dead (*la fiesta de los finados*).

In the *Magliabechiano* description of the Tititl celebration, Cihuacoatl wears a pair of personified flints in her headdress (Figure 15a). These blades recall the pair of flints held

in the hands of the Bilimek figure. Another depiction of a goddess with flints in her hands appears on *Borgia* page 18, here in a scene of darkness accompanied by the five southern day names (Figure 15c). The figure displays a skeletal mouth and the characteristic headdress of Mictlantecuhtli. According to Selser (1963:1:220), the figure represents the consort of Mictlantecuhtli, who also appears facing her in the same scene. In between the two death gods, there is a pair of diving birds, which Selser identified as *tzitzimime*. Like the *Borgia* scene, the Bilimek Vessel represents the flint-wielding figure as a goddess of death and darkness.

To the ancient Aztec, Ilamatecuhtli-Cihuacoatl was identified with the forces of night. The underside lid of the Hackmack Box displays a star-rimmed medallion containing a skeletal head (Figure 15b). Noting the pair of flint blades in the headdress, Selser (1902-1923:1:742) identified the figure as Ilamatecuhtli-Cihuacoatl. Selser noted that the name of her “starry skirt,” *citlalli icue*, is also an Aztec term for the Milky Way. Thus according to Selser, Ilamatecuhtli-Cihuacoatl may have personified the Milky Way. It is noteworthy that in one Aztec song, Cihuacoatl is described as the mother of Mixcoatl, another god of the Milky Way (Selser 1902-1923:2:1049). The continually darkened temple of Ilamatecuhtli-Cihuacoatl was termed *tlillan*, meaning “darkness” (Durán 1971:211). Sahagún (1950-1982:Book 2:182) mentioned that the Tlillan Calmecac was the residence of the “guardians of Cihuacoatl.” Nicholson (cited in Couch 1985:84-85) argues that the temple prominently displayed in the *Borbonicus* New Fire scene represents Tlillan Calmecac, that is, the temple precinct of Ilamatecuhtli-Cihuacoatl.

Caso (1940) noted that Ilamatecuhtli-Cihuacoatl played a major role in the burial of the year bundles during the 2 Acatl *veintena* month of Tititl. However, because of her association with forces of death and darkness, Ilamatecuhtli-Cihuacoatl may have also been an important and feared figure during the New Fire vigil of Panquetzaliztli. During this rite, great attention was paid to the creation of fire upon Huixachtlan, or Hill of the Star (Sahagún 1950-1982:Book 7:25). This mountain is located due south of Tenochtitlan—that is, residents of the capital would be looking directly toward the southern night sky during the New Fire rites. This southern region not only corresponded to the Centzon Huitznahua, or “400 southerners” but also to Ilamatecuhtli-Cihuacoatl. According to Durán (1971:210), Cihuacoatl was the patron of the southern city of Xochimilco.

On the Bilimek Vessel, the figure corresponding to the southern sky bearer is represented as Ilamatecuhtli-Cihuacoatl, a goddess identified with war, death, the starry night, and the completion of the 52-year cycle. The appearance of this southern figure with the other three sky bearers suggests that a great deal of the imagery appearing on the vessel concerns the starry firmament. This identification with night and darkness is represented by the eclipsed sun appearing on the front of the vessel. However, the sky bearers constitute an even stronger allusion to the night sky. As noted earlier, the Aztec regarded the sky bearers as stars and constellations that threatened to descend in the form of *tzitzimime* demons. In other words, the group of sky-bearer figures probably refers to celestial bodies observable in the night sky. Mention has been made of the series of circles appearing amidst the weapon-wielding *tzitzimime* star demons (Figure 7). Rather than being coefficients, these lines of dots could well refer to constellations (Figures 7, 16b). Thus, in the illustrations of constellations in the *Primeros memoriales* (Paso y Troncoso 1905:65-66), the stars are similarly marked as pairs of concentric circles (Figure 16a). The figures and dots on the Bilimek Vessel could well constitute a form of star chart describing some of the prominent celestial denizens of the night.

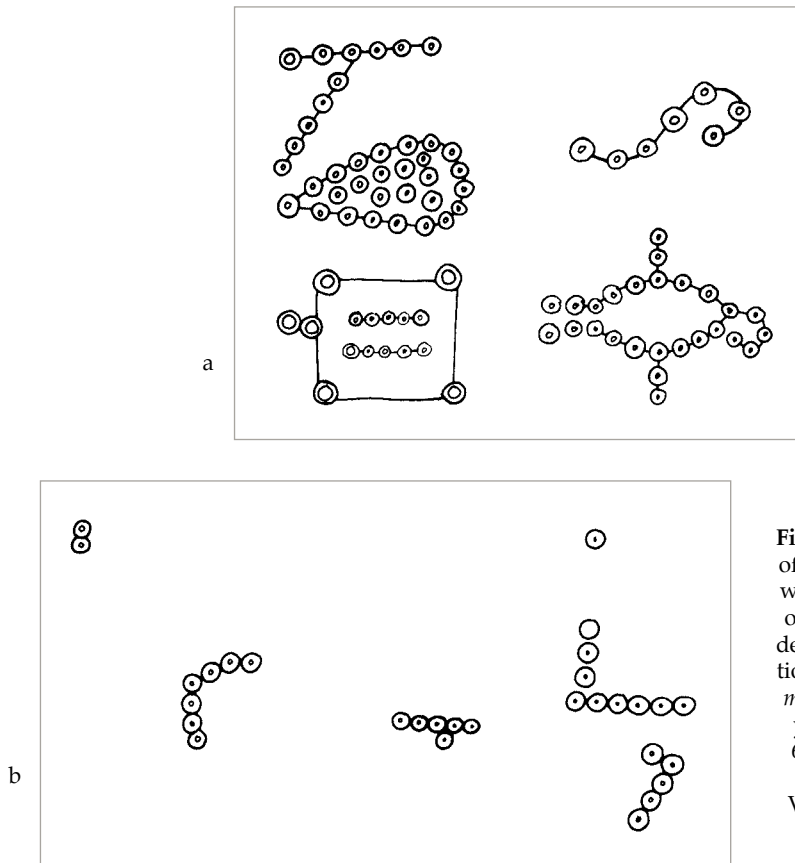


Figure 16. Comparison of Aztec constellations with circular elements on Bilimek Vessel: (a) depictions of constellations from the *Primeros memoriales* (after Paso y Troncoso 1905:65-66); (b) possible star groups on Billmek Vessel (see Figure 7).

Conclusions

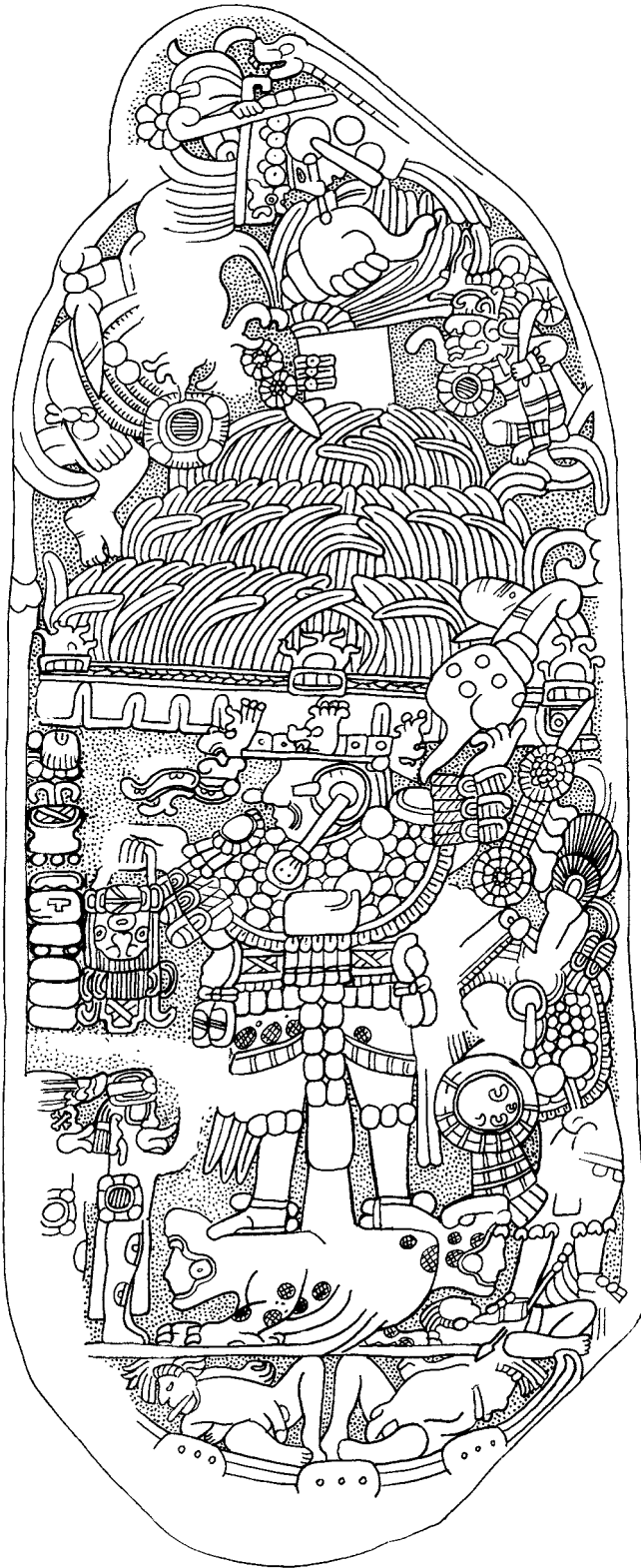
Far more than simply an intoxicating beverage, pulque constituted an integral part of Aztec concepts of warfare and cosmology. In this study, I have argued that pulque was identified with the souls of dead warriors and the starry night sky. The Bilimek Pulque Vessel contains graphic illustrations of some of the prominent *tzitzimime* star beings of central Mexican thought. Considering the *Histoire du mechique* account of Mayahuel and her *tzitzimiltl* grandmother, it is entirely appropriate that this vessel be filled with scenes of star beings. The Bilimek Vessel contains a great deal of iconography pertaining to the completion of the 52-year cycle. Along with representing the dreaded *tzitzimime*, the vessel depicts a pair of year bundles. In addition, many of the Bilimek scenes can be correlated with the year-bearer pages in the *Borgia* and *Vaticanus B* codices. Accordingly, the diving *tzitzimime* pair of *ahuiateteo* appearing on the Bilimek Vessel have clear analogues with all four *Borgia* year-bearer pages. An even more striking parallel is the series of four sky bearers appearing in the *Borgia* and *Vaticanus B* codices. The codical sky bearers Tlahuizcalpantecuhtli, Xiuhtecuhtli, and Ehecatl are clearly depicted on the Bilimek Vessel. Moreover, it has been suggested that the skeletal sky bearer of the south is depicted by the principal goddess splayed across the back of the vessel. Displayed with long streams of white pulque pouring from her breasts, this figure may represent the Milky Way, possibly as the great mother of the *tzitzimime* star demons. A goddess closely identified with death and darkness, Ilamatecutli-Cihuacoatl

played an important role in the ceremonies pertaining to the completion of the 52-year cycle.

The two dates appearing on the front of the Bilimek Vessel probably pertain to the completion of the 52-year cycle. Thus, the year 1 Tochtli constitutes the last year of the 52-year cycle whereas the reconstructed date of 1 Malinalli corresponds not only to the *trecena* of Mayahuel, but also to the day immediately preceding 2 Acatl, the first year of the 52-year cycle. Both Malinalli and Tochtli are southern day signs. In the *Borgia* and *Vaticanus B* year-bearer pages, the southern year bearer Tochtli is the last of the series, like its Maya equivalent Lamat in the *Codex Dresden*. Moreover, in the *Borgia* and *Vaticanus B*, the sky bearer is Mictlantecuhctli, a clear reference to death and completion. In like manner, the Bilimek Vessel depicts the forces of death and castigation appearing in the night sky as *tzitzimime*. This vessel embodies the celestial enemies of Huitzilopochtli, the demons of darkness who threaten to reappear for cosmic battle every 52 years during the New Fire vigil.

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The Iconography of Toltec Period Chichen Itza

The site of Chichen Itza, Yucatan, contains the largest corpus of ancient bas-relief sculptures in the Maya area. Found primarily in architectural contexts on exterior façades, benches, columns, lintels, and interior chambers, the majority of these scenes are quite unlike Classic Maya sculpture of the southern Maya lowlands or even that of the nearby and roughly contemporaneous Puuc region. Since the 19th century work of Désiré Charnay (1887), it has been widely recognized that the iconography of Chichen Itza is notably similar to that of Tula, Hidalgo, situated some 1,100 kilometers to the west (e.g., Seler 1902-1923:1:668-705, 5:197-388; Tozzer 1930, 1957; Jiménez Moreno 1941; Lothrop 1952; Ruz Lhuillier 1962; Andrews IV 1965; Kristan-Graham 1989). For many years, it has been thought that this art followed the Puuc florescence of the northern Maya lowlands. The Puuc style traits at Chichen Itza were considered to be before the advent of Central Mexican art and iconography. Thus the contrasts between the Maya “Old Chichen” and the Toltec “New Chichen” were examined and explained through a chronological construct. A foreign Toltec culture entirely eclipsed earlier Classic Maya art and architecture. Invasion and mass-migration have been frequently cited as explanations for the widespread appearance of Toltec imagery at Chichen Itza (e.g., Morley and Brainerd 1956; Tozzer 1957; Kelley 1983).

In recent years, it has become increasingly evident that the Maya and Toltec styles at Chichen Itza do not simply form two distinct periods but rather, are at least partly contemporaneous. Thus, the occurrence of Maya and Mexican traits cannot be simply explained through chronological succession. The appearance of Toltec iconography is not a manifestation of direct and total domination of a pre-existing Maya population; rather, the manipulation of Mexican versus Maya traits at Chichen is more subtle and complex. In a recent study, Lincoln (1986:153) interprets the appearance of Maya hieroglyphic writing at Chichen in terms of architectural context, and notes that the majority of Maya texts appear in the interior of range structures. In this study, I adopt a similar approach for understanding the eclectic nature of Chichen iconography. However, rather than focusing upon architectural context, I am concerned with symbolic meaning, that is, the thematic context of Chichen iconography. The principal themes to be discussed are cosmology, gods, maize and agriculture, sacrifice and war. By noting the distribution of Maya and Mexican iconography according to themes, it will be possible to determine some of the motivations underlying the conscious manipulation of distinct iconographic systems at Chichen Itza.

Much of the present study focuses upon the primary body of iconography at Chichen, what has been commonly referred to as Toltec style art. The term Toltec here refers specifically to the culture emanating from the site of Tula, Hidalgo. Although I recognize that many

traits found in the Toltec or Modified Florescent art of Chichen Itza are of Maya origin, I also believe that there is a profound and special relationship between Chichen Itza and Tula. To cite the entire range of striking iconographic parallels between Chichen Itza and Tula is not only beyond the scope of the present study, but it would also be quite redundant. A recent discussion of the relationship between Tula and Chichen Itza may be found in the doctoral dissertation by Kristan-Graham (1989).

Chronology

Chronology has played a major role in our interpretation and understanding of Chichen Itza iconography. The issue of contemporaneity has frequently been used to relate Chichen iconography to various cultures of ancient Mesoamerica, including Teotihuacan, Xochicalco, El Tajín, and Cotzumalhuapa as well as the Toltec and the Classic Maya. However, although of primary importance, the chronology of Chichen Itza is poorly understood. Structures bearing Maya style writing and art have been widely viewed as being contemporaneous with the Terminal Classic Puuc florescence, whereas the Toltec style has been considered to be Postclassic and coeval with Tula. Ceramic wares have served as one of the most important means of correlating Chichen Itza with the cultural history of the northern Maya lowlands. In his analysis of Mayapan ceramics, Smith (1971:168-169, 189-192) terms the Puuc ceramic sphere Cehpech, and that of Toltec period Chichen Itza, Sotuta. To Smith, the two ceramic spheres are chronologically distinct. Thus Smith dates the Cehpech complex to AD 800–1000, whereas Sotuta is placed at AD 1000–1200.

However, Ball (1978, 1979) notes that Cehpech and Sotuta are not entirely sequential, but rather, are at least partly contemporaneous. Subsequent investigations at Isla Cerritos directed by Anthony Andrews confirm the chronological overlap between Cehpech and Sotuta wares (A. Andrews et al. 1988:201; Robles Castellanos 1987:104).

There is an increasing consensus that a notable chronological overlap exists between Cehpech and Sotuta ceramics, although the extent of contemporaneity is still unknown.¹ Citing the appearance of Sotuta ceramics in Pure Florescent style Puuc buildings at Chichen Itza, Lincoln (1986:165) argues that Cehpech and Sotuta are contemporaneous, in other words, that there is a total chronological overlap between these two complexes. However,

¹ At present, radiocarbon dates from the northern Maya area have been of comparatively little help in resolving the overlap problem. In part, this is due to the surprisingly limited number of radiocarbon dates from the Puuc region and Chichen Itza. For the Puuc, Pollock (1980:562) cites but four uncalibrated radiocarbon dates from wooden beams in architectural contexts. From Sayil, there is a date of AD 720 ± 60, and from Uxmal three dates were obtained, AD 740 ± 60, AD 885 ± 120, and a date of AD 570 ± 50 from an early structure in the Pyramid of the Magician. In a recent list of radiocarbon dates from the central and northern lowlands, Andrews V (in Andrews and Andrews 1980:Table 4) lists 6 radiocarbon dates from Chichen Itza, with four from the peripheral cave site of Balankanche. Three of the Chichen Itza dates were secured from beams occurring in Puuc style structures. Two dates from the La Iglesia structure are AD 600 ± 70, AD 780 ± 70, and there is a date of AD 610 ± 60 from the Casa Colorada. A date of AD 810 ± 200 was obtained from the east patio of Las Monjas, and may correspond to either the Puuc or Mexican period of occupation (Andrews IV 1965:64; Andrews and Andrews 1980:Table 4). For the period corresponding to the Toltec or Mexican influence, a sample was taken from a wooden lintel at the Castillo. Two runs were made with this sample, providing radiocarbon dates of AD 790 ± 70 and AD 810 ± 100. Andrews V (in Andrews and Andrews 1980:284-285) notes that the radiocarbon samples obtained from wooden beams tend to be slightly earlier than samples from charcoal and other materials. According to Andrews (ibid.) this may be due to post sample growth error.

most researchers view the chronological problem of Cehpech and Sotuta in terms of a partial overlap, with Sotuta beginning during Cehpech and the Puuc florescence but also continuing after the end of Cehpech in the region of Chichen Itza (e.g., Andrews V 1981:336; Andrews and Sabloff 1986; A. Andrews et al. 1988; Robles Castellanos and A. Andrews 1986; Ball 1978, 1979; Chase 1986).

According to Parsons (1969:1:174, Table 7) and Cohodas (1978a, 1978b), the early Toltec period at Chichen Itza is entirely contemporaneous with the Classic Maya, and dates to at least as early as the first half of the seventh century AD. Both authors note the similarity of the reputed Toltec style art at Chichen Itza to the Coztumalhuapa style of Bilbao and El Baul. Although I agree that there are striking similarities between the art of Cotzumalhuapa and Toltec Chichen Itza, I find that a Middle Classic dating of the Cotzumalhuapa style is untenable. Sharer (Morley et al. 1983:177) notes that Cotzumalhuapa is actually a Terminal Classic phenomenon (ca. AD 800–1000). Moreover, although Tohil plumbate—an important component of the Sotuta ceramic sphere—has not been found at Cotzumalhuapan sites, a number of Cotzumalhuapan sculptures bear a striking resemblance to Tohil plumbate effigy forms. Thus it has long been noted that Bilbao Monument 3 is very similar to a common Tohil vessel form representing the head of an aged male (Dieseldorff 1926a:Pl. 28, no. 155, legend). Moreover, a Cotzumalhuapa style colossal skull sculpture from Finca la Chacra is quite like a Tohil effigy vessel bearing the same strangely prognathid lower jaw (see Parsons 1969:2:Pl. 66a-b; Shepard 1948:Fig. 19m).

In view of stylistic considerations, ceramics, and the new series of radiocarbon dates from Isla Cerritos, I believe that the Toltec period at Chichen Itza begins no earlier than the late 9th century AD.² Clearly, there is considerable overlap between the appearance of the Toltec style and the Puuc florescence. Uxmal, Edzna, and Yaxcopoil are among the Puuc sites which exhibit traits known for the Toltec period art of Chichen Itza. However, the Toltec period at Chichen Itza is primarily an Early Postclassic phenomenon dating from AD 900 to 1250. This dating is supported not only by the close ties of Chichen to Early Postclassic Tula, but also by particular materials represented in the iconography. Thus it will be noted that items of metal and turquoise, essentially absent during the Classic period of Mesoamerica, are widespread in the iconography of Toltec period Chichen.

Cosmology and Cosmogony

In the art of Chichen Itza, human figures are commonly framed above and below by horizontal registers containing supernatural entities. These framing registers serve to place a given scene in a cosmological context, that is, in terms of sacred space. One of the most common figures appearing in these framing registers is a Maya entity commonly known under such epithets as Bacab, Pauhtun, or God N in the Schellhas system of deity classification

² Recent excavations at the site of Isla Cerritos have provided important information regarding the chronological relationship of Cehpech and Sotuta wares. Here the two groups occur in stratigraphic association, with Cehpech being earlier. Chapel, the local Cehpech phase, has an uncalibrated radiocarbon date of AD 660 ± 70 (A. Andrews et al. 1988:200). Four radiocarbon dates are available for the following Jotuto phase corresponding to Sotuta. The dates (uncalibrated) are as follows, AD 850 ± 80, AD 980 ± 60, AD 1010 ± 60, and AD 1100 ± 60 (ibid.). However, the authors note that there is substantial chronological overlap between Cehpech and Sotuta wares, with such diagnostic Sotuta wares as Dzitas, Silho, and Sisal wares first appearing in the Chapel Cehpech phase (ibid.:201).

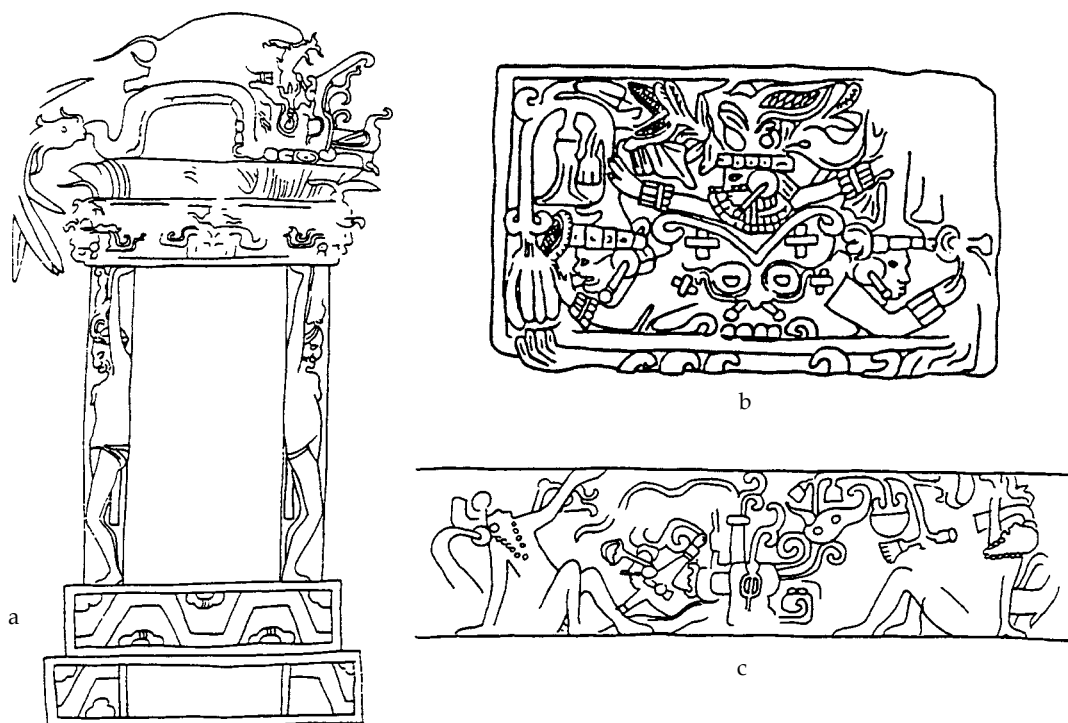


Figure 1. Iconographic parallels between a Late Classic relief and the Temple of the Jaguars, Chichen Itza: (a) detail of Late Classic altar depicting God N columns supporting roof topped by the God of the Number 13, note emerging foliated figures on roof band (after Berjonneau et al. 1985:Pl. 106); (b) capital supported by God N column in the Lower Temple of the Jaguars, note fingers at lower left corner (from Tozzer 1957:Fig. 346); (c) God N figures in water band with God of the Number 13 (after Coggins 1984b:Fig. 19).

(Figures 1, 2, 5, 6). In Classic and Postclassic epigraphy, he is phonetically named *pauhtun* (Coe 1973:15; Taube 1989d:36). Although a contrast is often made between Bacab sky and Pauhtun earth bearers, we are probably viewing only a single entity, a quadripartite supporter of the world—the earth as well as the sky.

In a number of Classic Maya instances, God N explicitly supports the sky (e.g., Robicsek and Hales 1981:Fig. 9b). However, God N is also commonly represented in a watery environment or with stone, as if also identified with the moist and rocky interior of the earth. On one Late Classic monument, God N appears in the form of columns supporting a structure topped by the God of the Number 13 (Figure 1a). Marked by a bound waterlily pad headdress, this serpent being is closely identified with standing water.³ In the murals from the Upper Temple of the Jaguars at Chichen, the God of the Number 13 appears in a blue band with a pair of God N figures and waterlilies, as if this register depicts the underlying sea supporting the terrestrial scene above (Figure 1c). The roof of the aforementioned Late Classic temple depicts foliated figures rising out of cleft heads. This is markedly similar to the Lower Temple of the Jaguars, where God N columns support capitals represented as cleft heads sprouting personified maize and squash (Figure 1b). It is probable that both the Chichen and Peten cleft heads refer to the stone Cauac monster, which Stuart (1987:17-23)

³ An excellent example of this being appears in the modeled stucco cornice of the Late Classic Temple of the Seven Dolls at Dzibilchaltun (Hellmuth 1987b:327; Taube 1986:66-67).

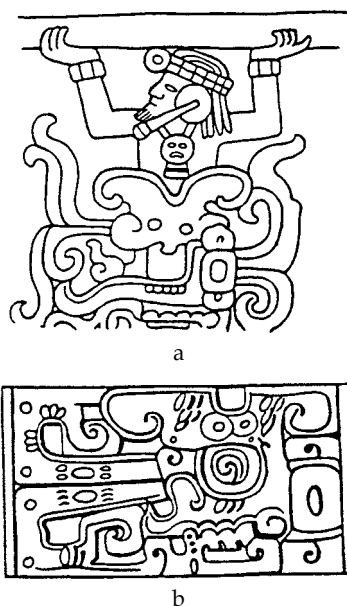


Figure 2. God N as a mountain:
 (a) God N figure emerging from smoking cleft head, composite drawing by author from two sections of cylindrical columns, North Colonnade, Chichen Itza;
 (b) smoking cleft head with Cauac signs, detail of Islas Gouged Incised vessel from Burial 14, Seibal (from Sabloff 1970:Fig. 48).

identifies as a representation of *uitz*, or mountain. A series of cylindrical columns in the North Colonnade at Chichen contain registers depicting God N rising out of four cleft zoomorphic heads (Figure 2a). A markedly similar zoomorphic head appears on a Terminal Classic vessel from Seibal, here marked with explicit Cauac signs (Figure 2b). Quite likely, the Chichen column scene depicts God N as sky-supporting sacred mountains at the four corners of the world.

In the case of the North Colonnade columns, the God N mountains appear both above and below the standing Toltec style figures. Rather than referring to a distinct region, such as the sky, the upper register probably also depicts the supporting earth. The warrior figures upon the bas-relief columns of Pyramid B at Tula are bracketed above and below by Cipactli signs, a reference to the well-known earth caiman (see Acosta 1945:Fig. 11). It is noteworthy that in the known sculptural corpus of Tula there are no depictions of God N world bearers. It is possible that at Chichen, the world bearers serve as toponymic markers to refer specifically to Yucatan and the Maya world.

In the area of the Great Ballcourt at Chichen there is another important spatial motif: a prone, skirted woman with one or two serpents emerging from her abdomen (Figures 3a–b, 4b, 25b). The serpent heads are supplied

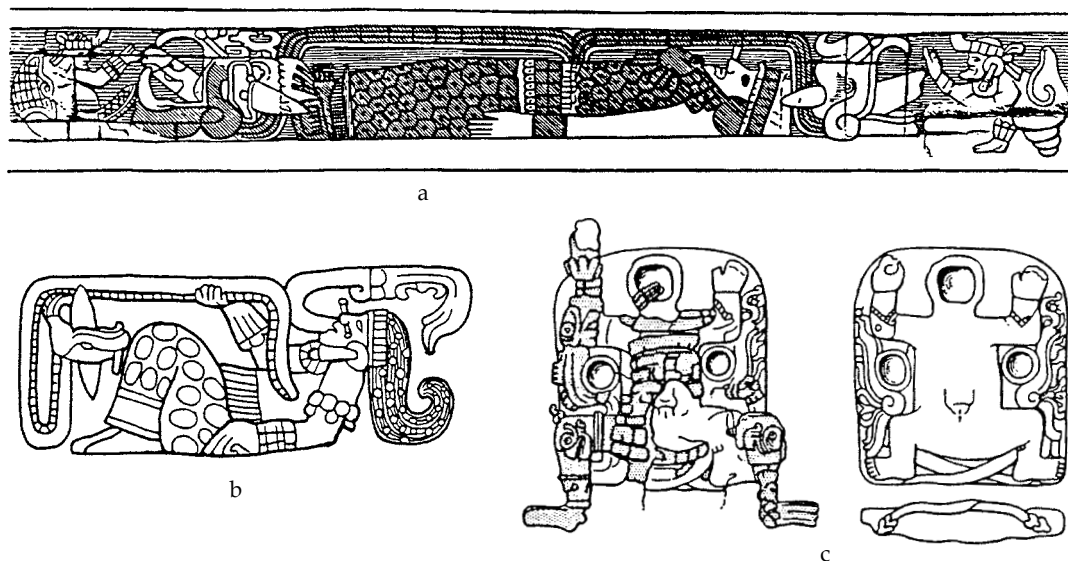


Figure 3. Representations of earth deities from northern Yucatan: (a) prone earth goddess with bladed serpents emerging from abdomen, North Temple of the Great Ballcourt (from Seler 1902-1923:5:321); (b) detail of North Temple column (after rubbing courtesy of Merle Greene Robertson); (c) Tlaltecuhli figure with two serpents, left view with superimposed plaster (from Chowning 1956:Figs. 1b, 1c).

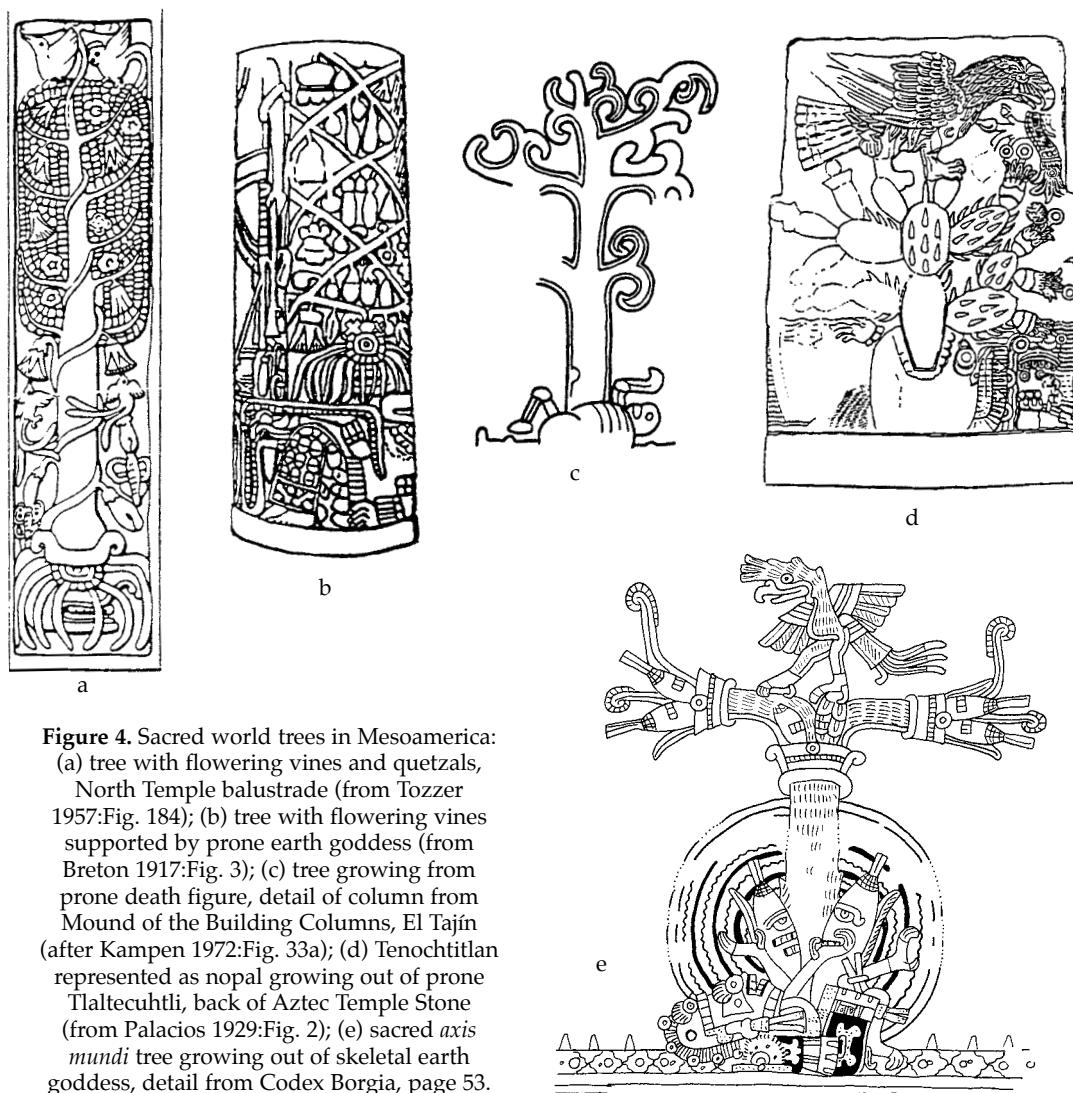


Figure 4. Sacred world trees in Mesoamerica: (a) tree with flowering vines and quetzals, North Temple balustrade (from Tozzer 1957:Fig. 184); (b) tree with flowering vines supported by prone earth goddess (from Breton 1917:Fig. 3); (c) tree growing from prone death figure, detail of column from Mound of the Building Columns, El Tajín (after Kampen 1972:Fig. 33a); (d) Tenochtitlan represented as nopal growing out of prone Tlaltecuhltli, back of Aztec Temple Stone (from Palacios 1929:Fig. 2); (e) sacred *axis mundi* tree growing out of skeletal earth goddess, detail from Codex Borgia, page 53.

with blades, as if the creatures slashed through her abdomen. In the interior of the North Temple of the Great Ballcourt, this female figure is flanked by a pair of God N figures (Figure 3a). Whereas Selser (1902-1923:5:307) identifies the prone woman as a goddess of the night sky, Coggins (1984b:160) considers her the earth; the terrestrial identification is probably correct. The serpents and prone figure recall an episode in the Aztec *Histoire du Mexique*, in which Quetzalcoatl and Tezcatlipoca transform themselves into a pair of serpents to tear apart the earth monster, Tlaltecuhltli (Garibay 1979:108). I suspect that the Chichen motif refers to an early version of this great cosmogonic act. A probable Late Postclassic form of this episode appears at Mayapan. Here a pair of serpents are depicted with an explicit splayed Tlaltecuhltli figure (Figure 3c).

In another Aztec account of creation, the *Historia de los Mexicanos por sus pinturas*, Quetzalcoatl and Tezcatlipoca transform themselves into a pair of trees to raise the heavens (Garibay 1979:32). Pairs of trees are prominently displayed in the North Temple, once on

the balustrades, and in addition, twice on the two columns in the North Temple doorway (Figure 4a–b). In all cases, the trees are wrapped with flowering vines. The column examples are especially noteworthy, as they rise directly above the abdomen of the prone earth goddess (Figure 4b). This is markedly similar to Mexican scenes of world trees growing out of the abdomen of prone figures, frequently Tlaltecuhltli (Figure 4c–e). I suspect that the North Temple refers to two related acts of creation, the dismemberment of the earth goddess, and the raising of the heavens by the cosmic trees.

Gods

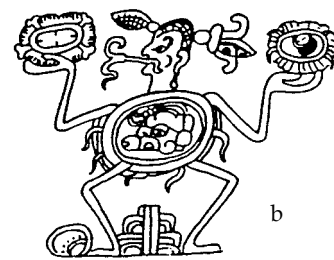
The identification of gods at Chichen is a complicated task. Deity impersonation is a major theme at Chichen, and it is frequently difficult to distinguish between historical figures, political offices and gods. At Chichen, deity impersonation is not limited to ritual and theatrical performances; instead, important historical figures appear to have identified themselves with certain deities as a form of title.⁴ Nonetheless, it is still possible to isolate the iconographic elements of particular gods, whether these appear on mortal impersonators or the deities themselves.

One of the most common and readily identifiable deities at Chichen is the aforementioned God N world bearer. This entity is decidedly Maya in origin, and can be traced back to the beginnings of the Early Classic period. However, the Chichen God N exhibits a number of unusual traits. Thus along with wearing conch and turtle shells—traits common to Classic Maya examples—the Chichen God N also appears with a spider web (Figure 5a). However, although rare, God N is also found wearing a spider web in Classic Maya iconography. An excellent example appears on a Tepeu 1 polychrome vessel, probably dating to the early seventh century AD (Figure 5b).⁵

Two common traits of the Chichen God N are a cut shell chest piece and a pair of elements hanging from the belt (Figures 5a, 6a). Although unknown in the Classic art of the southern Maya lowlands, this God N costume does appear on Yaxcopoil Stela 2 (Figure 6c).⁶ Thompson (1970a:473) interprets the pendant belt devices as bee wings, but this identification is unlikely. Seler (1902-1923:5:284-285) notes that along with the oval shell chest piece, this belt device is an article of dance. Seler (*ibid.*) compares the Chichen



a



b

Figure 5. The spider God N: (a) God N with spider web, Chichen Itza (from Seler 1902-1923:5:301); (b) detail of Tepeu 1 bowl depicting God N holding sun and moon, note spider web on abdomen (after Robicsek 1978:Pl. 138).

⁴ It is also possible that a particular god was considered as the spirit familiar of an individual, much like conceptions of the *way* and *tonal* in colonial and contemporary Mesoamerica. For an important discussion of the *way* concept among the ancient Maya, see Houston and Stuart (1989).

⁵ A sculpture representing the God N spider is currently placed in the façade of the West Structure of the Nunnery Quadrangle at Uxmal (see Kowalski 1999).

⁶ Near the entrance to the Dzibilchaltun museum, there is a fragmentary representation of God N wearing the Chichen costume with the pendant belt device clearly visible.

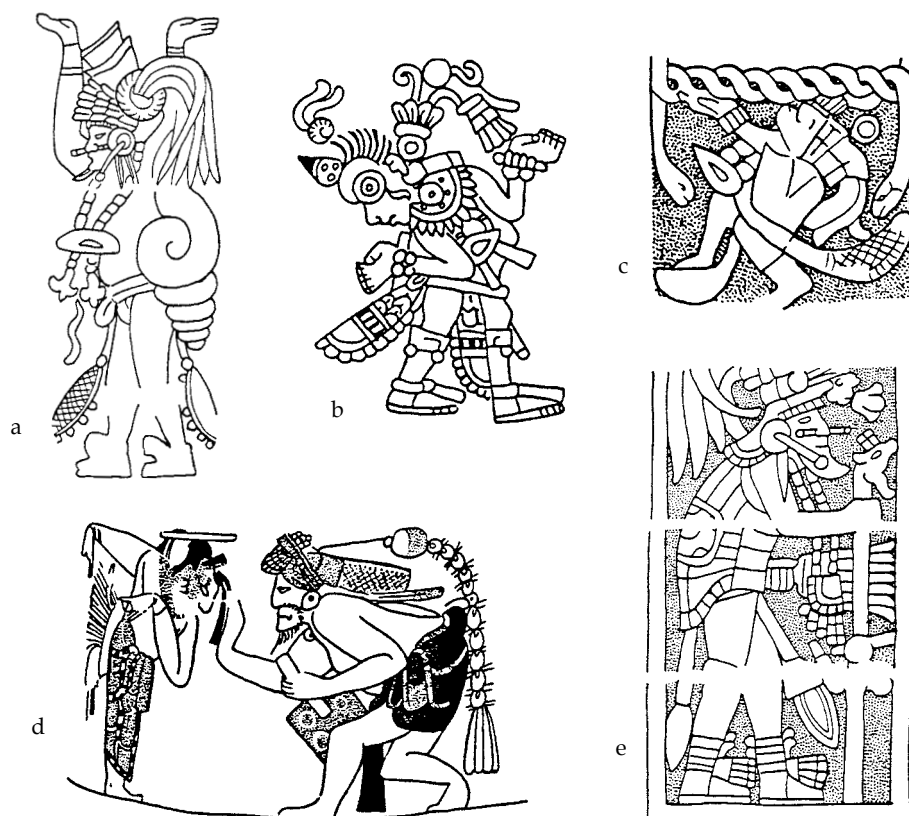


Figure 6. Costume and attributes of God N at Chichen Itza: (a) God N with shell pendant and belt pennants, Chichen Itza (after rubbing courtesy of Merle Greene Robertson); (b) dancer wearing shell pendant and belt element, Vaticanus B, page 52; (c) Terminal Classic God N figure from Yaxcopoil Stela 2 (after Proskouriakoff 1950:Fig. 88f); (d) God N dancing with fan (from Taube 1989c:Fig. 12); (e) God N with staff and fan, drawn by author from structure in vicinity of North Colonnade, Chichen Itza.

Pauhtun costume to a dancer illustrated on page 52 of the Mexican Vaticanus B Codex (Figure 6b). In addition to wearing the shell chest piece and pendant belt elements, this figure also has his arms upraised, much like the Pauhtun world bearer. In both the art of Toltec period Chichen and the Classic Maya, Pauhtun frequently wields a fan (Figure 6d–e). In a recent study of ritual humor in Classic Maya religion, I note that fans were an important accoutrement of performers, such as dancers and buffoons (Taube 1989c). As with the Classic Maya of the southern lowlands, the inhabitants of Chichen considered God N to be a ritual clown as well as a powerful world bearer.

Chac, the Maya god of lightning and rain, is also commonly found in the Toltec period art of Chichen (Figures 7a, 8, 9a, 26b–c, 27a). Quite frequently, he wears a large, broad-brimmed headdress, a specific Chac trait also found at Mulchic, Uxmal, Itzimte, and other Puuc sites (Figures 7, 8a, 9a). Uxmal Stela 14 and Itzimte Stela 12 are especially important examples, since here the figures are explicitly termed Chac in the accompanying texts (Figure 7c–d). The figure upon Uxmal Stela 14 is none other than Lord Chac, as first identified by Kowalski (1985). A sculptured column from Structure 6E1 at Chichen bears another example of an epigraphically named Chac figure wearing the broad headdress (Figures 8a–b, 27a). The first glyph of the second compound represents a waterlily flower and serves as a variant

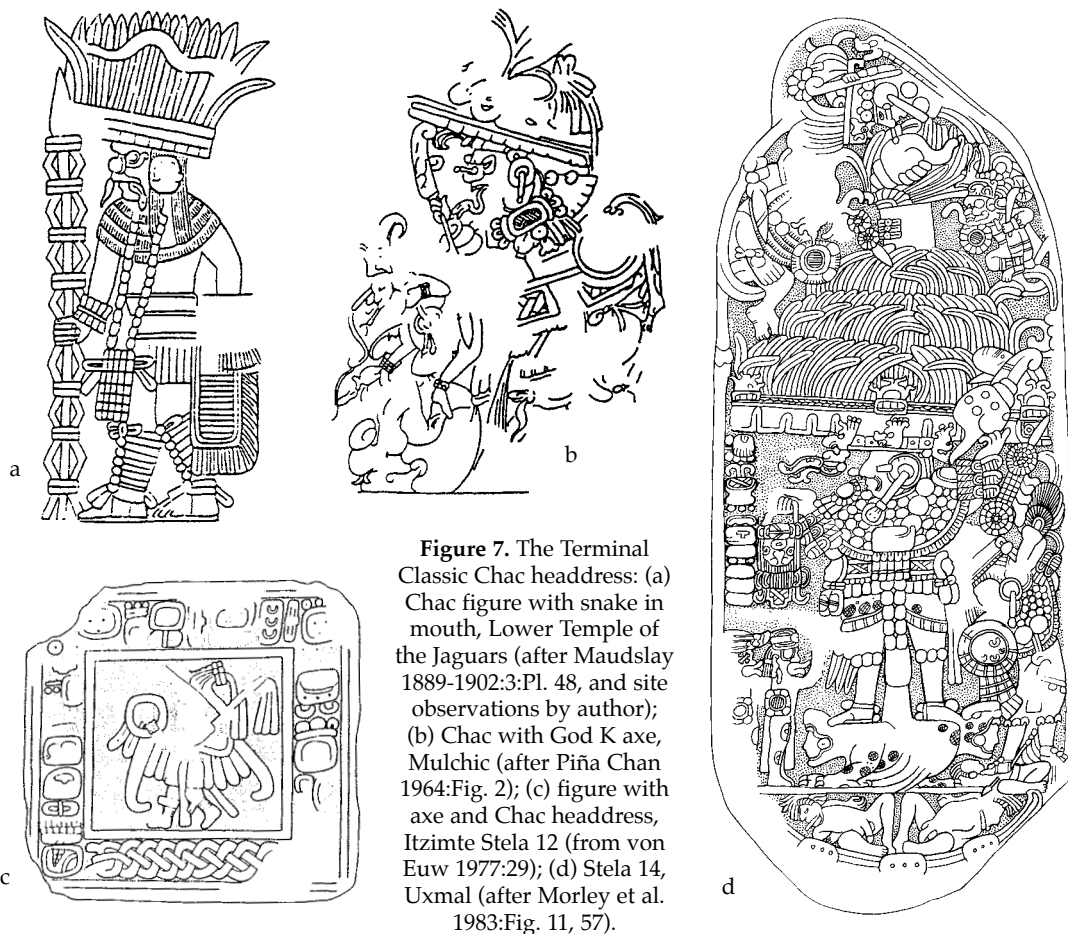


Figure 7. The Terminal Classic Chac headdress: (a) Chac figure with snake in mouth, Lower Temple of the Jaguars (after Maudslay 1889-1902:3:Pl. 48, and site observations by author); (b) Chac with God K axe, Mulchic (after Piña Chan 1964:Fig. 2); (c) figure with axe and Chac headdress, Itzimte Stela 12 (from von Euw 1977:29); (d) Stela 14, Uxmal (after Morley et al. 1983:Fig. 11, 57).

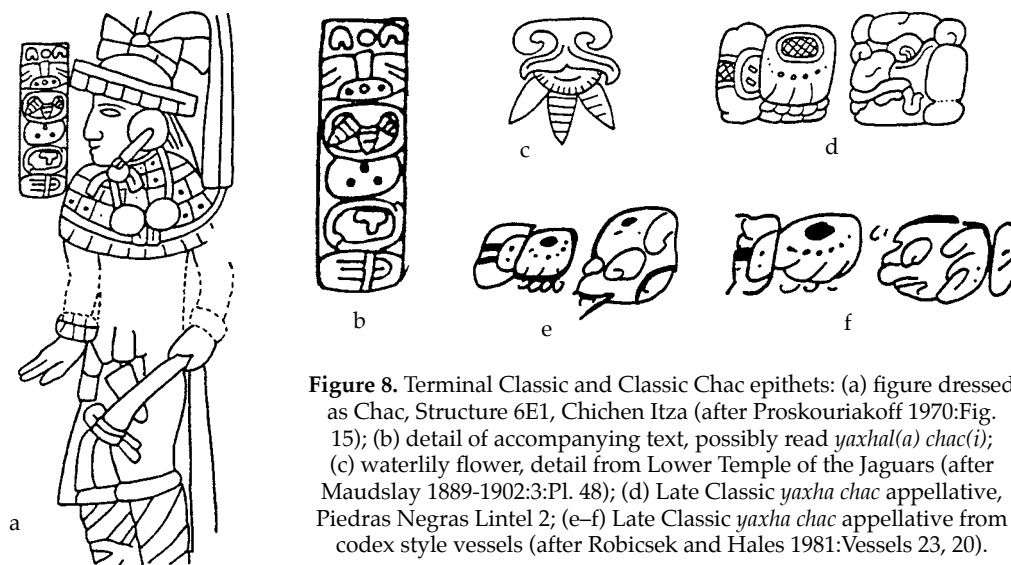


Figure 8. Terminal Classic and Classic Chac epithets: (a) figure dressed as Chac, Structure 6E1, Chichen Itza (after Proskouriakoff 1970:Fig. 15); (b) detail of accompanying text, possibly read *yaxhal(a) chac(i)*; (c) waterlily flower, detail from Lower Temple of the Jaguars (after Maudslay 1889-1902:3:Pl. 48); (d) Late Classic *yaxha chac* appellative, Piedras Negras Lintel 2; (e-f) Late Classic *yaxha chac* appellative from codex style vessels (after Robicsek and Hales 1981:Vessels 23, 20).

of the T500 Imix sign (Figure 8c). Recent epigraphic work has demonstrated that the Imix sign can have the phonetic value *ha* (Stephen Houston, personal communication 1986). It thus appears that the entire phrase can be read as *Yaxhal chac*. This is virtually identical to *yaxha chac*, a common Classic Chac epithet (Figure 8d–f).

At Toltec Chichen and the Puuc sites, Chac is frequently accompanied with lightning symbols, the most important being burning serpents and axes. In ancient and contemporary Mesoamerica, serpents are a pervasive and widespread symbol of

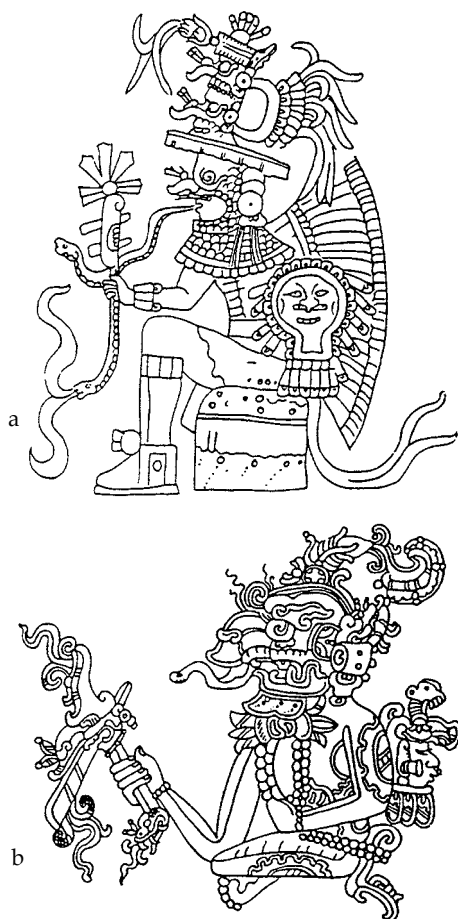


Figure 9. Comparison of Terminal Classic and Early Classic Chac figures: (a) Chac impersonator from Temple of Chac Mool, Chichen Itza (after Morris et al. 1931:1:Fig. 305); (b) Chac from Early Classic vessel (after Coe 1982:71).



Figure 10. Painted capstone from the Temple of the Owls, Chichen Itza (from von Winning 1985:Fig. 91).

lightning. Quite frequently, serpents are either found emerging from or held in the mouth of Chac (Figures 7a–b, 9). In many cases, the Chac lightning axe possesses a burning, serpent-headed handle. Clear examples occur in the Temple of Chac Mool murals, where Chac impersonators wield burning serpent axes (Figure 9a). With their serpent axes and snakes emerging from their mouths, these figures are notably similar to an Early Classic representation of Chac, fashioned some 600 years before. In this case, Chac also holds a fiery serpent lightning axe and has a snake writhing in his mouth. Clearly, many ancient Classic Maya conceptions of Chac were still very much alive during Toltec period Chichen.

The burning serpent lightning axe is identical to the Classic Manikin Scepter, a version of Schellhas' God K (Coggin 1988). However, although clear Manikin Scepters are found in the Puuc region (e.g., Proskouriakoff 1950:Figs. 83a, 88a, 89b), at

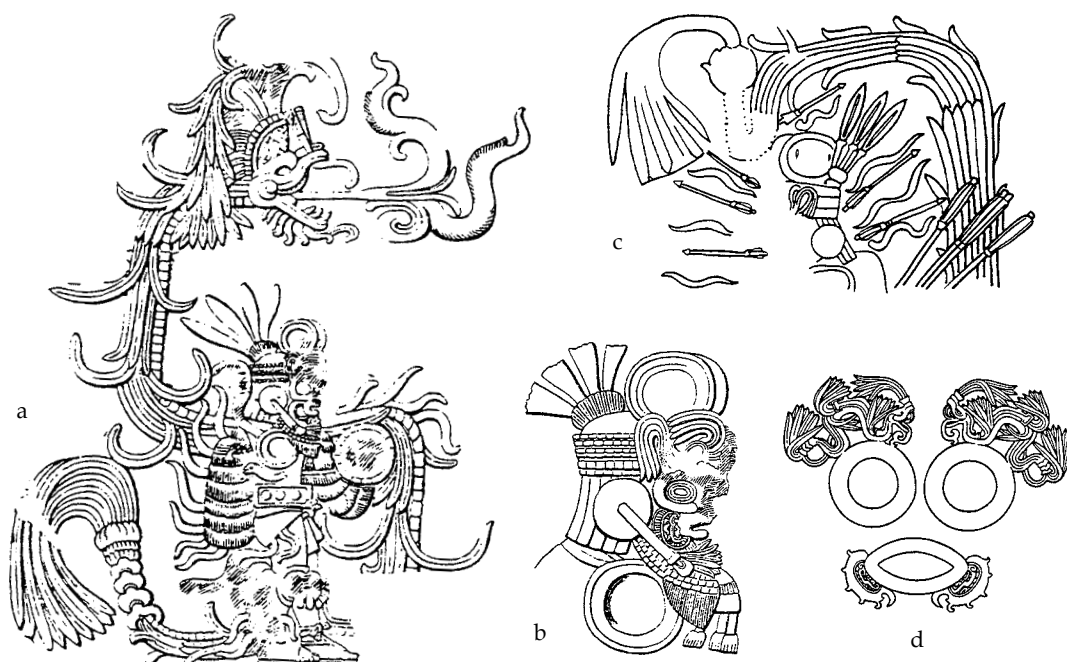


Figure 11. The masked feathered serpent figure at Chichen Itza: (a) masked figure backed by feathered serpent, Lower Temple of the Jaguars (detail from Maudslay 1889-1902:3:Pl. 49); (b) detail of masked figure from Lower Temple of the Jaguars (from Selser 1902-1923:5:313); (c) masked plumed serpent figure confronting solar entity at left, note flames and darts emanating out of masked figure (from Coggins 1984b:Fig. 17); (d) drawing of gold mask from Sacred Cenote (from Tozzer 1957:Fig. 216).

Chichen, the image is rudimentary. Rather than possessing the head and body of God K, the axe appears with only the serpent foot and projecting blade. Nonetheless, there is a clear representation of God K at Chichen, here on a painted capstone from the Temple of the Owls (Figure 10).⁷ In this case, the figure resembles God K representations from the Postclassic codices, with a large crenelated nose and no indication of the forehead axe or torch. In fact, there is little in this image to compare with the serpent-footed axes found at Chichen. Thus in contrast to God B, there appears to be a disintegration or breaking up of God K iconography at Toltec Chichen.

In all of Mesoamerica, perhaps the closest and most confusing relationship between a deity and a historical counterpart is that of the plumed serpent, Quetzalcoatl, and the legendary ruler of Tula, Ce Acatl Topiltzin Quetzalcoatl (see Nicholson 1957). This ambiguity is not limited to Tula, but is also present at Toltec Chichen. According to ethnohistorical sources of highland Mexico, the ruler of Tula migrated to the lands of the east, an episode corroborated by early colonial accounts in Yucatan (Selser 1902-1923:1:669-705). Images of feathered serpents abound at Chichen Itza, and frequently, where paint is preserved, one can discern the green feathers of the quetzal. However, it is quite another matter to correlate the feathered serpent with a specific anthropomorphic being. At Chichen and Tula, feathered serpents seem to serve as titles for a variety of individuals (Figure 12b). Nonetheless, there

⁷ Although the hieroglyphic text is ambiguous, the painted capstone probably dates to the Toltec period. Thus the motifs found in the overarching skyband are quite similar to designs appearing on Sotuta vessels (see Brainerd 1958:Figs. 83, 87).

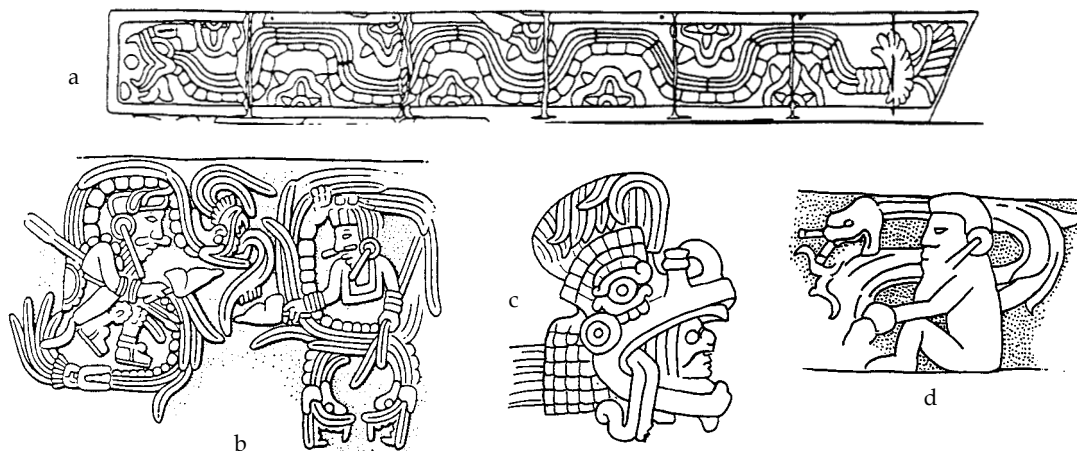


Figure 12. Terminal Classic and Early Postclassic representations of the plumed serpent: (a) plumed serpent with star sign, detail of Mercado dais, Chichen Itza (from Tozzer 1957:Fig. 126); (b) Toltec figures with plumed serpents, detail of ceramic vessel (from Tozzer 1957:Fig. 273); (c) feathered serpent head containing masked Chac figure in mouth, West Structure of Nunnery Quadrangle, Uxmal (from Foncerrada de Molina 1965:Fig. 39); (d) seated figure with plumed serpent, Edzna Stela 16 (after rubbing courtesy of Merle Greene Robertson).

is one figure which is consistently identified with the feathered serpent. Found in both the Lower and Upper Temple of the Jaguars, the individual wears a mask with clearly demarcated zones around the mouth and eyes (Figure 11).⁸ Such a mask was actually found in the Sacred Cenote (Figure 11d). Fashioned of sheet gold, this mask is virtually identical to the example rendered in the Lower Temple of the Jaguars (Figure 11b).

Outside of Chichen, anthropomorphic or even zoomorphic representations of Quetzalcoatl are quite rare.⁹ At Uxmal, the feathered serpents at the Ballcourt and the West Structure of the Nunnery Quadrangle are obvious and well-known examples (Figure 12c). The basal register of Edzna Stela 16 depicts a seated individual backed by a twisting plumed serpent (Figure 12d). The entire effect is extremely similar to the figures backed by plumed serpents at Chichen and Tula.

An important representation of Quetzalcoatl appears on page 4a of the Dresden Codex (Figure 13a). Due to the hand-held serpent, shell jewelry, and probable quetzal on the back, Seler (1902-1923:1:698) suggested that this figure is Kukulcan, the Yucatec Quetzalcoatl. However, Seler neglected to point out an especially important detail. The headdress contains a disk flanked by two knots, one partially obscured behind the quetzal head. The central disk is identical to the Aztec symbol of turquoise, and it will be subsequently demonstrated that this device has the same value in the Dresden Codex. This same headdress device—a turquoise disk flanked by two knots—is a diagnostic element of the Aztec Ehecatl-Quetzalcoatl (Figure 13b–c). The Dresden figure displays a pair of curving lines encircling the eyes and mouth. Although this recalls the eye and mouth pieces of the Chichen entity, the significance

⁸ Seler (1902-1923:1:688) was the first to identify the individual from the Lower Temple of the Jaguars as a representation of Quetzalcoatl. However, Seler did not recognize this same masked being in other scenes at Chichen.

⁹ On Dresden page 60b, a kneeling individual supports a Toltec style warrior seated upon a throne backed by a twisting serpent. The hook-like emanations upon the serpent body may represent feathers, and it is thus possible that the creature represents the plumed serpent Quetzalcoatl.

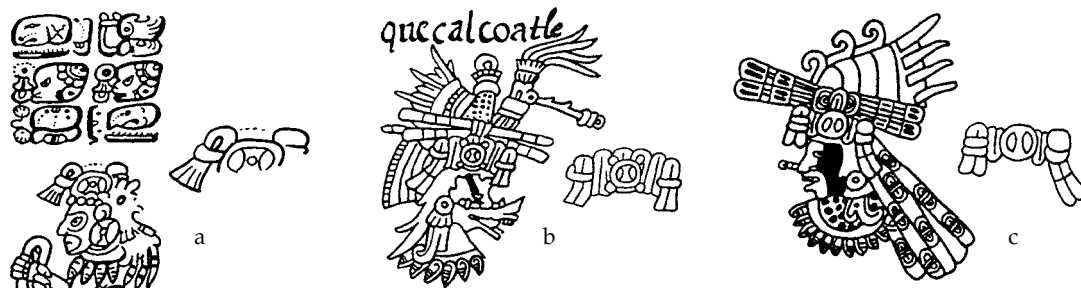


Figure 13. Depictions of Quetzalcoatl in Maya and Aztec manuscripts: (a) Quetzalcoatl holding snake and wearing quetzal bird on back, note disk and flanking knots in headdress, Dresden, page 4a; (b) Aztec representation of Ehecatl-Quetzalcoatl with headdress disk and knots, Telleriano-Remensis, page 9; (c) Quetzalcoatl with headdress element, Codex Borbonicus, page 3.

of this patterning remains obscure. Nonetheless, it is clear that the Dresden figure constitutes a Postclassic Maya form of Quetzalcoatl.

In the Temple of the Jaguars at Chichen, the Quetzalcoatl figure is paired with an individual appearing in a sun disk. A. Miller (1977), the first to note this consistent pairing in the Upper Temple of the Jaguars, termed the Quetzalcoatl figure Captain Serpent, and the solar figure, Captain Sun Disk. The same pairing also appears in the Lower Temple of the Jaguars, where both figures receive homage from an impressive procession of individuals (see Maudslay 1889-1902:3:Pls. 49-50). A fine painted vase in the Museo de Tula depicts the masked individual standing before a Maya figure engaged in bloodletting, with a version of the solar figure seated above (Figure 14b). Lincoln (1990:38, n. 3) notes that the sun disk and feathered serpent pair also appear at the remarkable Toltec-style rock painting at Ixtapantongo, in the state of Mexico (Figure 14a). In this case, the feathered serpent is accompanied by star signs. This may also be seen in representations of the sun disk and feathered serpent pair in the Upper Temple of the Jaguars, where the feathered serpent figure appears with a prominent star skirt. Moreover, in one relief from the Mercado, star signs appear against the undulating body of the feathered serpent (Figure 12a).

A number of researchers suggest that the placement of star signs on the feathered

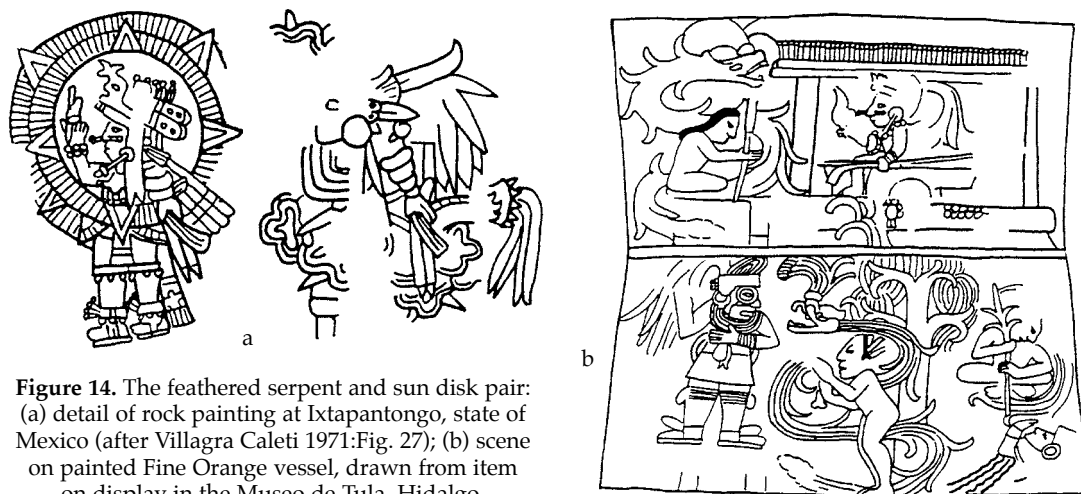


Figure 14. The feathered serpent and sun disk pair: (a) detail of rock painting at Ixtapantongo, state of Mexico (after Villagra Caletti 1971:Fig. 27); (b) scene on painted Fine Orange vessel, drawn from item on display in the Museo de Tula, Hidalgo.



Figure 15. Representations of Tlahuizcalpantecuhtli at Chichen and in Mexican codices: (a) representation of skeletal Tlahuizcalpantecuhtli from Northwest Colonnade, Chichen (from Tozzer 1957:Fig. 183); (b) Aztec representation of Tlahuizcalpantecuhtli, Codex Borbonicus, page 9; (c) Tlahuizcalpantecuhtli, Vaticanus B, page 57.

serpent refer to Quetzalcoatl as an aspect of Venus (Coggins 1984b; V. Miller 1989). The star-marked Quetzalcoatl figures probably refer to Tlahuizcalpantecuhtli, the god of the morning star. The *Anales de Quauhtitlan* relates that at his death, Quetzalcoatl was transformed into the morning star (Seler 1904b:359-360). In the most prominent representation of the feathered serpent figure from the Upper Temple of the Jaguars, flames and arrows emanate from his body (Figure 11c). This may well refer to the fiery rays of the morning star at heliacal rising. In his classic discussion of the Venus pages in the Mexican and Maya codices, Seler (1904b:384) notes that whereas in Nahuatl, *miotl* signifies "ray of light," *mitl* signifies "arrow" or "dart." So far as I am aware, such a word play between a dart and shaft of light does not occur in Yucatec.

The *Anales de Quauhtitlan* relates that during his transformation into Tlahuizcalpantecuhtli, Quetzalcoatl became skeletal (Seler 1904b:360). In many cases, Tlahuizcalpantecuhtli appears with a fleshless skull (e.g., Seler 1904b:Fig. 97). A column from the Northwest Colonnade bears a probable depiction of the skeletal Tlahuizcalpantecuhtli (Figure 15a). His headband and feather headdress are virtually identical to examples found with Late Postclassic representations of Tlahuizcalpantecuhtli (Figure 15b-c). Moreover, the figure wears the cut conch wind jewel of Ehecatl-Quetzalcoatl, one of the few examples of this device at Chichen.

The sun disk figure commonly paired with the feathered serpent is a combination of Maya and Mexican iconography (Figure 16). The rayed disk is clearly related to the conventional Postclassic solar sign of highland Mexico. A roughly contemporaneous Cotzumalhuapa style example can be seen on El Castillo Monument 1 (Parsons 1969:2:Pl. 59a). Other disks with rayed rims occur in the art of El Tajín (Kampen 1972:Fig. 24), and Teotihuacan (Taube 1983:Figs. 9, 10a, 14). Although the figure inside the disk cannot be identified as the Maya jaguar sun god, a number of researchers have noted that he is portrayed as a Maya lord (e.g., A. Miller 1977:220; Coggins 1984b:160-161). Coggins (1984a:56-57, 1984b:160) notes that the

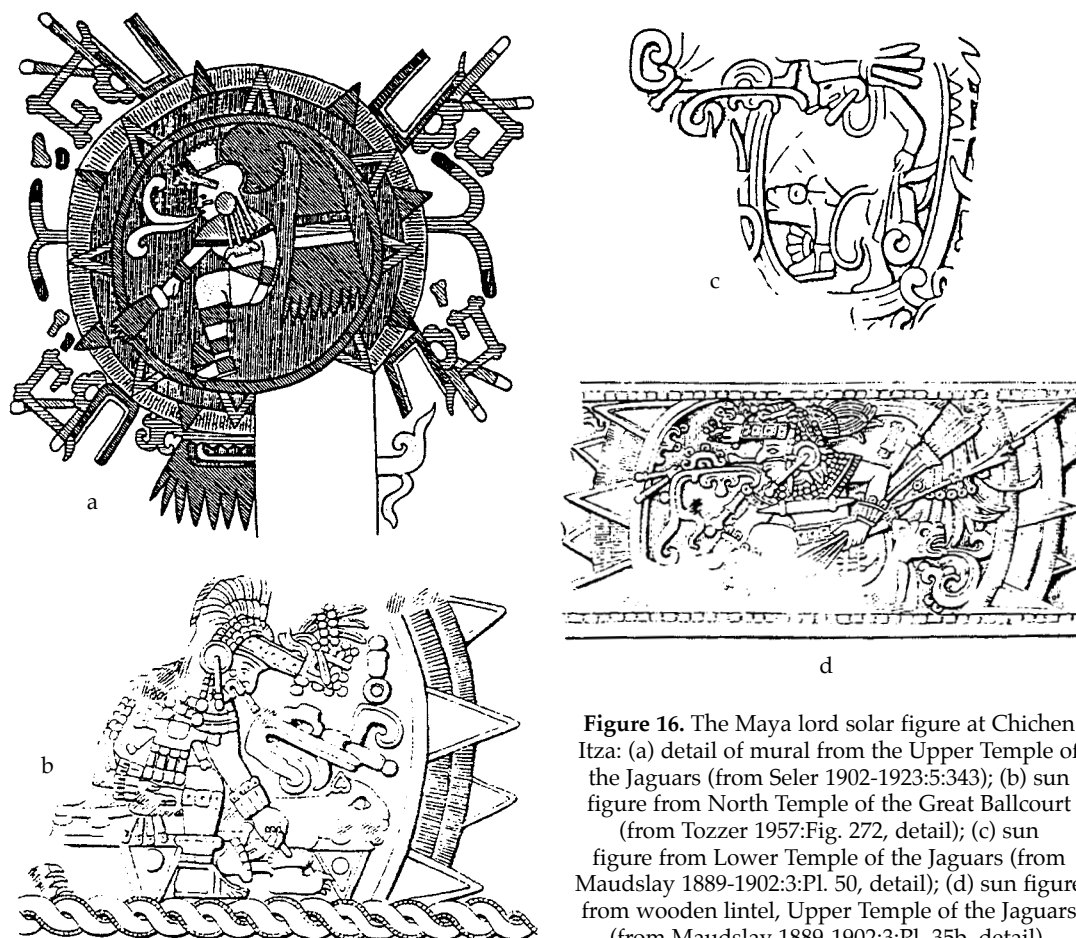


Figure 16. The Maya lord solar figure at Chichen Itza: (a) detail of mural from the Upper Temple of the Jaguars (from Seler 1902-1923:5:343); (b) sun figure from North Temple of the Great Ballcourt (from Tozzer 1957:Fig. 272, detail); (c) sun figure from Lower Temple of the Jaguars (from Maudslay 1889-1902:3:Pl. 50, detail); (d) sun figure from wooden lintel, Upper Temple of the Jaguars (from Maudslay 1889-1902:3:Pl. 35b, detail).

figure wears Maya jade jewelry—the nose-bar and, more importantly, the Jester God brow piece, an important Classic Maya symbol of rulership. But although Coggins (*ibid.*) asserts that the beaded jade chest piece is Toltec, clear analogues can also be found in Terminal Classic Maya dress.¹⁰ The jaguar throne serves as one of the clearest allusions to Classic Maya rulership. Although unknown in the iconography of highland Mexico, jaguar thrones are relatively common in Classic and Terminal Classic Maya art.

The Maya sun figure is by no means limited to Chichen. In the aforementioned painting from Ixtapantongo, in the state of Mexico, the solar entity is dressed very much like the example from the Lower Temple of the Jaguars (Figures 14a, 16c). Thus he wears the same jade nose-bar, chest piece, beaded-tassel sandals, and a possible Jester God headdress. In several of the polychrome murals in the Upper Temple of the Jaguars, the solar figure has golden hair, quite probably an allusion to the yellow orb (e.g., Figures 11c, 16a). A fine example of the yellow-haired sun figure appears in the Temple of Chac Mool murals (Figure 17a). The

¹⁰ For example, in the Lower Temple of the Jaguars the beaded chest plaque worn by the sun figure also appears on a Maya style warrior in the lowest register (see Maudslay 1889-1902:2:Pl. 4, Fig. 11). This same chest piece is also worn by a Chac warrior on a lintel from nearby Halakal (see Proskouriakoff 1950:Fig. 106, left figure).

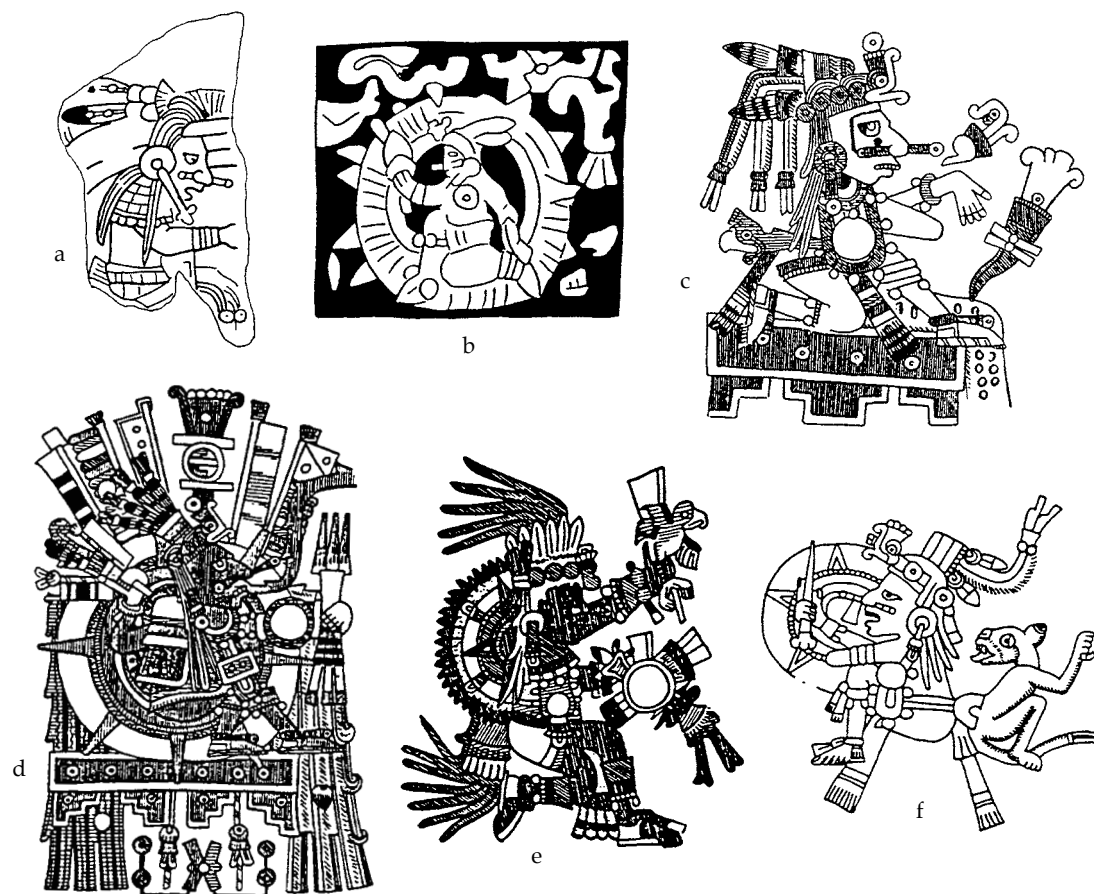


Figure 17. The Maya lord solar figure and Tonatiuh: (a) Maya solar figure backed with probable remains of solar disk, note eagle feathers; mural fragment from Temple of Chac Mool, Chichen (after Morris et al. 1931:2:Pl. 142c); (b) sun disk figure with probable eagle plumes, Temple of the Wall Panels, Chichen (from Tozzer 1957:Fig. 275); (c) Tonatiuh, note eagle plumes, Codex Borgia, page 70 (from Danzel 1922-1923:3:Pl. 50); (d) Tonatiuh, Codex Borgia, page 71 (from Danzel 1922-1923:3:Pl. 1); (e) Aztec rendering of Tonatiuh, Telleriano-Remensis; (f) Tonatiuh with jaguar, Codex Laud.

figure is clearly Maya, and in fact, Ann Morris (1931:444) uses this image to illustrate Maya figures in the murals. A pair of dark-tipped feathers—possibly eagle—project from behind the headdress. This same pair of feathers appear with the sun figures from the Temple of the Wall Panels and the Ixtapantongo scene (Figures 14a, 17b).

Many traits observed for the Toltec period sun figure continue into the Late Postclassic in the form of Tonatiuh, the princely sun god of Central Mexico. Along with the rayed solar disk, Tonatiuh is usually portrayed with yellow hair, an eagle feather headdress, a nose-bar, and a jade mask upon the brow (Figure 17c–e). The brow mask possesses the conventional Mexican sign for jade, this being a zone of green, then red, and finally, a segmented white band.¹¹ Although highly stylized, the profile of the jade mask is quite similar to that of the

¹¹ Although found with other Late Postclassic Mexican gods, the jade brow mask is an especially diagnostic element of Tonatiuh. Thus in the Codex Borbonicus and Aubin Tonalamatl series of the thirteen gods of the days, only Tonatiuh is consistently depicted with the jade brow piece.

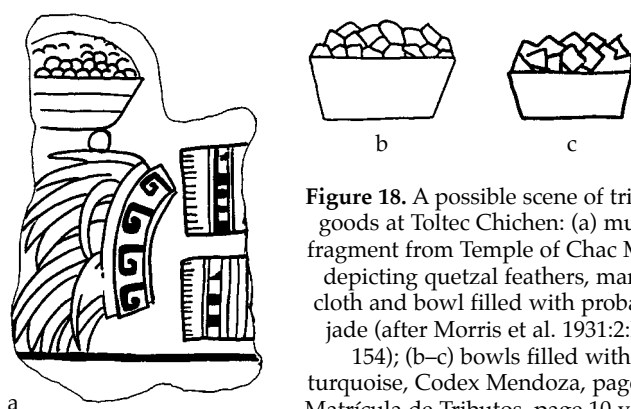


Figure 18. A possible scene of tribute goods at Toltec Chichen: (a) mural fragment from Temple of Chac Mool depicting quetzal feathers, manta cloth and bowl filled with probable jade (after Morris et al. 1931:2:Pl. 154); (b–c) bowls filled with turquoise, Codex Mendoza, page 40, *Matrícula de Tributos*, page 10 verso.

Jester God, as both possess sharply upturned curving snouts. Quite frequently, Tonatiuh appears with a pair of large eagle plumes in his headdress, strikingly similar to the aforementioned sun figures at Chichen and Ixtapantongo (Figures 17c, e).

The series of correspondences between the Toltec period Maya sun

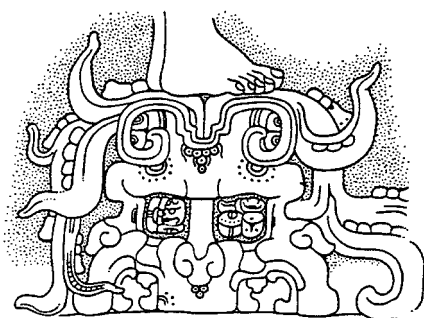
figure and Tonatiuh brings up the intriguing possibility that the Late Postclassic sun god derives from a prototype based upon Terminal Classic Maya kings. The identification of Tonatiuh with a Maya king is by no means inconsistent with Central Mexican cosmography. In the codices, the realm of Tonatiuh is to the east, the birthplace of the sun (Seler 1963:2:89). This eastern solar realm is consistently identified with jade and the quetzal (e.g., Borgia, p. 49; Cospi, p. 12; Féjervary-Mayer, pp. 1, 33; Vaticanus B, p. 17). As can be seen in the Codex Mendoza and *Matrícula de Tributos*, the Maya region of Soconusco was a major Aztec source of quetzal feathers and jadeite (Codex Mendoza, p. 47; *Matrícula de Tributos*, p. 13 recto). The identification of the Maya region with jade and quetzal plumes is surely at least as old as Toltec Chichen. In her study of the murals from the Temple of Chac Mool, Ann Morris (1931:409) notes the similarity of one scene to Central Mexican tribute rolls, and suggests that tribute is represented (Figure 18a). The scene probably is tribute, since it includes manta cloth, an important tribute item of protohistoric Yucatan. Along with the cloth, there is a quetzal plume back device and a bowl filled with green substance, quite probably jade. In the Codex Mendoza and *Matrícula de Tributos*, precious stones are similarly mounded in bowls (Figures 18b–c). To the peoples of Central Mexico, the Maya region—the land of jade and the quetzal—was the eastern region and the birthplace of the sun.

Maize and Agriculture

In the monumental art of Chichen, there are numerous representations of edible plants and foods. One of the most detailed programs appears on the aforementioned capitals in the Lower Temple of the Jaguars (Figure 19a). Here a youthful maize god rises out of a cleft head. A pair of figures with squash fruit, flowers and foliage emerge from the sides of the monstrous face. Above, a youthful maize god rises out of the great cleft. This head probably represents a mountain, much like that appearing in the Temple of the Foliated Cross at Palenque (Figure 19b). In this case, the head is clearly a cleft Cauac head from which maize emerges. The left eye of the Palenque head contains a compound phonetically read as *uitz nal*, or maize mountain (see Stuart 1987:18). I (Taube 1985:175) have previously noted that the Chichen scene is a version of the Classic Maya resurrection theme—the emergence of the maize god out of the enclosing earth (Figure 19c). However, in the Classic Peten scenes, the earth is represented as a tortoise shell. The areas from where the squash figures emerge correspond to the Peten depictions of the natural openings of the carapace. It appears that



a



b



KAT

Figure 19. The emergence of maize in the art of Toltec Chichen and the Late Classic southern lowlands: (a) capital from the Lower Temple of the Jaguars, Chichen Itza (from Seler 1902-1923:5:317); (b) the *uitz nal* maize mountain (from Stuart 1987:Fig. 27); (c) emergence of the Tonsured Maize God out of tortoise earth (drawing by author).

the Chichen example is a conflation of a tortoise shell and a Cauac monster mountain.

Representations of maize foods are relatively common in the iconography of Toltec Chichen. Quite frequently they appear with personages in Maya dress. Bowls containing tamales appear with the representations of God N flanking the entrance to the Lower Temple of the Jaguars (Figure 19a). The examples on the right side are marked as Kan signs. Recent work by Love (1989) and myself (Taube 1989d) has established that the T506 Kan sign represents the tamale. In a relief from the Holtun Group at Chichen, a Maya figure holds a vessel containing Kan sign tamales topped with maize foliage (Figure 20b). Virtually identical foliated tamales are common in the Late Postclassic iconography of Yucatan (Figure 20c). A painted bench from the Temple of Chac Mool depicts a series of Maya figures with bowls containing Kan sign tamales (Figure 20d). These particular tamales are not ball-like but tall and slender, and thus resemble a huge tamale depicted in a bas-relief near Structure 5A1 in Old Chichen (Figure 20e). These tall tamales may be early forms of the long and slender *yaxche uah*, or 'ceiba tamale' used in contemporary Yucatec ceremonies (see Redfield and Villa Rojas 1934:129). The curious spiked tamales appearing in Postclassic Maya painting and sculpture probably represent the *yaxche uah*, with the points referring to the spiked trunk of the ceiba (Figure 20f-g). Many of these Late Postclassic spiked tamales are slender and pointed, and thus resemble the tall tamales in the Temple of Chac Mool scene.

The Temple of the Owls contains one of the most detailed iconographic programs dedicated to cacao known for ancient Mesoamerica. The aforementioned painted capstone depicts God K within a sunken cavity containing cacao pods (Figure 10). Still other cacao pods hang from the sky above. I suspect that this cavity depicts the moist *kop*, or sinkhole,

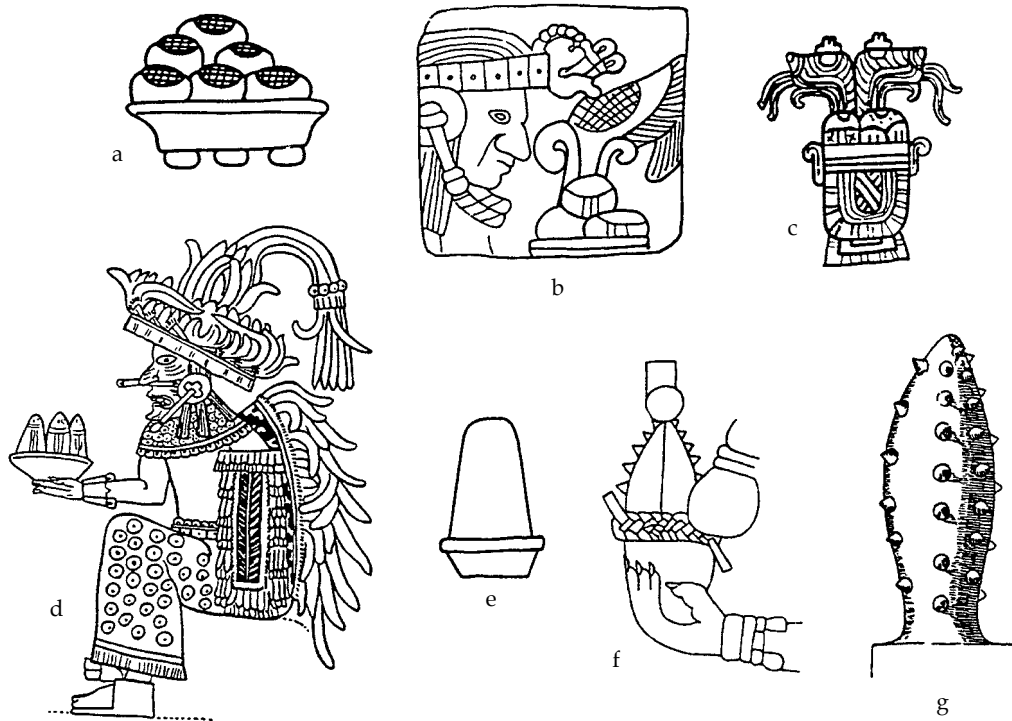


Figure 20. Maize offerings from the northern Maya lowlands: (a) bowl filled with tamales, entrance to Lower Temple of the Jaguars, Chichen Itza (drawing by author); (b) figure with Maya headdress holding tamales topped with maize growth, relief from Holtun Group, Chichen (after Schmidt 1981:Fig. 7); (c) container with tamales, Tulum Structure 16 (after A. Miller 1982:Pl. 33); (d) seated Maya figure with tamales, Temple of Chac Mool (from Roys 1933:Fig. 45); (e) probable maize tamale, detail of bas-relief near Structure 5A1, Old Chichen (drawing by author); (f) spiked tamale, possibly *yaxche wah*, detail of mural from Santa Rita, Belize (from Gann 1900:Pl. 30); (g) spiked tamale, Tulum (from Fernández 1941:Fig. 55).

that is still currently used to grow cacao in Yucatan (Gómez-Pompa et al. 1990).¹² In the capstone scene, God K holds a bowl containing probable cacao seeds and four curious devices resembling jade beads. However, rather than representing jade, these elements refer to another precious substance, the flower of the cacao. On the two piers at the entrance of the temple, these flowers can be seen growing directly out of the trunks of cacao trees (Figure 21a).¹³ These flowers also appear on Madrid page 52c, here in a scene depicting Chac and Goddess I holding cacao grain.

The Temple of the Owls piers originally had tenoned human figures projecting out of the base, as if their lower body formed the trunk of the tree (Figure 21a). This concept is duplicated on a Terminal Classic Maya polychrome reputedly from Belize (Figure 21b).

¹² The colonial Chronicles of Ebtun mention cacao groves at Homteel, Cuncunul, and Cocuitz (Roys 1939:11, 123, 281). The Homteel and Cuncunul groves are both mentioned to be within *kop* sinkholes. At Chichen, the Hoyo de Thompson could have served as a *kop* in which to grow cacao.

¹³ The resemblance of the Chichen cacao flowers to jade earspools is probably intentional, and seems to occur at Bilbao as well. Thus the flowering vine on Bilbao Monument 21 contains a clear earspool assemblage as well as personified cacao pods (see Parsons 1969:1:Frontispiece).

In posture, this figure is virtually identical to the Chichen piers.¹⁴ Just above the Chichen figure, there is a circular, shield-like device (Figure 21a). A very similar element appears on the famous Hun-Hunahpu vessel in the Museo Popol Vuh, again at the base of the cacao tree (Figure 21c). A version of this device also appears on Bilbao Monument 21 below a seated goddess (Figure 21d). A vine with cacao pod heads sprouts at the feet of the goddess. In this case, the shield-like element contains two shell creatures, and it is possible that it refers to a pool of water. However, the actual significance of this element and its relation to cacao remains to be explained.

Von Winning (1985:59, 74) interprets the horned owls in the Temple of the Owls as a reference to death. However, the horned Moan owl was also related to cacao among the Postclassic Yucatec. Thus Landa (in Tozzer 1941:164) mentions that during the month of Moan, special ceremonies were held in cacao groves, quite probably the *kop* sinkholes.

Human Sacrifice

Allusions to human sacrifice are widespread at Toltec Chichen, and have served as lurid

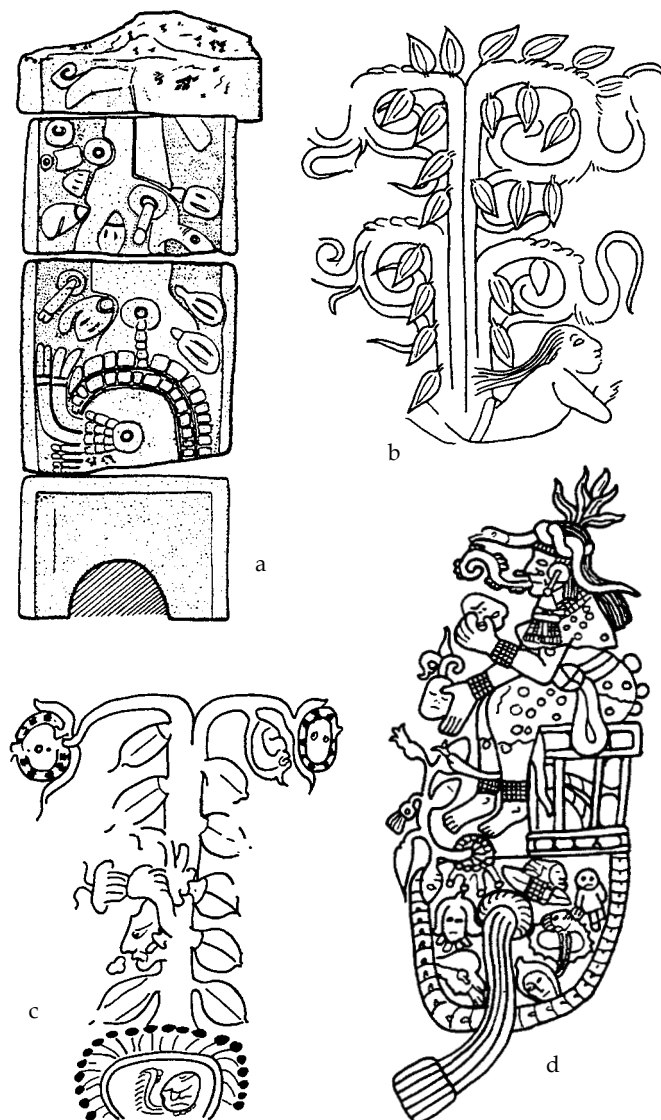


Figure 21. Cacao iconography from the Maya region: (a) front of west pier, Temple of the Owls, Chichen (from von Winning 1985:Fig. 53); (b) figure with cacao trunk growing from lower body (after Kerr 1989:29); (c) detail of Late Classic polychrome, Museo Popol Vuh (drawing by author); (d) detail of Monument 21, Bilbao (from Parsons 1969:1:Frontispiece).

¹⁴ Peter Schmidt (personal communication 1990) has kindly pointed out two other examples of inverted figures marked with cacao pods. A large Rio Bec *incensario* recently exhibited in the Museo Regional de Antropología in Merida depicts a human figure with cacao pods emerging from the body. Schmidt points out a similar figure occurring on an Early Classic vessel lid from Tikal Burial 10 (see Coggins 1975:155-156, Fig. 48). However, unlike the Chichen and Belize examples, both of the inverted figures mentioned by Schmidt have human lower torsos and legs. In this regard, they closely resemble the “diving god” of Late Postclassic Yucatan. An unprovenanced Late Postclassic vessel published by M. Coe (1982:77) depicts a God E “diving god” holding a cacao pod in his hands.

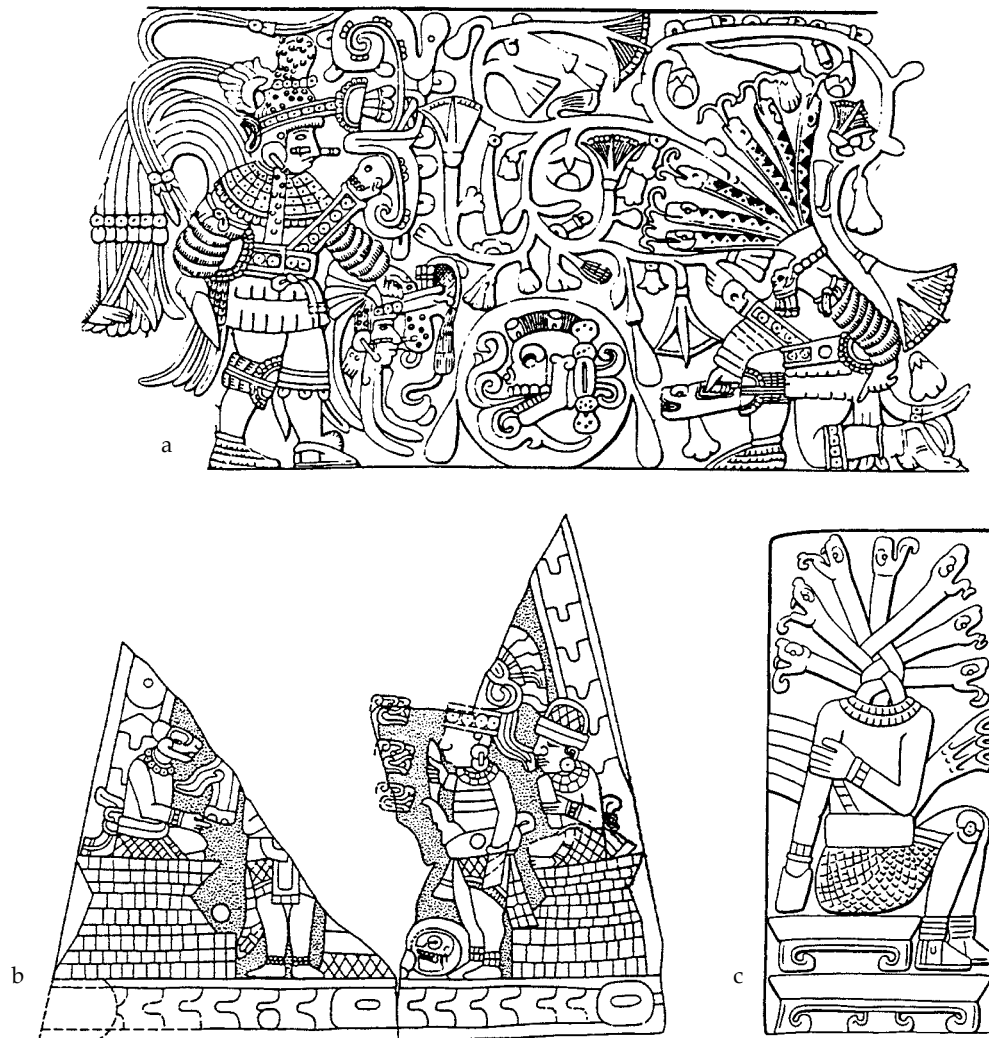


Figure 22. The ballgame and decapitation at Chichen and the Gulf Coast: (a) detail of center panel of west side of Great Ballcourt, Chichen (from Tozzer 1957:Fig. 474); (b) fragmentary scene with skull ball and probable representation of blood as snakes, El Tajín (from Kampen 1972:Fig. 19a); (c) bas-relief from Aparicio, Veracruz (from Tozzer 1957:Fig. 475).

reinforcements for the conception of Mexican domination at Chichen. According to Tozzer (1957:127), human sacrifice was not common in the Maya region until the Postclassic period. However, recent research has established that human sacrifice was widespread among the Classic Maya; among the more common forms were heart excision, decapitation, and scaffold sacrifice (Robicsek and Hales 1984; Schele and Miller 1986; Taube 1988b).

Some of the most explicit scenes of sacrifice at Chichen occur in the six panels of the Great Ballcourt (Figure 22a). Cohodas (1978b:264) notes that in layout, these panels are notably similar to the South Ballcourt at El Tajín, which also contains six carved panels, a number of which depict human sacrifice. In addition, the striking theme of snakes as blood emerging from a severed neck is found not only at Chichen, but also in a fragmentary sculpture from El Tajín, and on a relief from Aparicio, Veracruz (Figures 22b–c). The *palmas* worn by the Chichen

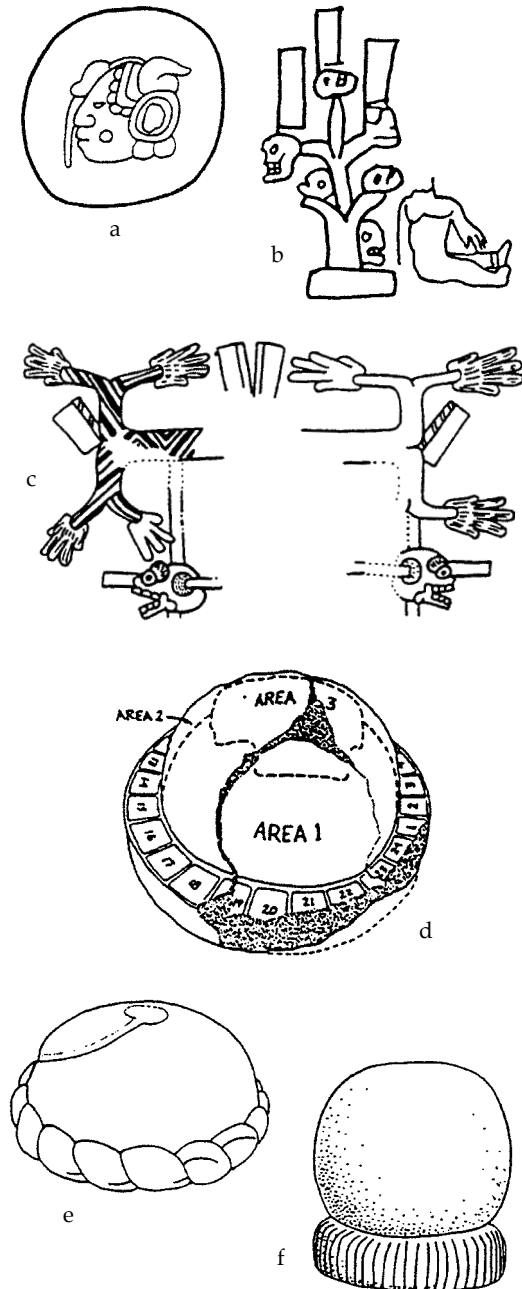
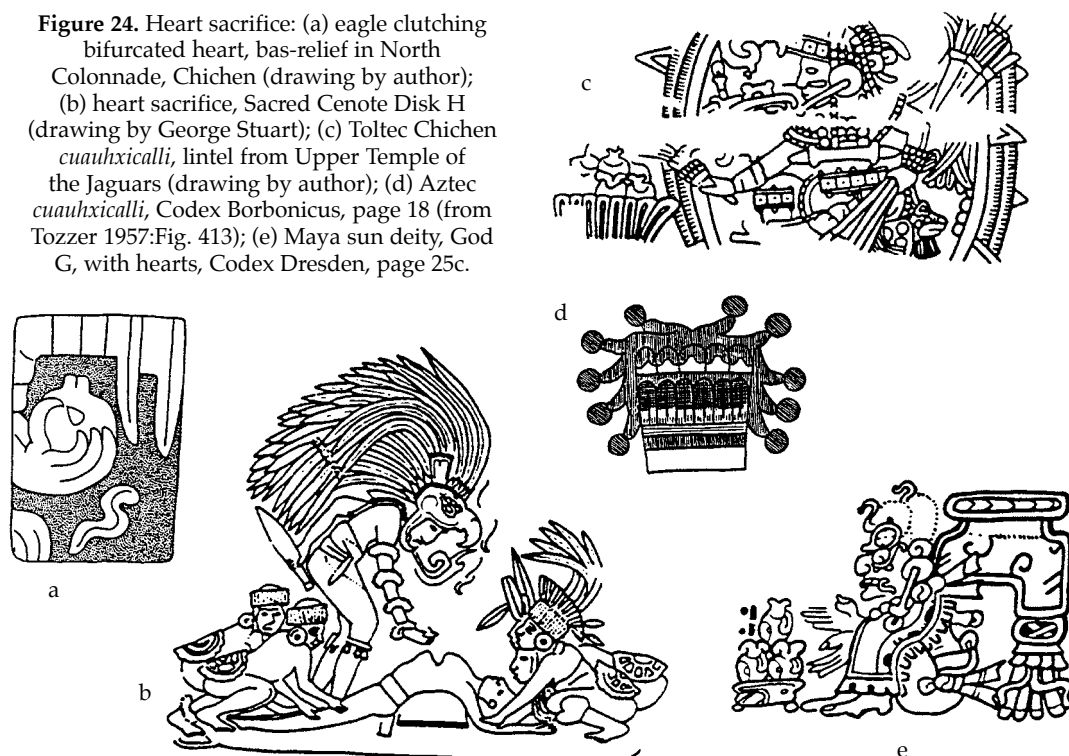


Figure 23. Sacrifice and the ballgame in Mesoamerica: (a) detail of the La Esperanza ballcourt marker (after Castro-Leal 1986:No. 69); (b) detail of Ixtapantongo rock painting (after Villagra Caletti 1971:Fig. 27); (c) tree skull rack, Codex Borgia, page 19; (d) schematic drawing of Great Ballcourt Stone, Chichen Itza (from Wren et al. 1989:Fig. 1); (e) altar from Court B, Tula (after Castro-Leal 1986:No. 100); (f) Altar 4, Copan (after Miller and Houston 1987:Fig. 11).

players also point to the Gulf Coast. However, the Great Ballcourt reliefs also bear traits unique to the Cotzumalhuapa style of Bilbao. Thus for example, several of the flowering “blood vines” in the Great Ballcourt reliefs are provided with stone projectile points. A similar convention can be seen on Bilbao Monument 21, in which the flowering vine contains a possible projectile point and a sacrificial knife, probably to qualify the vine as a plant of sacrifice (see Parsons 1969:1:Frontispiece).

The sacrificial ball game scenes at Chichen are not only linked to the iconography of the Gulf Coast and Bilbao, but also to that of the Classic Maya. Iconographic and epigraphic research by Miller and Houston (1987) demonstrates that the humiliation and sacrifice of captives was indeed an important component of the Classic Maya ballgame. Kowalski (1989) notes that the ball represented on the Late Classic La Esperanza ballcourt marker contains a human head (Figure 23a). Kowalski (1989) identifies this head as that of Hunahpu, one of the hero twins in the Quiche Maya *Popol Vuh*. During the ball playing between the hero twins and the gods of death, Hunahpu loses his head (see Recinos 1950:150-153). It would appear that for the Classic Maya, the slaying of Hunahpu provided a mythical charter for ball game decapitation. The *Popol Vuh* also mentions that the head of Hun-Hunahpu, the father of the hero twins, was placed in a gourd tree at the place of ball game sacrifice (Recinos 1950:117-119). This strongly suggests the *tzompantli* placed near the Great Ballcourt at Chichen. The Ixtapantongo rock painting suggests that the *tzompantli* was considered as a tree during the Toltec period. In the scene, there is a tree laden with skulls and paper banners, or *pantli* (Figure 23b). On page 19 of the Late Postclassic Codex Borgia, there is another depiction of a *tzompantli* tree, once again marked with *pantli* banners (Figure 23c). It is likely that at Chichen, as in the highlands of Guatemala and Mexico, the *tzompantli* was considered as a fruit-laden tree.

Figure 24. Heart sacrifice: (a) eagle clutching bifurcated heart, bas-relief in North Colonnade, Chichen (drawing by author); (b) heart sacrifice, Sacred Cenote Disk H (drawing by George Stuart); (c) Toltec Chichen *cuauhxicalli*, lintel from Upper Temple of the Jaguars (drawing by author); (d) Aztec *cuauhxicalli*, Codex Borbonicus, page 18 (from Tozzer 1957:Fig. 413); (e) Maya sun deity, God G, with hearts, Codex Dresden, page 25c.



Wren, Schmidt, and Krochock (1989), suggest that the Great Ballcourt Stone from Chichen served for heart excision (Figure 23d). A quite similar altar, clearly representing a ball, was found in Ballcourt B at Tula (Figure 23e). This altar form is probably Maya in origin. Miller and Houston (1987:56) note that Copan Altar 4 represents a ball, and suggest that it may have been a locus for human sacrifice (Figure 23f).

Along with scenes of heart excision, severed hearts are also common at Chichen Itza. At Chichen and Tula, eagles and jaguars are found clutching hearts. An interesting heart variant appears with a fragmentary representation of an eagle in the North Colonnade; in this case the heart is bifurcated, presumably to represent the severed arteries (Figure 24a). A similarly bifurcated heart appears on Disk H from the Sacred Cenote, here being taken from the chest of the prone victim (Figure 24b). These graphic scenes allow one to identify the objects frequently placed in feather-rimmed bowls. They are clearly hearts, and the feather-rimmed bowl is probably an early form of the Aztec *cuauhxicalli*, the eagle-plumed vessel (Figure 24c). For the Aztec, the *cuauhxicalli* was an important means of offering hearts to the sun (Figure 24d). Similarly, the Chichen example is frequently before the Maya Tonatiuh. The identification of hearts with the sun can also be seen on page 26b of the Dresden Codex, where the Maya sun god, God G, sits before a bowl of bifurcated hearts (Figure 24e).

In ancient Mesoamerica, the act of human sacrifice was often compared to mythic acts of creation. The decapitation of the Quiche Hunahpu has been mentioned. Another clear example is the Aztec myth of Coyolxauhqui, in which Huitzilopochtli kills his evil sister and the four hundred brothers with the Xiuhcoatl fire serpent. A fragmentary Coyolxauhqui stone from the Templo Mayor depicts the Xiuhcoatl penetrating the chest of Coyolxauhqui (Figure 25a). Clearly, this fascinating scene is a mythical analogue to the actual heart sacrifices performed

at the Templo Mayor. At Chichen, it appears that the aforementioned dismemberment of the earth goddess by the two bladed serpents provided a cosmic charter for heart sacrifice (Figures 3a–b, 25b). Thus in the Upper Temple of the Jaguars, an actual scene of heart sacrifice appears directly above the prostrate body of the earth goddess (Figure 25b). Moreover, a fine sacrificial knife from the Sacred Cenote bears a handle with two intertwined serpents (Figure 25c). I suggest that this knife represents the pair of bladed serpents which dismember the earth goddess: during the sacrificial act, a victim slain with this knife assumed the symbolic role of the prone earth goddess.

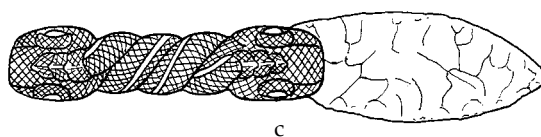
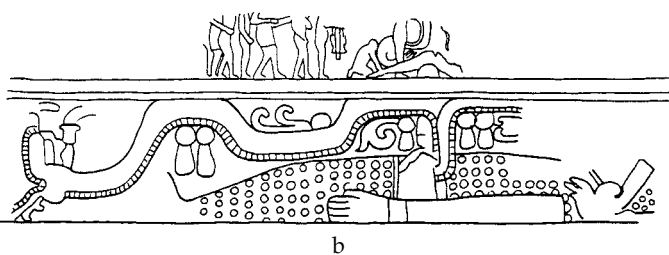
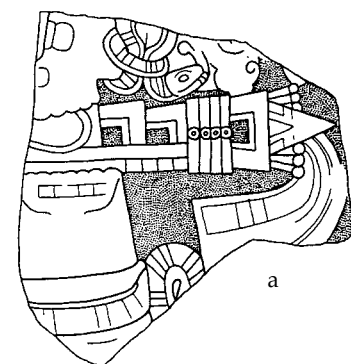


Figure 25. Mythology and heart sacrifice: (a) detail of fragmentary Coyolxauhqui stone on display in Museo Templo Mayor, Mexico City (drawing by author); (b) earth goddess cut by serpent pair with sacrifice immediately above, Upper Temple of the Jaguars, Chichen (after Coggins 1984b:Fig. 19); (c) sacrificial knife with handle composed of serpent pair, Sacred Cenote, Chichen (from Coggins 1984a:No. 26).

Warfare

In an important study published in 1930, Alfred Tozzer notes the simultaneous presence of both Toltec and Maya warrior figures in the art of Toltec period Chichen. Tozzer (1930:160) notes that whereas the Toltec warriors are depicted with darts and spearthrowers, the Maya are usually found with spears and knives. In many cases, Maya warriors at Chichen are portrayed as Chac, and thus frequently hold axes, the lightning weapon *par excellence* (Figures 7a, 8, 9a, 26b–c, 29a). The identification of Maya warriors with Chac is also widespread in the Puuc region (Figures 7b–d). One of the most ambitious programs illustrating this theme occurs on Uxmal Stela 14, where Lord Chac wields a conch and axe as he stands on a jaguar throne above slain and naked figures, probably defeated warriors. The Chac warrior theme was also present among the Classic Maya of the southern lowlands. On Bonampak Lintel 3, the victorious ruler wears a prominent Chac headdress (Figure 26a).

In the south column of Chichen Structure 6E1, a Chac warrior appears with three other warrior figures in very similar dress (Figure 27a). All wear a shoulder cape and a necklace composed of two large beads. This same shoulder cape and beaded necklace appears on a sculpture possibly from Tiho (Figure 27b). Still another example occurs on Uxmal Stela 14, where a warrior figure wears the cape and large bead necklace (Figure 27c). But although the Uxmal figure is dressed in the Maya warrior costume, he wields an atlatl and a circular shield. With its infixed crescents and pendant tassel, the shield is identical to examples known for Toltec Chichen. Clear examples of this type are prominently depicted on the Upper Temple of the Jaguars (Figure 27d). Moreover, it is likely that the crescents were of metal, much like

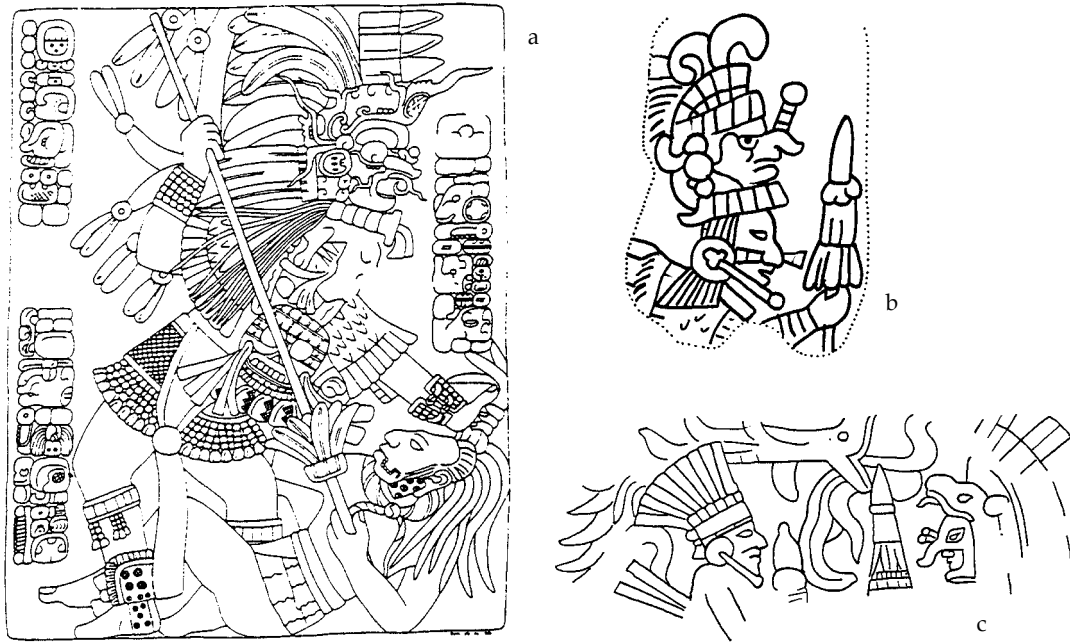


Figure 26. The Chac warrior theme in Maya iconography: (a) Late Classic Bonampak ruler, Knot Eye Jaguar, wearing Chac headdress (from Mathews 1980:Fig. 7); (b) mural fragment representing Chac warrior, Temple of Chac Mool (from Morris et al. 1931:2:Pl. 157b); (c) Toltec warrior facing Maya Chac warrior, detail of lintel from Castillo, Chichen (after rubbing courtesy of Merle Greene Robertson).

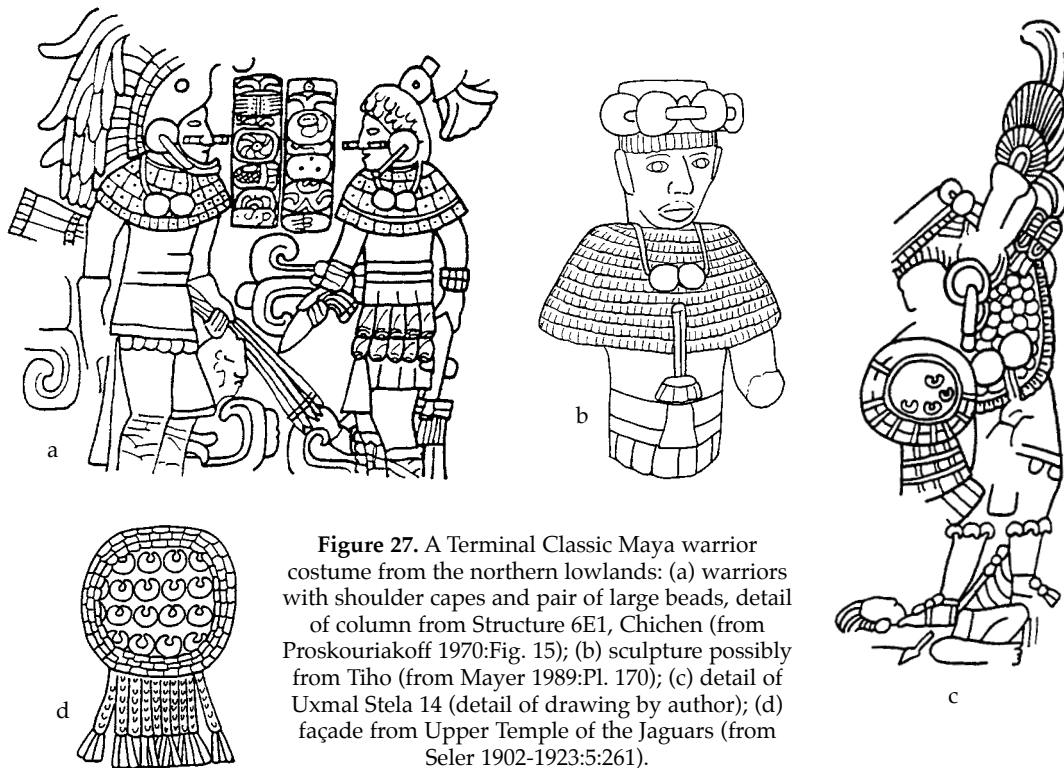


Figure 27. A Terminal Classic Maya warrior costume from the northern lowlands: (a) warriors with shoulder capes and pair of large beads, detail of column from Structure 6E1, Chichen (from Proskouriakoff 1970:Fig. 15); (b) sculpture possibly from Tihó (from Mayer 1989:Pl. 170); (c) detail of Uxmal Stela 14 (detail of drawing by author); (d) façade from Upper Temple of the Jaguars (from Selser 1902-1923:5:261).

examples recovered from the Sacred Cenote at Chichen Itza (see Coggins 1984a:No. 15). Thus although in Maya dress, the Stela 14 warrior bears the arms of Toltec Chichen.

The omnipresent Toltec warriors at Chichen stand out in sharp contrast to traditional Maya warrior dress and have obvious parallels with Toltec costume of highland Mexico (Figures 28b, 29a). Stone (1989:165-166) notes that many traits of Toltec warrior costume can be traced to Classic Teotihuacan. Depictions of Toltec warriors are not only found at Chichen and Tula, but also in the rock painting from Ixtapantongo. One of the Ixtapantongo figures is almost identical in arms and dress to examples at Chichen (Figure 28a). Among the shared costume traits are a pointed mosaic crown, a nose bead, and a large back mirror, or *tezcacuitlapilli*. When the original painted color is preserved at Chichen, these costume elements are light blue, in contrast to the dark green denoting jade. At Chichen, this blue often refers to turquoise, a stone entirely foreign to the Maya area.

Much of the Toltec turquoise warrior regalia continued in Late Postclassic Central Mexican iconography. The Aztec Codex Magliabechiano illustrates the image of a dead warrior, who is depicted with the same blue pointed crown and nosepiece (Figure 28c). In this instance,



Figure 28. Turquoise warrior regalia of Postclassic Mesoamerica: (a) Toltec warrior figure from Ixtapantongo rock painting (after Villagra Caletti 1971:Fig. 27); (b) Toltec warrior from Upper Temple of the Jaguars (from Maudslay 1889-1902:3:Pl. 38); (c) Aztec image of dead warrior, Codex Magliabechiano, page 60.

the pointed headpiece clearly represents the turquoise *xiuhuitzolli* crown of Aztec rulers. Seler (1902-1923:1:682), the first to note the widespread occurrence of turquoise at Toltec Chichen, suggests that the pointed Chichen headpiece is an early form of the *xiuhuitzolli*. The accompanying Magliabechiano text terms the blue nose bead *yacaxuitl* [*yacaxiuitl*], meaning turquoise or grass nose piece. According to Seler (1902-1923:5:280), the Chichen nose bead is also a turquoise *yacaxiuitl*. However, yet another Chichen parallel with the Magliabechiano scene not mentioned by Seler is the blue *xolocozcatl* dog pendant (Figures 28c, 29). Very similar chest pendants are commonly worn by warriors at Chichen and again, when the paint is preserved, these creatures are turquoise blue (see Morris et al. 1931:2:Pls. 74, 77, 81).

One of the most striking diagnostic items worn by Toltec warriors is the large petaled disk commonly placed in the small of the back (Figures 28a-b, 29a, 30). This device is extremely widespread in the iconography of Tula and Chichen, and is even found worn by a graffito warrior incised in the Akab

Dzib at Chichen (Figure 30c). Selser (1902-1923:1:681) suggests that these are turquoise *tezcacuitlapilli* back mirrors, an identification that has been entirely borne out by more recent discoveries at Chichen. The actual mirrors found at Chichen are composed of a polished pyrite mosaic center surrounded by a mosaic of turquoise and other materials (Figure 31a). Four mosaic serpents lie within the encircling turquoise. Acosta (1942:129) interprets these as *xiuhcoatl* turquoise fire serpents and notes that they are also present on *tezcacuitlapilli* at Tula, here depicted on the great warrior columns at Mound B. Although with copper backing, similar mirrors are known for the far distant site of Casas Grandes, in northern Chihuahua (Figure 30a). Once again, *Xiuhcoatl* serpents appear in four zones on the mirror rim. One of the Casas Grandes mirrors retained some mosaic of turquoise and specular iron mosaic at the time of discovery (Di Peso 1974a:2:498).

The turquoise back mirror was obviously of extreme importance at Toltec Chichen. Tozzer (1957:120) notes that with their four *Xiuhcoatl* serpents, the Chichen mirrors are very similar to certain Chichen representations of the solar disk, which are also provided with four *Xiuhcoatl* serpents (Figure 31b). In several studies, I (Taube 1983, 1988e, 1992a) note that the Aztec Calendar Stone may be based on the Toltec turquoise and pyrite mirror. In this case, the central solar figure is surrounded by a ring of turquoise quincunx signs and two great *Xiuhcoatl* serpents (Figure 31c). However, the concept of solar mirrors surrounded by serpents may well be Maya in origin. During both the Early Classic and Late Classic periods of Maya art, four serpent heads are found on the rims of mirrors containing the solar *kin* sign (Figure 31d–e). The turquoise back mirror of Chichen and Tula probably also represents the sun. I suspect that by donning the turquoise and pyrite mirror, the Toltec warrior supported the burden or office of the sun.

Still another turquoise element appearing with Toltec warriors is the winged pectoral (Figure 32). Although Selser (1902-1923:5:273) states that the device is mosaic, he suggests that the stone is jadeite. However, when the color is preserved at Chichen, the plaque is turquoise blue rather than jade green (e.g., Morris et al. 1931:2:Pls. 30, 33, 50).¹⁵

¹⁵ Like the Toltec style *tezcacuitlapilli* discovered at Chichen, the mosaic chest plaque may have been backed by wood. Possible examples can be seen among the Sacred Cenote wooden objects currently on display in the Museo de Chichen Itza.

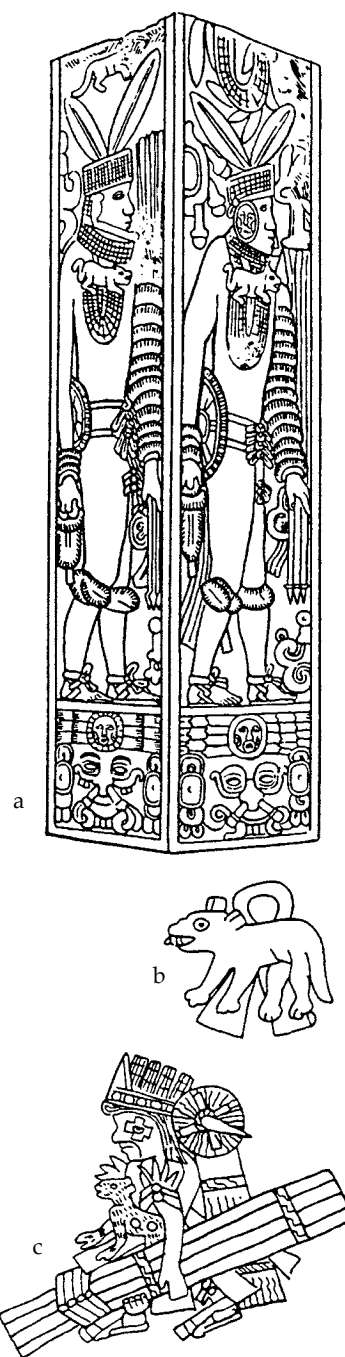


Figure 29. Aztec and Toltec forms of the *xolocoatzl* turquoise chest piece: (a) chest pendants worn by Toltec warriors (from Selser 1902-1923:5:280); (b) *xolocoatzl* pendant, Codex Borbonicus, page 10; (c) *xolocoatzl* pendant worn by fire priest, Codex Borbonicus, page 34.

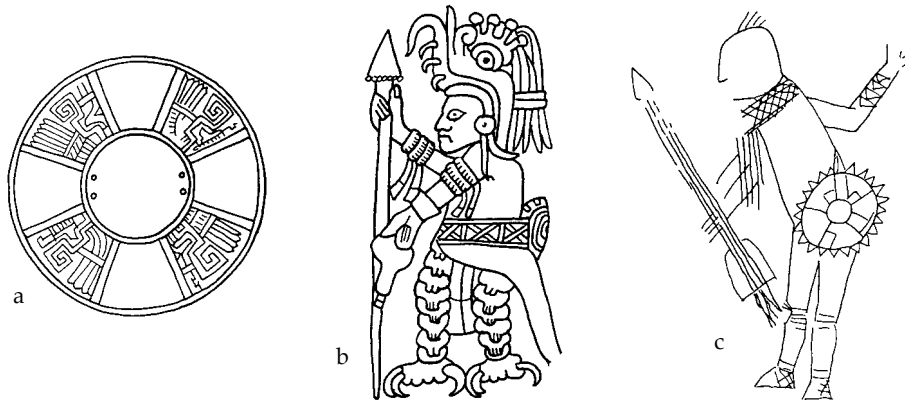


Figure 30. The Toltec style *tezcacuitlapilli* in Mesoamerica: (a) copper *tezcacuitlapilli* backing, Casas Grandes, Chihuahua (from Di Peso 1974a:2:Fig. 255); (b) deity with weapons and *tezcacuitlapilli*, Codex Grolier, page 8; (c) graffito from Akab Dzib, Chichen (drawing by author).

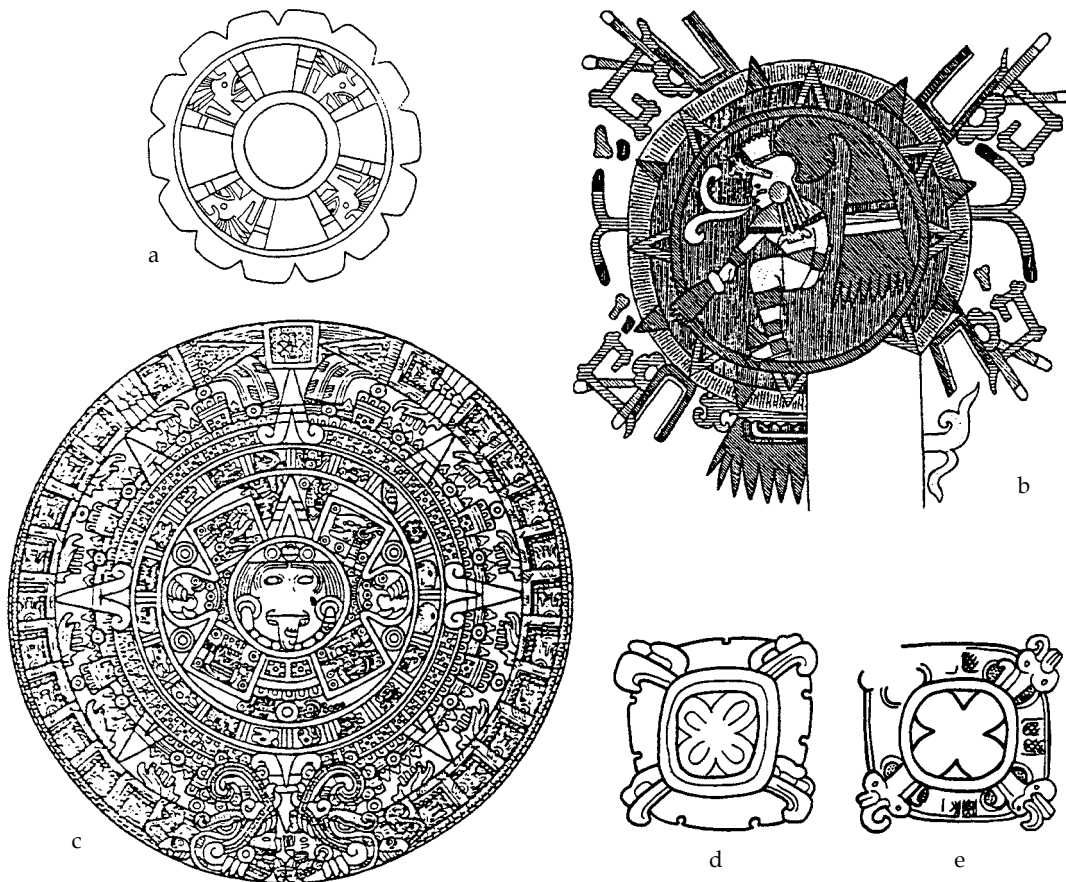


Figure 31. Solar mirrors in Mesoamerica: (a) schematic drawing of *tezcacuitlapilli* discovered in Temple of Chac Mool, Chichen (drawing by author); (b) solar disk framed by Xiuhcoatl serpents, Upper Temple of the Jaguars, Chichen (from Seler 1902-1923:5:343); (c) Aztec Calendar Stone, solar figure encircled by turquoise and pair of Xiuhcoatl serpents; (d) detail of Early Classic Tikal Stela 1; (e) detail of Late Classic Stela 10, Piedras Negras.

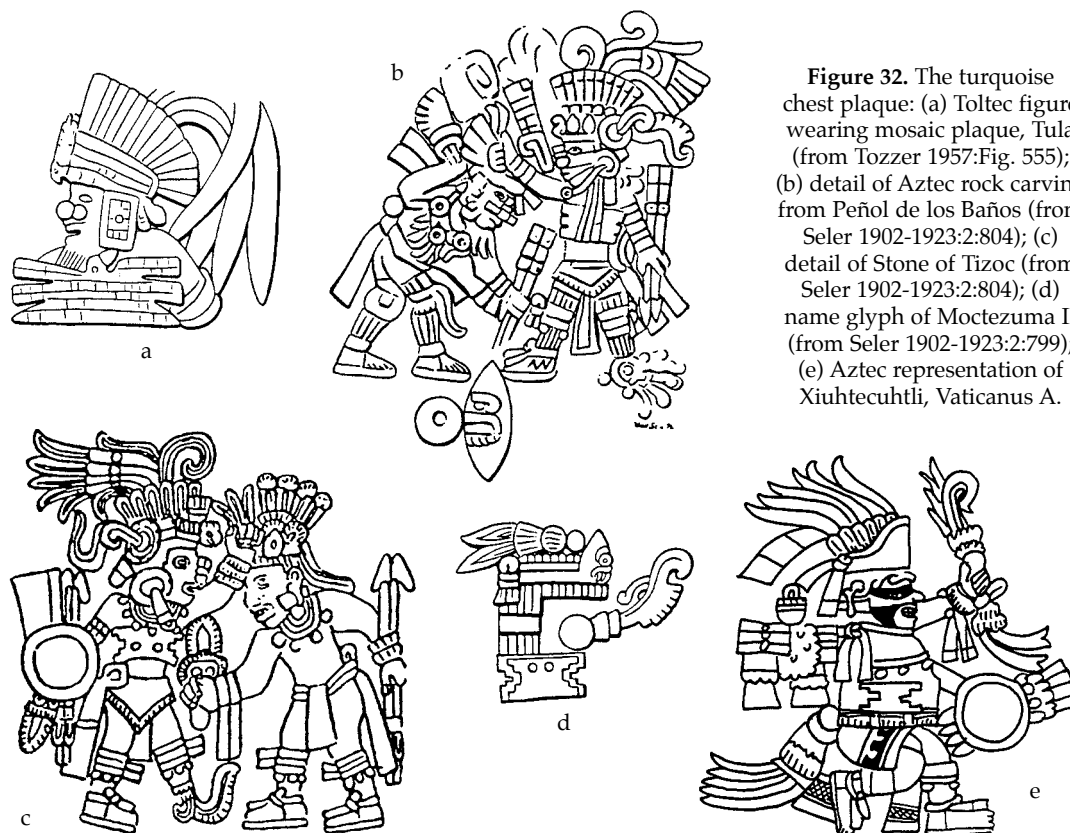


Figure 32. The turquoise chest plaque: (a) Toltec figure wearing mosaic plaque, Tula (from Tozzer 1957:Fig. 555); (b) detail of Aztec rock carving from Peñol de los Baños (from Selser 1902-1923:2:804); (c) detail of Stone of Tizoc (from Selser 1902-1923:2:804); (d) name glyph of Moctezuma II (from Selser 1902-1923:2:799); (e) Aztec representation of Xiuhtecuhtli, Vaticanus A.

Moreover, this chestpiece appears in the Aztec carving at Peñol de los Baños, here on a figure displaying attributes of both Tezcatlipoca and Xiuhtecuhtli, the turquoise lord of fire and rulership (Figure 32b). This same composite figure is also present on the Stone of Tizoc, although here the chestpiece is slightly different and now corresponds to the better known turquoise chestpiece appearing in the name glyph of Motecuhzoma II and on the Aztec Xiuhtecuhtli (Figure 32c–e).

In his early studies of Chichen iconography, Selser (1902-1923:1:690, 5:274) states that the descending bird commonly found on the brow of Chichen Toltec warriors represents the Xiuhtototl bird, or lovely cotinga (*Cotinga amabilis*), similarly found on the headdress of the Late Postclassic Xiuhtecuhtli (Figure 33a–b).¹⁶ This same headdress element is found at Tula (Figure 33c), and interestingly enough, in the Postclassic Maya Dresden Codex. On Dresden page 60, a warrior figure wielding a spear, atlatl darts, and a round shield, wears the Xiuhtototl in his headdress (Figure 33d). But by far the most interesting example occurs on page 49 of the Dresden Venus pages (Figure 33e). A recent study demonstrates that this is a unique Maya representation of Xiuhtecuhtli (Taube and Bade 1991). Thus the figure not only has the Xiuhtototl brow piece and the characteristic facial stripes of Xiuhtecuhtli, but also a version of the *xiuhuitzoll*i crown. In addition, the god wears a round breast piece similar to

¹⁶ The Xiuhtototl bird appears to have been of considerable importance in Postclassic Yucatan. According to Tozzer (1941:30, n. 159), the historic Tutul Xiu derived their name from the Nahuatl name of the lovely cotinga.

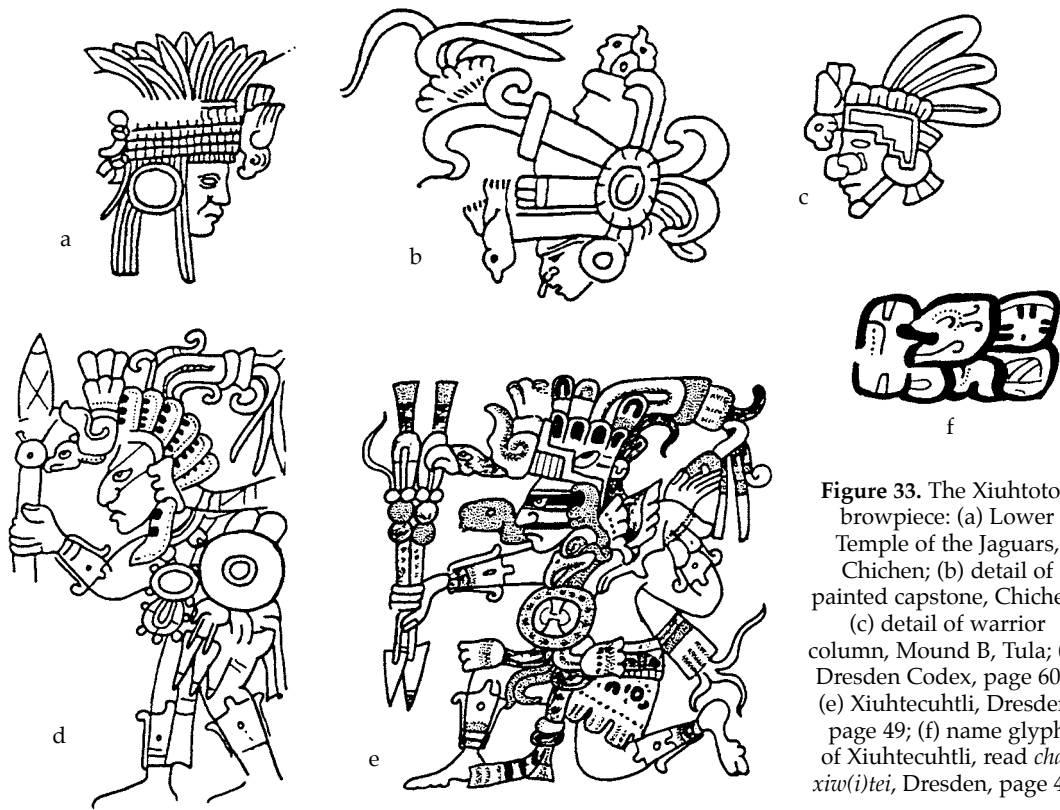


Figure 33. The Xiuhtototl browpiece: (a) Lower Temple of the Jaguars, Chichen; (b) detail of painted capstone, Chichen; (c) detail of warrior column, Mound B, Tula; (d) Dresden Codex, page 60b; (e) Xiuhtecuhtli, Dresden, page 49; (f) name glyph of Xiuhtecuhtli, read *chac xiw(i)tei*, Dresden, page 49.

the Aztec sign for turquoise, or *xiuitl*, such as appears in the toponym for *xiuh-tepec*. However, the most striking confirmation of his identity lies in his name glyph, composed of a *chac* sign, a beaded skull, a T277 *wi* suffix, followed by a sign identified by Whittaker (1986:58) as *te* in the Landa alphabet, and finally, T679, Landa's *i* (Figure 33f). David Stuart (1987:37) proposes that the beaded skull sign has the phonetic value *xi*. With this value, the entire compound can be read as *chac xiw(i)tei*, a very close gloss for the Nahuatl Xiuhtecuhtli.

The presence of a phonetically named Xiuhtecuhtli in the Dresden Codex provides a great deal of support for the identification of turquoise, or *xiuitl*, in the iconography of Chichen. Thus along with being named Xiuhtecuhtli, the figure wears the Xiuhtototl bird, the *xiuhuitzolli* crown, and a turquoise chest piece. It would appear that the Maya of the Dresden Codex were entirely aware of turquoise and even its Nahuatl name. At Chichen and Tula, there was a virtual cult of turquoise. However, I know of only one indication of a possible turquoise object in Puuc art. A standing figure on Uxmal Stela 13 appears to wear a large, Toltec style *tezcacuitlapilli* (see Morley 1970:Fig. 20). However, there is no actual turquoise known for the Puuc Pure Florescent sites or for Classic Maya sites of the southern lowlands. In fact, turquoise, like metal, is generally absent from Mesoamerica until the Postclassic period. Chemical turquoise does not occur naturally in Mesoamerica; instead, it appears that much of the turquoise appearing in Mesoamerican sites comes from the distant mines of Cerrillos, New Mexico (Weigand et al. 1977). Arguments for the contemporaneity of Toltec Chichen and Classic Maya or the Maya origins of Toltec iconography must explain the widespread presence of turquoise at Toltec Chichen.

Conclusions

The iconography of Toltec period Chichen is by no means a monolithic portrayal of Toltec ideology. Instead, the Toltec period iconography reveals a profound understanding and appreciation of ancient Maya belief, as well as traditions of the Gulf Coast and the Cotzumalhuapan region of Guatemala. Although particular Toltec traits, such as the feathered serpents and back mirrors, can be easily traced to earlier traditions of highland Mexico, there are other elements which appear to be Toltec innovations. This is not only true for costume elements, such as turquoise regalia, but also religious ideology and presumably, political institutions as well.

The iconography of Toltec Chichen exhibits both Maya and Mexican cosmological concepts. The God N world bearers abounding in the art of Toltec Chichen are decidedly Maya in origin. However, although less common, the prone earth goddess seems to have had a particularly important role at Chichen. Her dismemberment by the bladed serpents appears to have provided a mythical legitimization for heart sacrifice.¹⁷ Although the dismemberment of the earth goddess by mythical snakes is known for the Late Postclassic Nahuatl, I know of no counterpart in the Classic iconography of the Maya region or highland Mexico. Much like the Aztec Huitzilopochtli and Coyolxauhqui myth, the dismemberment of the earth goddess may have been a Toltec innovation.

Both Mexican and Maya gods are widely depicted in the art of Toltec Chichen. Aside from the omnipresent God N, the Maya deities include the God of the Number 13, Chac, and God K. Representations of Chac are widespread at Toltec Chichen, and display a rich iconography that can be compared not only to the Puuc region, but also Classic sites of the southern lowlands. However, God K is quite rare at Toltec Chichen; this is all the more surprising when one recalls that one of the more important names mentioned in the Maya texts is Kakupacal Kauil, *kauil* being a Maya epithet for God K (Krochock 1988; see Stuart 1987:15). Mexican gods are also common at Toltec Chichen, and aside from the aforementioned representations of Quetzalcoatl, Tlahuizcalpantecuhtli, and the Maya Tonatiuh, there are also clear images of Tlaloc and Tezcatlipoca (see Thompson 1942). Although images of Tlaloc abound in Classic iconography of the Gulf Coast and Central Mexico, the Chichen depictions of Tezcatlipoca are the earliest reliable representations of this god known in Mesoamerica. The feathered serpent and sun disk pair probably refer simultaneously to both political offices and gods. The feathered serpent clearly enough is Quetzalcoatl, who merges into Tlahuizcalpantecuhtli, the fierce god of the morning star. Although the Tonatiuh figure is portrayed as a Maya, he is a new entity entirely distinct from the Maya jaguar sun god. It appears that the Maya Tonatiuh of the Toltec continued in Late Postclassic Mexican iconography as the princely sun god of the east.

The iconography of maize and subsistence at Toltec Chichen is wholly Maya, and has

¹⁷ Precisely who these twin bladed serpents represent is an important problem. I suspect that they refer to the masked feathered serpent and Maya solar king pair. Just below the scenes of human sacrifice and dismemberment of the earth goddess in the Upper Temple of the Jaguars, there is a wooden lintel representing the feathered serpent and sun disk pair facing a stacked bowl of hearts. They are flanked on either side by a pair of serpents, quite probably the same serpents slicing through the earth goddess in the scene above (see Coggins 1984b:Fig. 19). In both cases the serpents are supplied with hanks of hair pulled through a hollow spool.

clear analogues in the Classic art of the southern lowlands. The importance of maize offerings—particularly tamales—in the art of Toltec Chichen is in striking contrast to Central Mexican iconographic traditions, where maize foods are essentially absent from monumental sculpture. Moreover, the Temple of the Owls reveals a complex lore surrounding cacao that has clear parallels in Classic Maya art as well as the Terminal Classic art of Bilbao.

The explicit scenes of sacrifice with the ball game at Toltec Chichen have clear analogues with ball game iconography of the Gulf Coast, the Classic Maya, and Terminal Classic Bilbao. It is likely that the sacrificial ball game iconography at Toltec Chichen is partly derived from all three areas. I find it unlikely, however, that many traits of the Toltec Chichen ballgame derived from Central Mexico. The lowlands, rather than Mexican highlands, have always been the innovative center of the Mesoamerican ball game. Although Tozzer (1957:130) asserts that the sacrificial *cuauhxicalli* vessel is absent from the Maya lowlands, clear examples exist at Toltec Chichen, frequently as offerings to the Maya Tonatiuh. But although explicit representations of sacrifice are widespread at Toltec Chichen, it is unlikely that Chichen enjoyed a monopoly on heart sacrifice and decapitation. The many drum altars at Puuc sites, frequently with captive iconography, were probably also altars for heart sacrifice. Moreover, Andrews IV (1965:315) notes that the skull platforms at Dzibilchaltun and Uxmal were probably foundations for *tzompantli*. Dunning (n.d.) notes the presence of a probable *tzompantli* platform at Nohpat, here in close association to a ballcourt.

The identification by Tozzer (1930) of distinct Maya and Toltec warriors at Chichen appears to be entirely correct. Quite frequently, the Maya warriors are dressed as Chac, the Maya god of rain and lightning. In contrast, the Toltec warriors bear round shields, the atlatl, and are richly dressed in turquoise. Although it has received little investigation, the clear Aztec relationship of Xiuhtecuhtli with rulership and war could shed much light on the significance of the Toltec turquoise warrior. But although Tozzer (1930) correctly identifies Toltec and Maya warriors, his conclusions regarding a Toltec invasion of Chichen are unwarranted. It is true that there are explicit scenes of conquered and sacrificed Maya at Toltec Chichen (e.g., Lothrop 1952:Figs. 30, 31, 32, 34, 41, 42). However, it is quite another matter to argue that these are Chichen Maya. In other words, ethnic identity has been confused with political affiliation. It is quite likely that during the Toltec period, the Yucatec Maya were divided into competing political city states. Rather than depicting conquered Chichen Maya, these scenes could well represent the defeat of enemies of Toltec Chichen.

The iconography of Toltec Chichen suggests a self-conscious synthesis of Maya and Toltec traditions. Rather than being entirely eclipsed by Toltec influence, Maya traditions are clearly evident in all the themes that have been discussed. However, the Toltec period at Chichen is not a smooth homogenous blend of Mexican and Maya culture. Instead, the underlying theme appears to be “separate but equal”: Toltec and Maya figures are carefully distinguished. This is graphically displayed in the inner sanctuary of the Temple of Chac Mool (Morris 1931:Fig. 271). Whereas the north bench contains explicit depictions of Toltec figures, the south bench figures are exclusively Maya. At Chichen, this duality is exemplified by the Quetzalcoatl and Maya Tonatiuh figures. Although A. Miller (1977) views these two figures as being antagonistic, Lincoln (1988, 1990:165) rightly disagrees, and argues that they represent complementary aspects of rulership.

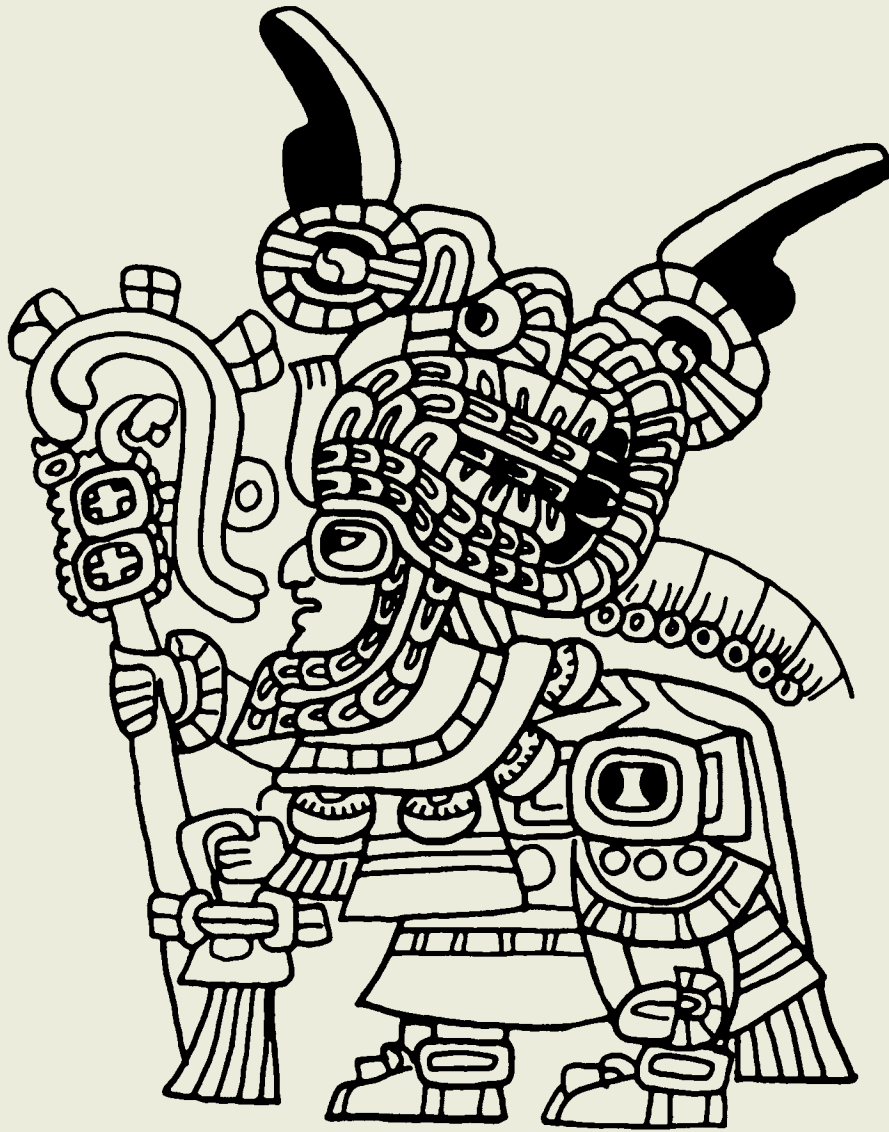
I find that the model of dual kingship proposed by Lincoln (ibid.) fits well with the iconography of Toltec Chichen. However, by minimizing the link of Toltec Chichen iconography to Central Mexico, Lincoln obscures the motivations behind this duality. According to

Lincoln, the dualism exhibited by the feathered serpent and sun figures is ultimately Classic Maya in origin. However, although I believe a similar contrast did exist among the Classic Maya, it was again a contrast between Lowland Maya and highland Mexican culture, in this case, the site of Teotihuacan. In her study of the warrior motif at Late Classic Piedras Negras, Andrea Stone (1989:167) argues that the Maya lords consciously identified themselves as Teotihuacan warriors. According to Stone, this identification of local Maya with foreign Mexicans was also widespread in Yucatan during the Terminal Classic and Postclassic periods: "*claims* of foreign affiliation were a favored form of propping up elite hierarchies in Yucatan from at least the Terminal Classic." Like Stone, I believe that both the Classic and Postclassic Maya elite aggressively adopted Central Mexican military costume and ideology. In my opinion, Toltec Chichen is the most developed example of this phenomenon known in ancient Mesoamerica. To the Maya, the Toltec imagery was the iconography of power: military strength legitimized by religious ideology. I suspect that whereas the Maya Tonatiuh represents the traditional Maya office of king, or *ahau*, the Toltec feathered serpent figure reflects the office of war captain or perhaps, even co-ruler of Toltec Chichen. However, because there are no texts explicitly describing these figures, this remains only conjecture. Nonetheless, it is clear that the influence of a Mexican warrior cult at Toltec Chichen is important, profound, and cannot be ignored.

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Bibliography (consolidating references from future volumes)

Acosta, Jorge R.

- 1942 La ciudad de Quetzalcóatl: exploraciones arqueológicas en Tula, Hidalgo. *Cuadernos Americanos* 2:121-131.
- 1945 La cuarta y quinta temporada de excavaciones en Tula, Hidalgo, 1943–1944. *Revista Mexicana de Estudios Antropológicos* 7:23-64.
- 1958-1959 Exploraciones arqueológicas en Monte Alban, XVIII temporada. *Revista Mexicana de Estudios Antropológicos* 15:7-50.

Acuña, René

- 1978 *Farsas y representaciones escénicas de los mayas antiguos*. Centro de Estudios Mayas 15. Universidad Nacional Autónoma de México, Mexico.

Adams, Karen R.

- 1994 A Regional Synthesis of *Zea mays* in the Prehistoric American Southwest. In *Corn and Culture in the Prehistoric New World*, edited by Sissel Johannessen and Christine Hastorf, pp. 273-302. Westview Press, Boulder.

Adams, Richard E. W.

- 1971 *The Ceramics of Altar de Sacrificios, Guatemala*. Papers 63(1). Peabody Museum of Archaeology and Ethnology, Cambridge, Mass.

Agrinier, Pierre

- 1960 *The Carved Human Femurs from Tomb 1, Chiapa de Corzo, Chiapas, Mexico*. Papers 6. Publication 5. New World Archaeological Foundation, Orinda.

Aguilera, Carmen

- 1981 *El Tonalámatl de Aubin*. Tlaxcala: Códices y Manuscritos 1. Rosette y Asociados Artes Gráficas, Mexico.

Agurcia Fasquelle, Ricardo

- 1997a Il tempio del Re Sole e la sua evoluzione nell'acropoli di Copán. In *I Maya di Copán: l'Atene del Centroamerica*, edited by Giuseppe Orefici, pp. 99-108. Skira Editore, Milan.
- 1997b Rosalila, An Early Classic Maya Cosmogram from Copan. *Symbols* (Spring):32-37.
- 1998 Copan: Art, Science and Dynasty. In *Maya*, edited by Peter Schmidt, Mercedes de la Garza, and Enrique Nalda, pp. 336-355. Rizzoli, New York.
- 2004 Rosalila, Temple of the Sun-King. In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello A. Canuto, and Robert J. Sharer, pp. 101-111. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

Agurcia Fasquelle, Ricardo, and Barbara W. Fash

- 1997 Evolution of Structure 10L-16, Heart of the Copán Acropolis. In *Copán: The History of an Ancient Maya Kingdom*, edited by E. Wyllys Andrews and William L. Fash, pp. 201-237. School of American Research Press, Santa Fe.

Agurcia Fasquelle, Ricardo, Payson Sheets, and Karl Andreas Taube

- 2016 *Protecting Sacred Space: Rosalila's Eccentric Chert Cache at Copan and Eccentrics among the Classic Maya*. Monograph 2. Precolumbia Mesoweb Press, San Francisco.

Agurcia Fasquelle, Ricardo, Donna K. Stone, Alfonso Morales, D. W. Kluth, and C. Leroux
1989 Estructura 10L-16 (OP 41), informe del campo, temporada 1989. Manuscript on file at the Instituto Hondureño de Antropología e Historia, Tegucigalpa and Copan.

Agurcia F., Ricardo, Donna K. Stone, and Jorge Ramos
1996 Tierra, tiestos, piedras, estratigrafía, y escultura: investigaciones en la Estructura 10L-16 de Copán. In *Visión del pasado maya*, edited by William L. Fash and Ricardo Agurcia Fasquelle, pp. 185-201. Asociación Copán, Copan.

Alcina Franch, José, Miguel León-Portilla, and Eduardo Matos Moctezuma
1992 *Azteca Mexica. Las culturas de México antiguo*. Sociedad Estatal Quinto Centenario; Lunwerg Editores, Madrid.

Alcorn, Janis B.
1984 *Huastec Mayan Ethnobotany*. University of Texas Press, Austin.

Alejandre, Marcelo
1890 *Cartilla huasteca con su gramática, diccionario, y varias reglas para aprender el idioma*. Secretaría de Fomento, Mexico.

Algaze, Guillermo
1993 Expansionary Politics of Some Early Pristine States. *American Anthropologist* 95:304-333.

Anawalt, Patricia Rieff
1996 Aztec Knotted and Netted Capes: Colonial Interpretations vs. Indigenous Primary Data. *Ancient Mesoamerica* 7(2):187-206.

Anders, Ferdinand, Maarten Jansen, and Luis Reyes Garcia
1993 *Los templos del cielo y de la oscuridad, oráculos y liturgia. Libro explicativo del llamado Códice Borgia*. Sociedad Estatal Quinto Centenario; Akademische Druck-und Verlagsanstalt; Fondo de Cultura Económica, Mexico.

Anderson, Dana
1978 Monuments. In *The Prehistory of Chalchuapa, El Salvador*, edited by Robert J. Sharer, v. 1, pp. 155-180. University of Pennsylvania Press, Philadelphia.

Anderson, Martha G., and Christine Mullen Kreamer
1989 *Wild Spirits, Strong Medicine: African Art and the Wilderness*. University of Washington Press, Seattle.

Anderson, Michael
1985 Curtain Holes in the Standing Architecture of Palenque. In *Fourth Palenque Round Table, 1980*, edited by Elizabeth P. Benson, pp. 21-27. Pre-Columbian Art Research Institute, San Francisco.

Alvarez del Toro, Miguel
1982 *Los reptiles de Chiapas*. 3rd ed. Instituto de Historia Natural, Tuxtla Gutiérrez.

André Emmerich and Perls Galleries
1984a *Masterpieces of Pre-Columbian Art*. Andre Emmerich and Perls Galleries, New York.
1984b *Masterpieces of Pre-Columbian Art from the Collection of Mr. and Mrs. Peter G. Wray*. Andre Emmerich and Perls Galleries, New York.

Andrews, Anthony P., Tomás Gallareta Negrón, J. Fernando Robles Castellanos, Rafael Cobos Palma, and Pura Cervera Rivero
1988 Isla Cerritos: An Itza Trading Port on the North Coast of Yucatan, Mexico. *National Geographic Research* 4(2):196-207.

- Andrews, E. Wyllys, IV
 1939 A Group of Related Sculptures from Yucatan. *Contributions to American Anthropology and History* 5(26):67-79. Publication 509. Carnegie Institution of Washington, Washington, D.C.
 1965 Archaeology and Prehistory in the Northern Maya Lowlands: An Introduction. In *Archaeology of Southern Mesoamerica*, Part 1, edited by Gordon R. Willey, pp. 288-330. Handbook of Middle American Indians 2. University of Texas Press, Austin.
- Andrews, E. Wyllys, IV, and E. Wyllys Andrews V
 1980 *Excavations at Dzibilchaltun, Yucatan, Mexico*. Publication 48. Middle American Research Institute, Tulane University, New Orleans.
- Andrews, E. Wyllys, V
 1981 Dzibilchaltun. In *Supplement to the Handbook of Middle American Indians, Volume 1: Archaeology*, edited by Jeremy A. Sabloff, pp. 313-344. University of Texas Press, Austin.
- Andrews, E. Wyllys, V, and Barbara W. Fash
 1992 Continuity and Change in a Royal Maya Residential Complex at Copan. *Ancient Mesoamerica* 3(1):63-88.
- Andrews, E. Wyllys, V, and Jeremy A. Sabloff
 1986 Classic to Postclassic: A Summary Discussion. In *Late Lowland Maya Civilization: Classic to Postclassic*, edited by Jeremy A. Sabloff and E. Wyllys Andrews V, pp. 433-456. University of New Mexico Press, Albuquerque.
- Andrews, George F.
 1989 *Comalcalco, Tabasco, Mexico: Maya Art and Architecture*. 2 vols. Labyrinthos, Culver City.
- Angulo V., Jorge
 1972 Reconstrucción etnográfica a través de la pintura. In *Teotihuacan. XI Mesa Redonda*, pp. 43-68. Sociedad Mexicana de Antropología, Mexico.
 1987 The Chalcatzingo Reliefs: An Iconographic Analysis. In *Ancient Chalcatzingo*, edited by David C. Grove, pp. 132-158. University of Texas Press, Austin.
- Anton, Ferdinand
 1969 *Ancient Mexican Art*. Thames and Hudson, London.
 1970 *Art of the Maya*. Thames and Hudson, London.
- Apostolides, Alex
 1987 Chalcatzingo Painted Art. In *Ancient Chalcatzingo*, edited by David C. Grove, pp. 171-199. University of Texas Press, Austin.
- Armillas, Pedro
 1950 Teotihuacán, Tula, y los toltecas. Las culturas post-arcaicas y pre-aztecas del centro de México. Excavaciones y estudios, 1922-1950. *Runa: Archivo para las Ciencias del Hombre* 3:37-70.
 1964 Northern Mesoamerica. In *Prehistoric Man in the New World*, edited by Jesse D. Jennings and Edward Norbeck, pp. 291-329. University of Chicago Press, Chicago.
- Arnold, Philip J., III
 2000 Sociopolitical Complexity and the Gulf Olmecs: A View from the Tuxtla Mountains, Veracruz, Mexico. In *Olmec Art and Archaeology in Mesoamerica*, edited by John E. Clark and Mary E. Pye, pp. 117-135. National Gallery of Art, Washington, D.C.
- Arts Club of Chicago
 1982 *High Culture in the Americas Before 1500*. The Arts Club of Chicago, Chicago.
- Ashmore, Wendy
 1980 Discovering Early Classic Quirigua. *Expedition* 23(1):35-44. Philadelphia.

Attinasi, John J.

1973 *Lak T'an: A Grammar of the Chol (Mayan) Word*. Ph.D. dissertation, Department of Anthropology, University of Chicago.

Aulie, H. Wilbur, and Evelyn W. de Aulie

1978 *Diccionario ch'ol-español, español-ch'ol*. Instituto Lingüístico de Verano, Mexico.

Aveleyra Arroyo de Anda, Luis

1963 La estela seccional de La Ventilla, Teotihuacán. *Boletín* 11:11-12. Instituto Nacional de Antropología e Historia, Mexico.

Aveni, Anthony F.

2000 Out of Teotihuacan: Origins of the Celestial Canon in Mesoamerica. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by David Carrasco, Lindsay Jones, and Scott Sessions, pp. 253-268. University Press of Colorado, Boulder.

Ball, Joseph W.

1974 A Teotihuacan-Style Cache from the Maya Lowlands. *Archaeology* 27(1):2-9.

1978 Archaeological Pottery of the Yucatan-Campeche Coast. In *Studies in the Archaeology of Coastal Yucatan and Campeche, Mexico*, edited by Jack D. Eaton and Joseph W. Ball, pp. 69-146. Publication 46. Middle American Research Institute, Tulane University, New Orleans.

1979 Ceramics, Culture History, and the Puuc Tradition: Some Alternative Possibilities. In *The Puuc: New Perspectives: Papers Presented at the Puuc Symposium, Central College, May 1977*, edited by Lawrence Mills, pp. 18-35. Central College, Pella, Iowa.

Barber, Sarah B., and Mireya Olvera Sánchez

2012 A Divine Wind: The Arts of Death and Music in Terminal Formative Oaxaca. *Ancient Mesoamerica* 23(1):9-24.

Barrera Rubio, Alfredo

1980 Mural Paintings of the Puuc Region in Yucatán. In *Third Palenque Round Table, 1978, Part 2*, edited by Merle Greene Robertson, pp. 173-182. University of Texas Press, Austin.

Barrera Rubio, Alfredo, and Karl A. Taube

1987 Los relieves de San Diego: nuevas perspectivas. *Boletín* 83:3-18. Escuela de Ciencias Antropológicas de la Universidad de Yucatán, Mérida.

Barrera Vásquez, Alfredo

1965 *El libro de los cantares de Dzitbalché*. Investigaciones 9. Instituto Nacional de Antropología e Historia, Mexico.

1980 *Diccionario maya Cordemex, maya-español, español-maya*. Alfredo Barrera Vásquez, director; Juan Ramón Bastarrachea Manzano and William Brito Sansores, editors; Refugio Vermont Salas, David Dzul Góngora, and Domingo Dzul Poot, collaborators. Ediciones Cordemex, Mérida.

Barthel, Thomas S.

1968 El complejo emblema. *Estudios de Cultura Maya* 7:159-193.

Bassie-Sweet, Karen

1991 *From the Mouth of the Dark Cave: Commemorative Sculpture of the Late Classic Maya*. University of Oklahoma Press, Norman.

2000 Corn Deities and the Complementary Male/Female Principle. *Mesoweb*: www.mesoweb.com/features/bassie/corn/Corn_Deities.pdf.

Baudez, Claude F.

1994 *Maya Sculpture of Copan: The Iconography*. University of Oklahoma Press, Norman.

1999 Los templos enmascarados de Yucatán. *Arqueología Mexicana* 7(37):54-59.

- Beals, Ralph L.
 1945a *Ethnology of the Western Mixe*. Publications in American Archaeology and Ethnology 42(1). University of California, Berkeley.
 1945b *The Contemporary Culture of the Cáhita Indians*. Bulletin 142. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.
 1973 *Cherán: A Sierra Tarascan Village*. Cooper Square Publishers, New York.
- Becquelin, Pierre, and Claude F. Baudez
 1979-1982 *Tonina, une Cité Maya du Chiapas (Mexique)*. 3 vols. Collection Études Mésoaméricaines. Mission Archéologique et Ethnologique Française au Mexique, Mexico.
- Beekman, John, and Elaine Beekman
 1953 *Vocabulario chol*. Instituto Lingüístico de Verano, Mexico.
- Beetz, Carl P., and Linton Satterthwaite
 1981 *The Monuments and Inscriptions of Caracol, Belize*. Monograph 45. University Museum, University of Pennsylvania, Philadelphia.
- Bell, Ellen E., Robert J. Sharer, Loa P. Traxler, David W. Sedat, Christine W. Carrelli, and Lynn A. Grant
 2004 Tombs and Burials in the Early Classic Acropolis at Copan. In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello A. Canuto, and Robert J. Sharer, pp. 131-157. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.
- Belt, Thomas
 1874 *The Naturalist in Nicaragua*. E. Bumpas, London.
- Ben-Amos, Paula
 1976 Men and Animals in Benin Art. *Man* 11:243-252.
- Benson, Elizabeth P.
 1971 *An Olmec Figure at Dumbarton Oaks*. Studies in Pre-Columbian Art and Archaeology 8. Dumbarton Oaks, Washington, D.C.
 1979 From the Island of Jaina: A Maya Figurine. *Bulletin of the Detroit Institute of Arts* 57(3):94-103. Detroit.
- Benson, Elizabeth P., and Beatriz de la Fuente, eds.
 1996 *Olmec Art of Ancient Mexico*. National Gallery of Art, Washington, D.C.
- Berdan, Francis F., and Patricia Rieff Anawalt, eds.
 1992 *The Codex Mendoza*. 4 vols. University of California Press, Berkeley.
- Berjonneau, Gerald, Emile Deletaille, and Jean-Louis Sonnery
 1985 *Rediscovered Masterpieces of Mesoamerica: Mexico-Guatemala-Honduras*. Editions Arts 135, Boulogne.
- Berlin, Brent, Dennis H. Breedlove, and Peter H. Raven
 1974 *Principles of Tzeltal Plant Classification: An Introduction to the Botanical Ethnography of a Mayan-Speaking People of Highland, Chiapas*. Academic Press, New York.
- Berlin, Heinrich
 1958 El glifo "emblema" en las inscripciones mayas. *Journal de la Société des Américanistes* 47:111-119. Paris.
- Berlin, Heinrich, and David H. Kelley
 1961 The 819 Day Count and Color-Direction Symbolism Among the Classic Maya. In *Archaeological Studies in Middle America*, pp. 9-20. Publication 26. Middle American Research Institute, Tulane University, New Orleans.

Berlo, Janet Catherine

- 1976 *The Teotihuacan Trapeze and Ray Sign: A Study of the Diffusion of Symbols*. M.A. thesis, Department of History of Art, Yale University, New Haven.
- 1982 *Artistic Specialization at Teotihuacan: The Ceramic Incense Burner*. In *Pre-Columbian Art History: Selected Readings*, edited by Alana Cordy-Collins and Jean Stern, pp. 83-100. Peek Publications, Palo Alto.
- 1983a *Conceptual Categories for the Study of Texts and Images in Mesoamerica*. In *Text and Image in Pre-Columbian Art: Essays on the Interrelationship of the Visual and Verbal Arts*, edited by Janet Berlo, pp. 1-39. BAR International Series 180. British Archaeological Reports, Oxford.
- 1983b *The Warrior and the Butterfly: Central Mexican Ideologies of Sacred Warfare and Teotihuacan Iconography*. In *Text and Image in Pre-Columbian Art: Essays on the Interrelationship of the Visual and Verbal Arts*, edited by Janet Berlo, pp. 79-117. BAR International Series 180. British Archaeological Reports, Oxford.
- 1984 *Teotihuacan Art Abroad: A Study of Metropolitan Style and Provincial Transformation in Incensario Workshops*. 2 vols. BAR International Series 199. British Archaeological Reports, Oxford.
- 1992 *Icons and Ideologies at Teotihuacan: The Great Goddess Reconsidered*. In *Art, Ideology, and the City of Teotihuacan*, edited by Janet C. Berlo, pp. 129-168. Dumbarton Oaks, Washington, D.C.

Bernal, Ignacio

- 1969a *100 Great Masterpieces of the Mexican National Museum of Anthropology*. Harry N. Abrams, New York.
- 1969b *The Olmec World*. University of California Press, Berkeley.

Berrin, Kathleen, ed.

- 1988 *Feathered Serpents and Flowering Trees: Reconstructing the Murals of Teotihuacán*. Fine Arts Museums of San Francisco, San Francisco.

Berrin, Kathleen, and Esther Pasztory, eds.

- 1993 *Teotihuacan: Art from the City of the Gods*. Thames and Hudson, New York.

Beutelspacher Baigts, Carlos Rommel

- 1984 *Mariposas de México*. La Prensa Médica Mexicana, Mexico.

Beyer, Hermann

- 1936 *Another Maya Hieroglyph for Day*. *American Antiquity* 2(1):13-14.
- 1965a *El cuauhpilolli, la borla de pluma del dios Mixcoatl*. *El México Antiguo* 10:313-325.
- 1965b *El llamado "Calendario azteca"*. Descripción e interpretación del cuauhxicalli de la "Casa de las Águilas." *El México Antiguo* 10:134-256.
- 1969 *Una pequeña colección de antigüedades mexicanas*. *El México Antiguo* 11:177-221.

Bierhorst, John

- 1985 *Cantares Mexicanos: Songs of the Aztecs*. Stanford University Press, Stanford.
- 1992 *History and Mythology of the Aztecs: The Codex Chimalpopoca*. University of Arizona Press, Tucson.

Bishop, Ronald L., Dorie J. Reents, Garman Harbottle, Edward V. Sayre, and Lambertus van Zelst

- 1985 *The Area Group: An Examination of Style and Paste Compositional Covariation in Maya Pottery*. In *Fifth Palenque Round Table, 1983*, edited by Virginia M. Fields, pp. 79-84. Pre-Columbian Art Research Institute, San Francisco.

Black, Mary E.

- 1984 *Maidens and Mothers: An Analysis of Hopi Corn Metaphors*. *Ethnology* 23(4):279-288.

Blaffer, Sarah C.

- 1972 *The Black-man of Zinacantan*. University of Texas Press, Austin.

- Blainey, Marc G.
2016 Techniques of Luminosity: Iron-Ore Mirrors and Entheogenic Shamanism among the Ancient Maya. In *Manufactured Light: Mirrors in the Mesoamerican Realm*, edited by Emiliano Gallaga M. and Marc G. Blainey, pp. 179-206. University of Colorado Press, Niwot.
- Blake, Michael, Brian S. Chisholm, John E. Clark, Barbara Voorhies, and Michael W. Love
1992 Prehistoric Subsistence in the Soconusco Region. *Current Anthropology* 33(1):83-94.
- Blake, Michael, John E. Clark, Barbara Voorhies, George Michaels, Michael W. Love, Mary E. Pye, Arthur A. Demarest, and Barbara Arroyo
1995 Radiocarbon Chronology for the Late Archaic and Formative Periods on the Pacific Coast of Southeastern Mesoamerica. *Ancient Mesoamerica* 6(2):161-183.
- Blinkenberg, Christopher
1911 *The Thunderweapon in Religion and Folklore: A Study in Comparative Archaeology*. Cambridge University Press, Cambridge.
- Boas, Franz
1966 *Kwakiutl Ethnography*. Helen Codere, ed. University of Chicago Press, Chicago.
- Bohannon, Paul, and George Dalton
1962 Introduction. In *Markets in Africa*, edited by Paul Bohannon and George Dalton, pp. 1-26. Northwestern University Press, Evanston.
- Bohrer, Vorsila L.
1994 Maize in Middle American and Southwestern United States Agricultural Traditions. In *Corn and Culture in the Prehistoric New World*, edited by Sissel Johannessen and Christine Hastorf, pp. 469-512. Westview Press, Boulder.
- Bolz, Ingeborg
1975a *Meisterwerke altindianischer Kunst. Die Sammlung Ludwig im Rautenstrauch-Joest-Museum Köln*. Aurel Bongers, Recklinghausen.
1975b *Sammlung Ludwig Altamerika. Ethnologica* 7. Berlin.
- Bonifaz Nuño, Rubén
1981 *The Art in the Great Temple, México-Tenochtitlan*. Instituto Nacional de Antropología e Historia, Mexico.
1993 *El Museo Amparo. Colección prehispánica*. Fundación Amparo, Puebla.
- Boone, Elizabeth Hill
1983 *The Codex Magliabechiano and the Lost Prototype of the Magliabechiano Group*. 2 vols. University of California Press, Berkeley.
1989 *Incarnations of the Aztec Supernatural: The Image of Huitzilopochtli in Mexico and Europe*. American Philosophical Society, Philadelphia.
1996 Venerable Place of Beginnings: The Aztec Understanding of Teotihuacan. Paper presented at the symposium "The Classic Heritage: From Teotihuacan to the Templo Mayor," Moses Mesoamerican Archive and Research Project, Princeton University.
2000 *Stories in Red and Black: Pictorial Histories of the Aztecs and Mixtecs*. University of Texas Press, Austin.
- Boos, Frank H.
1966 *The Ceramic Sculptures of Ancient Oaxaca*. A. S. Barnes, South Brunswick.
1968 Two Zapotec Urns with Identical Unclassified Figures Display a Unique Maize Fertility Concept. *Baessler Archiv* 16:1-8. Berlin.

Boot, Erik

n.d. Architecture and Identity in the Northern Maya Lowlands: The Temple of K'uk'ulk'an at Chichen Itza, Yucatan, Mexico. Manuscript.

Borhegyi, Stephan F.

1959 The Composite or "Assemble-It-Yourself" Censer: A New Lowland Maya Variety of the Three-Pronged Incense Burner. *American Antiquity* 25(1):51-58.

1965 Archaeological Synthesis of the Guatemala Highlands. In *Archaeology of Southern Mesoamerica*, Part 1, edited by Gordon R. Willey, pp. 3-58. Handbook of Middle American Indians 2. University of Texas Press, Austin.

Both, Arnd Adje

2002 Aztec Flower-Flutes: The Symbolic Organization of Sound in Late Postclassic Mesoamerica. *Journal of the Acoustical Society of America* 112(5):2367.

2005 Music: Music and Religion in Mesoamerica. In *Encyclopedia of Religion*, edited by Lindsay Jones, pp. 6266-6271. MacMillan Reference, Detroit.

Bowditch, Charles P.

1910 *The Numeration, Calendar Systems and Astronomical Knowledge of the Mayas*. Harvard University Press, Cambridge, Mass.

Boyd, Elizabeth

1974 *Popular Arts of Spanish New Mexico*. Museum of New Mexico Press, Santa Fe.

Bradley, Douglas E., and Peter David Joralemon

1993 *The Lords of Life: The Iconography of Power and Fertility in Preclassic Mesoamerica*. Snite Museum of Art, University of Notre Dame, South Bend.

Brainerd, George W.

1958 *The Archaeological Ceramics of Yucatan*. Anthropological Records 19. University of California, Berkeley.

Braswell, Geoffrey E.

2003 Introduction: Reinterpreting Early Classic Interaction. In *The Maya and Teotihuacan: Reinterpreting Early Classic Maya Interaction*, edited by Geoffrey E. Braswell, pp. 1-43. University of Texas Press, Austin.

Bray, Warwick

1970 *Ancient Mesoamerica. Precolumbian Mexican and Maya Art: An Exhibition of Material from Private Collections in Great Britain*. Birmingham Museum and Art Gallery, Birmingham.

Breton, Adela C.

1917 Preliminary Study of the North Building (Chamber C) of the Great Ball Court, Chichen Itza, Yucatan. In *Proceedings of the International Congress of Americanists (19th session, Washington, D.C., 1915)*, pp. 187-194. Washington, D.C.

Brettell, Richard

1993 *The Museum of the Americas: Dallas Museum of Art*. Apollo Magazine, London.

Brewer, Forrest, and Jean W. Brewer

1971 *Vocabulario de Tetelcingo, Morelos*. Summer Institute of Linguistics, Mexico.

Bricker, Victoria R.

1973 *Ritual Humor in Highland Chiapas*. University of Texas Press, Austin.

1981 *The Indian Christ, the Indian King: The Historical Substrate of Maya Myth and Ritual*. University of Texas Press, Austin.

Brittenham, Claudia

2015 *The Murals of Cacaxtla: The Power of Painting in Ancient Central Mexico*. University of Texas Press, Austin.

Broda de Casas, Johanna

1969 *The Mexican Calendar as Compared to Other Mesoamerican Systems*. Acta Ethnologica et Linguistica 15. Engelbert Stiglmayr, Vienna.

1982 La fiesta azteca del Fuego Nuevo y el culto de la Pléyades. In *Space and Time in the Cosmivision of Mesoamerica*, edited by Franz Tichy, pp. 129-158. Wilhelm Fink, Munich.

1987 Templo Mayor as Ritual Space. In *The Great Temple of Tenochtitlan: Center and Periphery in the Aztec World*, edited by Johanna Broda, David Carrasco, and Eduardo Matos Moctezuma, pp. 61-123. University of California Press, Berkeley.

1996 Paisajes rituales del Altiplano central. *Arqueología Mexicana* 4(20):40-49.

Brody, J. J.

1991 *Anasazi and Pueblo Painting*. University of New Mexico Press, Albuquerque.

Brown, Peter Lancaster

1973 *Comets, Meteorites, and Men*. Tamplinger Publishing Company, New York.

Brueggemann, Juergen K., Sara Ladrón de Guevara, and Juan Sánchez Bonilla

1992 *Tajín*. Citibank, Mexico.

Bullé Goyri, Alfonso, ed.

1987 *Cacaxtla*. Text by Eduardo Matos Moctezuma; photographs by Rafael Doniz. Citicorp, Mexico.

Bunzel, Ruth L.

1932 Zuñi Katsinas: An Analytical Study. *Forty-Seventh Annual Report of the Bureau of American Ethnology, 1929-1930*, pp. 837-1108. Smithsonian Institution, Washington, D.C.

1952 *Chichicastenango: A Guatemalan Village*. J. J. Augustin, Locust Valley, New York.

Burke, John G.

1986 *Cosmic Debris: Meteorites in History*. University of California Press, Berkeley.

Burkhart, Louise M.

1986 Moral Deviance in Sixteenth-Century Nahuatl and Christian Thought: The Rabbit and the Deer. *Journal of Latin American Lore* 12(2):107-139. Los Angeles.

1992 Flowery Heaven: The Aesthetic of Paradise in Nahuatl Devotional Literature. *Res: Anthropology and Aesthetics* 21:88-109.

Burland, C. A.

1971 *Codex Fejérváry-Mayer*. Akademische Druck-u. Velagsanstalt, Graz.

Byland, Bruce, and John M. D. Pohl

1994 *In the Realm of 8 Deer*. University of Oklahoma Press, Norman.

Cabrera Castro, Rubén

1995 Atetelco. In *La pintura mural prehispánica en México, Teotihuacán*, edited by Beatriz de la Fuente, 1(1):202-256. Universidad Nacional Autónoma de México, Mexico.

1993 Human Sacrifice at the Temple of the Feathered Serpent: Recent Discoveries at Teotihuacan. In *Teotihuacan: Art from the City of the Gods*, edited by Kathleen Berrin and Esther Pasztor, pp. 100-107. Thames and Hudson, New York.

1996 Caracteres glíficos teotihuacanos en un piso de La Ventilla. In *La pintura mural prehispánica en México, Teotihuacán*, edited by Beatriz de la Fuente, 1(2):401-427. Universidad Nacional Autónoma de México, Mexico.

1998 Teotihuacan. Nuevos datos para el estudio de las rutas de comunicación. In *Rutas de intercambio en Mesoamérica*, edited by Evelyn C. Rattray, pp. 57-100. Universidad Nacional Autónoma de México, Mexico.

- Cabrera Castro, Rubén, María Elena Ruiz Gallut, and Miguel Ángel Trinidad Meléndez
 1996 Murales del acervo de la zona arqueológica de Teotihuacan: devolución reciente. In *La pintura mural prehispánica en México, Teotihuacán*, edited by Beatriz de la Fuente, 1(2):465-474. Universidad Nacional Autónoma de México, Mexico.
- Cabrera Castro, Rubén, and Saburo Sugiyama
 1982 La reexploración y restauración del Templo Viejo de Quetzalcoatl. In *Memoria del Proyecto Arqueológico Teotihuacan 80-82*, edited by Rubén Cabrera Castro, Ignacio Rodríguez García, and Noel Morelos García, pp. 163-183. Colección Científica 132. Instituto Nacional de Antropología e Historia, Mexico.
- Cabrera Castro, Rubén, Saburo Sugiyama, and George Cowgill
 1988 Summer 1988 Discoveries at the Feathered Serpent Pyramid. Paper presented at the symposium "Art, Polity and the City of Teotihuacan," Dumbarton Oaks, Washington, D.C.
 1991 The Templo de Quetzalcoatl Project at Teotihuacan. *Ancient Mesoamerica* 2(1):77-92.
- Campaña, Luz Evelia, and Sylviane Boucher
 2002 Nuevas imágenes de Becán, Campeche. *Arqueología Mexicana* 10(56):64-69.
- Campbell, Jonathan A., and William W. Lamar
 1989 *The Venomous Reptiles of Latin America*. Comstock Publishing, Ithaca.
- Cantú, Graciela R., and Manuel Carballo
 1969 *Cerámica maya de la colección Manuel Barbachano Ponce*. Central de Artes Gráficas, Mexico.
- Carlson, John B.
 1981 Olmec Concave Iron-Ore Mirrors: The Aesthetics of a Lithic Technology and the Lord of the Mirror. In *The Olmec and Their Neighbors: Essays in Memory of Matthew W. Stirling*, edited by Elizabeth P. Benson, pp. 117-147. Dumbarton Oaks, Washington, D.C.
- Carlson, John B., and Linda C. Landis
 1985 Bands, Bicephalic Dragons, and Other Beasts: The Skyband in Maya Art and Iconography. In *Fourth Palenque Round Table, 1980*, edited by Elizabeth P. Benson, pp. 115-140. Pre-Columbian Art Research Institute, San Francisco.
- Carlsen, Robert S., and Martin Prechtel
 1991 The Flowering of the Dead: An Interpretation of Highland Maya Culture. *Man* 26:23-42.
 1997 The Flowering of the Dead. In *The War for the Heart and Soul of a Highland Maya Town*, edited by Robert S. Carlsen, pp. 47-67. University of Texas Press, Austin.
- Carmack, Robert M.
 1981 *The Quiche Mayas of Utatlan: The Evolution of a Highland Guatemala Kingdom*. University of Oklahoma Press, Norman.
- Carrasco, David
 1999 *City of Sacrifice: The Aztec Empire and The Role of Violence in Civilization*. Beacon Press, Boston.
- Carrasco Vargas, Ramón
 1999 Tumbas reales de Calakmul. Ritos funerarios e estructura de poder. *Arqueología Mexicana* 7(40):28-31.
 2000 El cuchcabal de la cabeza de serpiente. *Arqueología Mexicana* 7(42):12-19.
- Caso, Alfonso
 1928 *Las estelas zapotecas*. Monografías del Museo Nacional de Arqueología, Historia y Etnografía. Secretaría de Educación Pública, Mexico.
 1938 *Exploraciones en Oaxaca, quinta y sexta temporadas 1936-1937*. Publication 34. Instituto Panamericano de Geografía e Historia, Mexico.

- 1940 El entierro del siglo. *Revista Mexicana de Estudios Antropológicos* 4:11-45.
- 1947a *Calendario y escritura de las antiguas culturas de Monte Albán*. Cooperativa Talleres Gráficos de la Nación, Mexico.
- 1947b Resumen del informe de las exploraciones en Oaxaca, durante la séptima and octava temporadas 1937-1938 y 1938-1939. In *Proceedings of the International Congress of Americanists (27th session, Mexico, 1939)*, v. 2, pp. 159-187. Mexico.
- 1949 Una urna con el dios mariposa. *El México Antiguo* 7:78-95.
- 1959 Nombres calendáricos de los dioses. *El México Antiguo* 9:77-99.
- 1960 *Interpretation of the Codex Bodley 2858*. Sociedad Mexicana de Antropología, Mexico.
- 1962 Calendario y escritura en Xochicalco. *Revista Mexicana de Estudios Antropológicos* 18(1):49-80.
- 1965 Lapidary Work, Goldwork, and Copperwork from Oaxaca. In *Archaeology of Southern Mesoamerica, Part 2*, edited by Gordon R. Willey, pp. 896-930. Handbook of Middle American Indians 3. University of Texas Press, Austin.
- 1966 Dioses y signos teotihuacanos. In *Teotihuacán. Onceava Mesa Redonda*, pp. 249-279. Sociedad Mexicana de Antropología, Mexico.
- 1967 *Los calendarios prehispánicos*. Universidad Nacional Autónoma de México, Mexico.
- 1969 *El tesoro de Monte Albán*. Memorias 3. Instituto Nacional de Antropología e Historia, Mexico.
- 1971 Calendrical Systems of Central Mexico. In *Archaeology of Northern Mesoamerica, Part 1*, edited by Gordon F. Ekholm and Ignacio Bernal, pp. 333-348. Handbook of Middle American Indians 10. University of Texas Press, Austin.
- 1979 *Reyes y reinos de la Mixteca*. 2 vols. Fondo de Cultura Económica, Mexico.
- Caso, Alfonso, and Ignacio Bernal
- 1952 *Urnas de Oaxaca*. Memorias 2. Instituto Nacional de Antropología e Historia, Mexico.
- Castro-Leal, Marcia
- 1986 *El juego de pelota: una tradición prehispánica viva*. Museo Nacional de Antropología; Instituto Nacional de Antropología e Historia, Mexico.
- Cepeda Cárdenas, Gerardo
- 1970 Estela del Cerro de los Monos, Tlalchapa, Guerrero. *Boletín* 40:15-20. Instituto Nacional de Antropología e Historia, Mexico.
- Cervantes, Maria Antonieta
- 1969 Dos elementos de uso ritual en el arte olmeca. *Anales, época 7a*, 1:37-51. Instituto Nacional de Antropología e Historia, Mexico.
- Chadwick, R.
- 1971 Postclassic Pottery of the Central Valleys. In *Archaeology of Northern Mesoamerica, Part 1*, edited by Gordon F. Ekholm and Ignacio Bernal, pp. 228-257. Handbook of Middle American Indians 10. University of Texas Press, Austin.
- Chapman, Anne
- 1978 *Les Enfants de la Mort: Univers mythique des Indiens Tolupan (Jiquaque)*. Études Mésoaméricaines 4. Mission Archéologique et Ethnologique Française au Mexique, Mexico.
- Charnay, Désiré
- 1887 *The Ancient Cities of the New World: Being Voyages and Explorations in Mexico and Central America from 1857-1882*. Chapman, London.
- Chase, Arlen F.
- 1986 Time Depth or Vacuum: The 11.3.0.0.0 Correlation and the Lowland Maya Postclassic. In *Late Lowland Maya Civilization: Classic to Postclassic*, edited by Jeremy A. Sabloff and E. Wyllys Andrews V, pp. 99-140. University of New Mexico Press, Albuquerque.
- Chase, Arlen, Nikolai Grube, and Diane Chase
- 1991 Three Terminal Classic Monuments from Caracol, Belize. *Research Reports on Ancient Maya Writing* 36:1-18. Center for Maya Research, Washington, D.C.

Chase, Diane Z.

1985 Between Earth and Sky: Idols, Images, and Postclassic Cosmology. In *Fifth Palenque Round Table, 1983*, edited by Virginia M. Fields, pp. 223-233. Pre-Columbian Art Research Institute, San Francisco.

Chase, Diane Z., and Arlen F. Chase

1986 *Offerings to the Gods: Maya Archaeology at Santa Rita Corozal*. University of Central Florida, Orlando.

Chimalpain Cuauhtlehuanitzin, Domingo Francisco de San Antón Muñón

1991 *Memorial breve acerca de la fundación de la ciudad de Culhuacan*. Víctor M. Castillo Farreras, trans. Universidad Nacional Autónoma de México, Mexico.

Chowning, Ann

1956 A Round Temple and Its Shrine at Mayapan. *Current Reports* 2(34):443-461. Carnegie Institution of Washington, Cambridge, Mass.

Church, Clarence E., and Katherine Church

1955 *Vocabulario castellano-jacalteco, jacalteco-castellano*. Instituto Lingüístico de Verano, Guatemala.

Ciaramella, Mary A.

n.d. The Lady with the Snake Headdress. Manuscript.

Cisneros Gallery

1969 *Surrealism in Pre-Columbian Art*. Cisneros Gallery, New York.

Clancy, Flora S.

1974 Maya Pedestal Stones. *New Mexico Studies in the Fine Arts* 1:1019. Albuquerque.

1988 The Compositions and Contexts of the Classic Stelae at Copan and Quirigua. In *The Southeast Classic Maya Zone*, edited by Elizabeth Hill Boone and Gordon R. Willey, pp. 195-221. Dumbarton Oaks, Washington, D.C.

Clark, John L.

1978 The Statue of La Morelia. *Contributions of the University of California Archaeological Research Facility* 36:47-53. Department of Anthropology, University of California, Berkeley.

Clark, John E., and Michael Blake

1989 El origen de la civilización en Mesoamerica: los olmecas y mokaya del Soconusco de Chiapas, México. In *El preclásico o formativo. Avances y perspectivas*, edited by Martha Carmona, pp. 385-403. Museo Nacional de Antropología; Instituto Nacional de Antropología e Historia, Mexico.

1994 The Power of Prestige: Competitive Generosity and the Emergence of Rank Societies in Lowland Mesoamerica. In *Factional Competition and Political Development in the New World*, edited by Elizabeth M. Brumfiel and John W. Fox, pp. 17-30. Cambridge University Press, New York.

Clark, John E., and Mary E. Pye

2000 The Pacific Coast and the Olmec Question. In *Olmec Art and Archaeology in Mesoamerica*, edited by John E. Clark and Mary E. Pye, pp. 217-251. National Gallery of Art, Washington, D.C.

Clarkson, Persis B.

1978 Classic Maya Pictorial Ceramics: A Survey of Content and Theme. In *Papers on the Economy and Architecture of the Ancient Maya*, edited by Raymond Sidrys, pp. 86-141. Monograph 8. Institute of Archaeology, University of California, Los Angeles.

Clewlow, Carl William, Jr.

1968 Comparación de dos extraordinarios monumentos olmecas. *Boletín* 34:7-41. Instituto de Antropología e Historia, Mexico.

- Cline, Howard F.
1944 Lore and Deities of the Lacandon Indians, Chiapas, Mexico. *Journal of American Folklore* 57:107-15. Philadelphia.
- Codex Mendoza
1978 *Codex Mendoza: Aztec Manuscript*. Commentaries by Kurt Ross. Liber, Fribourg
- Coe, Michael D.
1962 *Mexico*. Praeger, New York.
1965a Archaeological Synthesis of Southern Veracruz and Tabasco. In *Archaeology of Southern Mesoamerica, Part 2*, edited by Gordon R. Willey, pp. 679-715. Handbook of Middle American Indians 3. University of Texas Press, Austin.
1965b *The Jaguar's Children: Pre-Classic Central Mexico*. Museum of Primitive Art, New York.
1966 *An Early Stone Pectoral From Southeastern Mexico*. Studies in Pre-Columbian Art and Archaeology 1. Dumbarton Oaks, Washington, D.C.
1968 *America's First Civilization: Discovering the Olmec*. American Heritage, New York.
1973 *The Maya Scribe and His World*. Grolier Club, New York.
1975a *Classic Maya Pottery at Dumbarton Oaks*. Dumbarton Oaks, Washington, D.C.
1975b Native Astronomy in Mesoamerica. In *Archaeoastronomy in Pre-Columbian America*, edited by Anthony F. Aveni, pp. 3-31. University of Texas Press, Austin.
1977 Supernatural Patrons of Maya Scribes and Artists. In *Social Process in Maya Prehistory*, edited by Norman Hammond, pp. 327-347. Academic Press, New York.
1978 *Lords of the Underworld: Masterpieces of Classic Maya Ceramics*. The Art Museum, Princeton University, Princeton.
1981a Religion and the Rise of Mesoamerican States. In *The Transition to Statehood in the New World*, edited by Grant D. Jones and Robert R. Kautz, pp. 157-171. Cambridge University Press, Cambridge.
1981b The Maya God N in the Memorial Art Gallery. *Porticus* 5:9-13. Rochester.
1982 *Old Gods and Young Heroes: The Pearlman Collection of Maya Ceramics*. Israel Museum, Jerusalem.
1984 *Mexico: From the Olmecs to the Aztecs*. 3rd ed. Thames and Hudson, London.
1988 Ideology of the Maya Tomb. In *Maya Iconography*, edited by Elizabeth P. Benson and Gillett G. Griffin, pp. 222-235. Princeton University Press, Princeton.
1989a The Hero Twins: Myth and Image. In *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 1*, pp. 161-184. Kerr Associates, New York.
1989b The Olmec Heartland: Evolution of Ideology. In *Regional Perspectives on the Olmec*, edited Robert J. Sharer and David C. Grove, pp. 68-82. Cambridge University Press, Cambridge.
1992 Los olmecas. In *Museo de Antropología de Xalapa*, pp. 33-75. Studio Beatrice Trueblood, Mexico.
1993 *The Maya*. 5th ed. Thames and Hudson, London.
- Coe, Michael D., and Richard A. Diehl
1980 *In the Land of the Olmec*. 2 vols. University of Texas Press, Austin.
- Coe, Michael D., and Stephen Houston
2015 *The Maya*. 9th ed. Thames and Hudson, New York.
- Coe, Michael D., and Justin Kerr
1997 *The Art of the Maya Scribe*. Thames and Hudson. London.
- Coe, Michael D., Dean Snow, and Elizabeth P. Benson
1986 *Archaeological Atlas of Ancient America*. Facts on File Publications, New York.
- Coe, Michael D., and Gordon Whittaker
1982 *Aztec Sorcerers in Seventeenth Century Mexico: The Treatise on Superstitions by Hernando Ruiz de Alarcón*. Publication 7. Institute for Mesoamerican Studies, State University of New York, Albany.

Coe, William R.

- 1959 *Piedras Negras Archaeology: Artifacts, Caches, and Burials*. University Museum, University of Pennsylvania, Philadelphia.
- 1967 *Tikal: A Handbook of the Ancient Maya Ruins*. University Museum, University of Pennsylvania, Philadelphia.
- 1990 *Excavations in the Great Plaza, North Terrace and North Acropolis of Tikal*. 6 vols. Tikal Report 14. Monograph 61. University Museum, University of Pennsylvania, Philadelphia.

Coe, William R., Edwin M. Shook, and Linton Satterthwaite

- 1961 The Carved Wooden Lintels of Tikal. In *Tikal Reports: Numbers 5-10*, pp. 15-111. Tikal Report 6. University Museum, University of Pennsylvania, Philadelphia.

Coggins, Clemency Chase

- 1975 *Painting and Drawing Styles at Tikal: An Historical and Iconographic Reconstruction*. Ph.D. dissertation, Department of Art, Harvard University, Cambridge, Mass.
- 1979 Teotihuacan at Tikal in the Early Classic Period. In *Proceedings of the International Congress of Americanists (42nd session, Paris, 1976)*, v. 8, pp. 151-269. Paris.
- 1984a The Cenote of Sacrifice: Catalog. In *Cenote of Sacrifice: Maya Treasures From the Sacred Well at Chichén Itzá*, edited by Clemency C. Coggins and Orin C. Shane III, pp. 23-155. University of Texas Press, Austin.
- 1984b Murals in the Upper Temple of the Jaguars, Chichén Itzá. In *Cenote of Sacrifice: Maya Treasures From the Sacred Well at Chichén Itzá*, edited by Clemency C. Coggins and Orin C. Shane III, pp. 157-165. University of Texas Press, Austin.
- 1987 New Fire at Chichen Itza. In *Memorias del Primer Coloquio Internacional de Mayistas: 5-10 de agosto de 1985*, edited by Mercedes de la Garza and Carmen Valverde, pp. 427-484. Universidad Nacional Autónoma de México, Mexico.
- 1988 The Manikin Scepter: Emblem of Lineage. *Estudios de Cultura Maya* 178:123-159.

Coggins, Clemency C., and Orrin C. Shane III, eds.

- 1984 *Cenote of Sacrifice: Maya Treasures from the Sacred Well at Chichén Itzá*. University of Texas Press, Austin.

Cohodas, Marvin

- 1978a Diverse Architectural Styles and the Ball Game Cult: The Late Middle Classic Period in Yucatan. In *Middle Classic Mesoamerica: A.D. 400-700*, edited by Esther Pasztory, pp. 86-107. Columbia University Press, New York.
- 1978b *The Great Ball Court at Chichen Itza, Yucatan, Mexico*. Garland Publishing, New York.

Colby, Benjamin N., and Lore M. Colby

- 1981 *The Daykeeper: The Life and Discourse of an Ixil Diviner*. Harvard University Press, Cambridge, Mass.

Coltman, Jeremy D., and John M. D. Pohl, eds.

- in press *Witchcraft and Sorcery in Ancient and Contemporary Mesoamerica*. University Press of Colorado, Boulder.

Cook de Leonard, Carmen

- 1985 Las almenas de Cinteopa. *Cuadernos de Arquitectura Mesoamericana* 4:51-56.

Córdova Tello, Mario

- 2008 Elementos olmecas en Morelos. In *Olmeca. Balance y perspectivas. Memoria de la Primera Mesa Redonda*, edited by María Teresa Uriarte and Rebecca B. González Lauck, v. 2, pp. 547-558. Universidad Nacional Autónoma de México, Mexico.

Corona Núñez, José

- 1964 *Antigüedades de México*. 4 vols. Secretaría de Hacienda y Crédito Público, Mexico.

Corson, Christopher

1976 *Maya Anthropomorphic Figurines from Jaina Island, Campeche*. Ballena Press, Ramona, California.

Cosminsky, Sheila

1977 El papel de la comadrona en Mesoamérica. *America Indígena* 37:305-335.

Coto, Tomás de

[c. 1656]1983 *Thesaurus verborum. Vocabulario de la lengua cakchiquel y guatemalteca, nuevamente hecho y recopilado con sumo estudio, trabajo y erudición*. René Acuña, ed. Universidad Nacional Autónoma de México, Mexico.

Couch, N. C. Christopher

1985 *The Festival Cycle of the Aztec Codex Borbonicus*. BAR International Series 270. British Archaeological Reports, Oxford.

Covarrubias, Miguel

1946 El arte "olmeca" o de La Venta. *Cuadernos Americanos* 28(4):153-179.

1947 *Mexico South: The Isthmus of Tehuantepec*. Knopf, New York.

1957 *Indian Art of Mexico and Central America*. Knopf, New York.

Cowgill, George L.

1983 Rulership and the Ciudadela: Political Inferences from Teotihuacan Architecture. In *Civilization in the Americas: Essays in Honor of Gordon R. Willey*, edited by Richard M. Leventhal and Alan L. Kolata, pp. 313-343. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

1997 State and Society at Teotihuacan, Mexico. *Annual Review of Anthropology* 26:129-161.

Craine, Eugene R., and Reginald C. Reindorp, trans. and eds.

1970 *The Chronicles of Michoacán*. University of Oklahoma Press, Norman.

1979 *The Codex Pérez and the Book of Chilam Balam of Maní*. The University of Oklahoma Press, Norman.

Crumrine, N. Ross

1977 *The Mayo Indians of Sonora: A People Who Refuse to Die*. University of Arizona Press, Tuscon.

Cruz Guzmán, Ausencio, J. Kathryn Josserand, and Nicholas A. Hopkins

1986 T'an ti wajali: cuentos choles antiguos. Manuscript.

Cruz Lara Silva, Adriana, and Maria Eugenia Guevara Muñoz

2002 *La restauración de la cerámica olmeca de San Lorenzo Tenochtitlán*. Universidad Nacional Autónoma de México, Mexico.

Culbert, T. Patrick

1993 *The Ceramics of Tikal: Vessels from the Burials, Caches and Problematical Deposits*. Tikal Report 25, Part A. Monograph 81. University Museum, University of Pennsylvania, Philadelphia.

Cyphers, Ann

1996 San Lorenzo, Veracruz. *Arqueología Mexicana* 4(19):62-65.

Dalton, George

1977 Aboriginal Economies in Stateless Societies. In *Exchange Systems in Prehistory*, edited by Timothy Earle and Jonathon Ericson, pp. 191-212. Academic Press, New York.

D'Altroy, Terence, and Timothy K. Earle

1985 Staple Finance, Wealth Finance, and Storage in the Inka Political Economy. *Current Anthropology* 26(2):187-206.

- Danzel, Theodor-Wilhelm
1922-1923 *Mexiko*. 3 vols. Folkwang-Verlag, Hagen.
- Davis, Virginia Dale
1978 *Ritual of the Northern Lacandon Maya*. Ph.D. dissertation, Department of Anthropology, Tulane University, New Orleans.
- Davis-Salazar, Karla L., and Ellen E. Bell
2000 Una comparación de los depósitos funerarios de dos mujeres en la acrópolis de Copan, Honduras. In *XXIII Simposio de Investigaciones Arqueológicas en Guatemala, 2009*, edited by Bárbara Arroyo, Adriana Linares Palma, and Lorena Paiz Aragón, v. 2, pp. 1113-1128. Ministerio de Cultura y Deportes; Instituto de Antropología e Historia; Asociación Tikal, Guatemala.
- de Jong, Harriet J.
1999 *The Land of Corn and Honey: The Keeping of Stingless Bees (Meliponiculture) in the Ethno-Ecological Environment of Yucatan (Mexico) and El Salvador*. Ph.D. dissertation, Utrecht University, Utrecht.
- de la Fuente, Beatriz
1973 *Escultura monumental olmeca. Catálogo*. Instituto de Investigaciones Estéticas, Universidad Nacional Autónoma de México, Mexico.
1977 *Los hombres de piedra. Escultura olmeca*. Instituto de Investigaciones Estéticas, Universidad Nacional Autónoma de México, Mexico.
1995a Tetitla. In *La pintura mural prehispánica en México, Teotihuacán*, edited by Beatriz de la Fuente, 1(1):258-311. Universidad Nacional Autónoma de México, Mexico.
1995b Zona 4: Animales mitológicos. In *La pintura mural prehispánica en México, Teotihuacán*, edited by Beatriz de la Fuente, 1(1):92-101. Universidad Nacional Autónoma de México, Mexico.
1996 El estilo teotihuacano en la pintura mural. In *La pintura mural prehispánica en México, Teotihuacán*, edited by Beatriz de la Fuente, 1(2):3-64. Universidad Nacional Autónoma de México, Mexico.
- de la Fuente, Beatriz, Silvia Garza Tarazona, Norberto González Crespo, Arnold Lebeuf, Miguel León Portilla, and Javier Wimer
1995 *La Acropolis de Xochicalco*. Instituto de Cultura de Morelos, Mexico.
- de la Fuente, Beatriz, Silvia Trejo, and Nelly Gutiérrez Solana
1988 *Escultura en piedra de Tula*. Universidad Nacional Autónoma de México, Mexico.
- de la Garza, Mercedes
1984 *El universo sagrado de la serpiente entre los mayas*. Universidad Nacional Autónoma de México, Mexico.
- de la Garza, Mercedes, ed.
1983 *Relaciones histórico-geográficas de la gobernación de Yucatán*. 2 vols. Fuentes para el Estudio de la Cultura Maya 1. Universidad Nacional Autónoma de México, Mexico.
- Deletaille, Lin, and Emile Deletaille, eds.
1992 *Trésors du Nouveau Monde*. Musée Royaux d'Art et d'Histoire, Bruxelles.
- Delgaty, Alfa Hurley de, and Agustín Ruíz Sánchez
1978 *Diccionario tzotzil de San Andrés con variaciones dialectales*. Instituto Lingüístico de Verano, Mexico.
- del Río, Alma Elizabeth
1973 *Bases psicodinámicas de la cultura azteca*. Costa-Amic Editores, Mexico.
- de Smet, Peter A. G. M.
1985 *Ritual Enemas and Snuffs in the Americas*. Latin American Studies 33. Centrum voor Studie en Documentatie van Latijns Amerika, Amsterdam.

- Díaz Oyarzábal, Clara Luz
 1987 *El occidente de México*. Garda Valades Editores, Mexico.
 1990 *Colección de objetos de piedra, obsidiana, concha, metales y textiles del Estado de Guerrero*. Instituto Nacional de Antropología e Historia, Mexico.
- Diehl, Richard A.
 1990 The Olmec at La Venta. In *Mexico: Splendors of Thirty Centuries*, edited by Kathleen Howard, 51-71. Metropolitan Museum of Art, New York.
- Dieseldorff, Erwin P.
 1922 Welchen Gott stellen die Steinidole der Mayavölker dar? In *Festschrift Eduard Seler*, edited by Walter Lehmann, pp. 47-58. Verlag Von Strecker und Schröder, Stuttgart.
 1926a El Tzultaca y el Mam, los dioses prominentes de la religión maya. *Anales* 2:378-386. Sociedad de Geografía e Historia de Guatemala, Guatemala.
 1926b *Kunst und Religion der Mayavölker*. Verlag von Julius Springer, Berlin.
- Digby, Adrian
 1972 *Maya Jades*. British Museum, London.
- Di Peso, Charles C.
 1974a *Casas Grandes: A Fallen Trading Center of the Gran Chichimeca*. 8 vols. Amerind Foundation; Northland Press, Flagstaff.
 1974b Medio Period Copper Artifacts. In *Casas Grandes: A Fallen Trading Center of the Gran Chichimeca, Volume 7: Stone and Metal*, by Charles C. Di Peso, John B. Rinaldo, and Gloria J. Fenner, pp. 500-532. Amerind Foundation; Northland Press, Flagstaff.
- Dorsey, George A., and Henry R. Voth
 1902 The Mishongnovi Ceremonies of the Snake and Antelope Fraternities. *Anthropological Series* 3(3):159-261. Publication 66. Field Columbian Museum, Chicago.
- Drucker, Philip
 1952 *La Venta, Tabasco: A Study of Olmec Ceramics and Art*. Bulletin 153. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.
 1955 The Cerro de las Mesas Offering of Jade and Other Materials. *Bulletin* 157:25-68. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.
- Drucker, Philip, Robert F. Heizer, and Robert J. Squier
 1959 *Excavations at La Venta, Tabasco, 1955*. Bulletin 170. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.
- Dunning, Nicholas P.
 n.d. Note on a Tzompantli Platform and Associated Sculpture at Nohpat, Yucatan. Manuscript.
- Durán, Diego
 1964 *The Aztecs: The History of the Indies of New Spain*. Trans. with notes by Doris Heyden and Fernando Horcasitas. Orion Press, New York.
 1971 *Book of the Gods and Rites and the Ancient Calendar*. Fernando Horcasitas and Doris Heyden, trans. and ed. University of Oklahoma Press, Norman.
 1994 *The History of the Indies of New Spain*. Doris Heyden, trans. University of Oklahoma Press, Norman.
- Easby, Elizabeth K.
 1966 *Ancient Art of Latin America from the Collection of Jay C. Leff: A Special Exhibition, November 22, 1966 – March 5, 1967*. Brooklyn Museum, Brooklyn.
- Easby, Elizabeth K., and John F. Scott
 1970 *Before Cortés: Sculpture of Middle America*. Metropolitan Museum of Art, New York.

Edmonson, Munro S.

- 1965 *Quiche-English Dictionary*. Publication 30. Middle American Research Institute, Tulane University, New Orleans.
- 1971 *The Book of Counsel: The Popol Vuh of the Quiche Maya of Guatemala*. Publication 35. Middle American Research Institute, Tulane University, New Orleans.
- 1982 *The Ancient Future of the Itza: The Book of Chilam Balam of Tizimin*. Translated and annotated by Munro S. Edmonson. University of Texas Press, Austin.

Ekholm, Gordon F.

- 1970 *Ancient Mexico and Central America*. American Museum of Natural History, New York.

Ekholm-Miller, Susanna M.

- 1973 *The Olmec Rock Carving at Xoc, Chiapas, Mexico*. Papers 32. New World Archaeological Foundation, Brigham Young University, Provo.
- 1979 The Lagartero Figurines. In *Maya Archaeology and Ethnohistory*, edited by Norman Hammond and Gordon R. Willey, pp. 172-186. University of Texas Press, Austin.

Eliade, Mircea

- 1964 *Shamanism: Archaic Techniques of Ecstasy*. Princeton University Press, Princeton.

Ellis, Florence Hawley

- 1967 Use and Significance of the Teamahia. *El Palacio* 74:35-43. Santa Fe.

Erosa Peniche, José A.

- 1947 Descubrimiento y exploración arqueológica de la subestructura del Castillo en Chichen-Itzá. In *Proceedings of the International Congress of Americanists (27th session, Mexico, 1939)*, 2(1):229-248. Mexico.

Estrada-Belli, Francisco

- 2006 Lightning, Sky, Rain, and the Maize God: The Ideology of Preclassic Maya Rulers at Cival, Peten, Guatemala. *Ancient Mesoamerica* 17(1): 57-78.
- 2011 *The First Maya Civilization: Ritual and Power Before the Classic Period*. Routledge, London.

Estrada-Belli, Francisco, Judith Valle, Chris Hewitson, Marc Wolf, Jeremy Bauer, Molly Morgan, Juan Carlos Pérez, James Doyle, Edy Barrios, Ángel Chávez, and Nina Neivens

- 2004 Teledetección, patron de asentamiento e historia en Holmul, Petén. In *XXVII Simposio de Investigaciones Arqueológicas en Guatemala, 2013*, edited by Bárbara Arroyo, Luis Méndez Salinas, and Andrea Rojas, v. 1, pp. 73-83. Ministerio de Cultura y Deportes; Instituto de Antropología e Historia; Asociación Tikal, Guatemala.

Evers, Larry, and Felipe S. Molina

- 1987 *Yaqui Deer Songs/Maso Bwikam: A Native American Poetry*. Sun Tracks; University of Arizona Press, Tuscon.

Fabrega, Horacio, Jr., and Daniel B. Silver

- 1973 *Illness and Curing in Zinacantan: An Ethnomedical Analysis*. Stanford University Press, Stanford.

Fahsen, Federico

- 1998 *A New Early Classic Text from Tikal*. Research Reports on Ancient Maya Writing 17. Center for Maya Research, Washington, D.C.

Farriss, Nancy M.

- 1984 *Maya Society Under Colonial Rule: The Collective Enterprise of Survival*. Princeton University Press, Princeton.

Fash, Barbara W.

- 1992 Late Classic Architectural Sculpture Themes in Copan. *Ancient Mesoamerica* 3(1):89-104.
- 1997 La scultura del mondo clasico Maya. In *I Maya di Copán: l'Atene del Centroamerica*, edited by Giuseppe Orefici, pp. 79-98. Skira Editore, Milan.

- Fash, Barbara W., William L. Fash, Sheree Lane, Rudy Larios, Linda Schele, Jeffrey Stomper, and David Stuart
 1992 Investigations of a Classic Maya Council House at Copan, Honduras. *Journal of Field Archaeology* 19(4):419-442.
- Fash, William L.
 1988 A New Look at Maya Statecraft from Copan, Honduras. *Antiquity* 62(234):157-169.
 1989 The Sculptural Façade of Structure 9N-82: Content, Form, and Significance. In *The House of the Bacabs, Copan, Honduras*, edited by David L. Webster, pp. 41-72. Dumbarton Oaks, Washington, D.C.
 1991 *Scribes, Warriors, and Kings: The City of Copán and the Ancient Maya*. Thames and Hudson, London.
 1997 Il progetto archeologico dell'acropoli di Copan e il retaggio della civiltà maya. In *I Maya di Copán: l'Atene del Centroamerica*, edited by Giuseppe Orefici, pp. 61-78. Skira Editore, Milan.
 2001 *Scribes, Warriors, and Kings: The City of Copán and the Ancient Maya*. Rev. ed. Thames and Hudson, London.
- Fash, William L., Harriet F. Beaubien, Catherine Magee, Barbara W. Fash, and Richard V. Williamson
 2001 The Trappings of Kingship among the Classic Maya: Ritual and Identity in a Royal Tomb from Copan. In *Fleeting Identities: Perishable Material Culture in Archaeological Research*, edited by Penelope Ballard Drucker, pp. 152-169. Center for Archaeological Investigations, Southern Illinois University, Carbondale.
- Fash, William L., Jr., and Barbara W. Fash
 1996 Building a World View: Visual Communication in Classic Maya Architecture. *Res: Anthropology and Aesthetics* 29-30:127-148.
 2000 Teotihuacan and the Maya: A Classic Heritage. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by David Carrasco, Lindsay Jones, and Scott Sessions, pp. 433-463. University Press of Colorado, Boulder.
- Fash, William L., Alexandre Tokovinine, and Barbara W. Fash
 2009 The House of New Fire at Teotihuacan and Its Legacy in Mesoamerica. In *The Art of Urbanism: How Mesoamerican Peoples Represented Themselves in Architecture and Imagery*, edited by William A. Fash and Leonardo López Luján, pp. 201-229. Dumbarton Oaks, Washington, D.C.
- Fash, William L., Richard V. Williamson, Carlos Rudy Larios, and Joel Palka
 1992 The Hieroglyphic Stairway and Its Ancestors: Investigations of Copan Structure 10L-26. *Ancient Mesoamerica* 3(1):105-116.
- Fauvet-Berthelot, Marie-France
 1986 *Ethno-préhistoire de la maison maya: Guatemala, 1250-1525*. Centre d'Etudes Mexicaines et Centraméricaines, Mexico.
- Fedick, Scott L.
 1995 Indigenous Agriculture in the Americas. *Journal of Archaeological Research* 3(4):255-303.
- Fedick, Scott L., and Karl A. Taube, eds.
 1995 *The View from Yalahau: 1993 Archaeological Investigations in Northern Quintana Roo, Mexico*. Field Report Series 2. Latin American Studies Program, University of California, Riverside.
- Fenton, William N.
 1987 *The False Faces of the Iroquois*. University of Oklahoma Press, Norman.
- Ferdon, Edwin N., Jr.
 1953 *Tonala, Mexico: An Archaeological Survey*. Monographs 16. School of American Research, Santa Fe.

Fernández, Jesús

1937 Diccionario poconchí. *Anales* 14:47-70, 184-200. Sociedad de Geografía e Historia de Guatemala, Guatemala.

Fernández, Miguel A.

1941 El Templo N° 5 de Tulum, Quintana Roo. In *Los mayas antiguos*, edited by César Lizardi Ramos, pp. 155-180. El Colegio de México, Mexico.

Ferree, Lisa

1972 The Pottery Censers of Tikal, Guatemala. Ph.D. dissertation, Southern Illinois University, Carbondale.

Feuchtwanger, Franz

1989 *Cerámica olmeca*. Patria Editores, Mexico.

Fewkes, Jesse Walter

1893 A Central American Ceremony Which Suggests the Snake Dance of the Tusayan Villagers. *American Anthropologist*, o.s. 4:285-306.

1897 Tusayan Snake Ceremonies. In *Sixteenth Annual Report of the Bureau of American Ethnology, 1894-1895*, pp. 267-312. Smithsonian Institution, Washington, D.C.

1900a The New-Fire Ceremony at Walpi. *American Anthropologist*, n.s. 2:80-138.

1900b Tusayan Flute and Snake Ceremonies. In *Nineteenth Annual Report of the Bureau of American Ethnology, 1897-1898*, pt. 2, pp. 957-1011. Smithsonian Institution, Washington, D.C.

1922 Fire Worship of the Hopi Indians. In *Annual Report of the Board of Regents of the Smithsonian Institution, 1920*, pp. 589-610. Smithsonian Institution, Washington, D.C.

1924 The Use of Idols in Hopi Worship. In *Annual Report of the Board of Regents of the Smithsonian Institution, 1922*, pp. 377-398. Smithsonian Institution, Washington, D.C.

1986 *Hopi Snake Ceremonies*. University of New Mexico Press, Albuquerque.

Field, Frederick V.

1974 *Pre-Hispanic Mexican Stamp Designs*. Dover Publications, New York.

Fields, Virginia M.

1991 The Iconographic Heritage of the Jester God. In *Sixth Palenque Round Table, 1986*, edited by Virginia M. Fields, pp. 167-174. University of Oklahoma, Norman.

Finamore, Daniel, and Stephen D. Houston, eds.

2010 *Fiery Pool: The Maya and the Mythic Sea*. Peabody Essex Museum; Yale University Press, New Haven.

Flannery, Kent V., and Joyce Marcus

1994 *Early Formative Pottery of the Valley of Oaxaca, Mexico*. Memoirs 27. Museum of Anthropology, University of Michigan, Ann Arbor.

Flannery, Kent V., and Joyce Marcus, eds.

1983 *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations*. Academic Press, New York.

Flannery, Kent V., and James Schoenwetter

1970 Climate and Man in Formative Oaxaca. *Archaeology* 23:144-152.

Foncerrada de Molina, Marta

1965 *La escultura arquitectónica de Uxmal*. Estudios y Fuentes del Arte en México 20. Universidad Nacional Autónoma de México, Mexico.

1980 Mural Painting in Cacaxtla and Teotihuacan Cosmopolitanism. In *Third Palenque Round Table, 1978, Part 2*, edited by Merle Greene Robertson, pp. 183-198. University of Texas Press, Austin.

Fondo Editorial de la Plástica Mexicana

1964 *Flor y canto del arte prehispánico de México*. Fondo Editorial de la Plástica Mexicana, Mexico.

Ford, Peter C.

2005 Celebration of Inorganic Lives: Interview with Henry Taube. *Coordination Chemistry Reviews* 249(3-4):275-279.

Förstemann, Ernst W.

1901 Der Mayagott der Jahresschlusses. *Globus* 80:189-192.

1906 *Commentary on the Maya Manuscript in the Royal Public Library of Dresden*. Papers 4(2). Peabody Museum of American Archaeology and Ethnology, Cambridge, Mass.

Foster, George M.

1945 Sierra Popoluca Folklore and Beliefs. *University of California Publications in American Archaeology and Ethnology* 42(2):177-249. University of California Press, Berkeley.

Fought, John G.

1972 *Chorti (Mayan) Texts: 1*. University of Pennsylvania Press, Philadelphia.

Fox, James A., and John S. Justeson

1980 Mayan Hieroglyphs as Linguistic Evidence. In *Third Palenque Round Table, 1978, Part 2*, edited by Merle Greene Robertson, pp. 204-216. University of Texas Press, Austin.

1984 Polyvalence in Mayan Hieroglyphic Writing. In *Phoneticism in Mayan Hieroglyphic Writing*, edited by John S. Justeson and Lyle Campbell, pp. 17-76. Publication 9. Institute for Mesoamerican Studies, State University of New York, Albany.

Franco, José Luis

1959 Representaciones de la mariposa en Mesoamérica. *El México Antiguo* 9:195-244.

1968 *Objetos de hueso de la época precolombina*. Instituto Nacional de Antropología e Historia, Mexico.

Freidel, David

1985 Polychrome Façades of the Lowland Maya Preclassic. In *Painted Architecture and Polychrome Monumental Sculpture in Mesoamerica*, edited by Elizabeth Boone, pp. 5-27. Dumbarton Oaks, Washington, D.C.

1990 The Jester God: The Beginning and End of a Maya Royal Symbol. In *Vision and Revision in Maya Studies*, edited by Flora Clancy and Peter Harrison, pp. 67-78. University of New Mexico Press, Albuquerque.

Freidel, David A., Linda Schele, and Joy Parker

1993 *Maya Cosmos: Three Thousand Years on the Shaman's Path*. William Morrow, New York.

Furst, Jill Leslie

1978 *Codex Vindobonensis Mexicanus I: A Commentary*. Publication 4. Institute for Mesoamerican Studies, State University of New York, Albany.

Furst, Peter T.

1968 The Olmec Were-Jaguar Motif in the Light of Ethnographic Reality. In *Dumbarton Oaks Conference on the Olmec*, edited by Elizabeth P. Benson, pp. 143-174. Dumbarton Oaks, Washington, D.C.

1978 The Art of Being Huichol. In *Art of the Huichol Indians*, edited by Kathleen Berrin, pp. 18-34. Harry N. Abrams, New York.

1994 The Maiden Who Ground Herself: Myths of the Origin of Maize from the Sierra Madre Occidental, Mexico. *Latin American Indian Literatures Journal* 10:101-115.

1995 Shamanism, Transformation, and Olmec Art. In *The Olmec World: Ritual and Rulership*, edited by Jill Guthrie, pp. 69-81. The Art Museum, Princeton University, Princeton.

Furst, Peter T., and Michael D. Coe
1977 Ritual Enemas. *Natural History* 86(3):88-91.

Galerie Mermoz
1990 *Art Précolombien*. Galerie Mermoz, Paris.

Galindo Trejo, Jesús, and María Elena Ruiz Gallut
1998 Bonampak: una confluencia sagrada de caminos celestes. In *La pintura mural prehispánica en México. Área maya. Bonampak. Estudios*, edited by Leticia Staines Cicero, 2(2):137-157. Instituto de Investigaciones Estéticas, Universidad Nacional Autónoma de México, Mexico.

Galinier, Jacques
1990 *La mitad del mundo. Cuerpo y cosmos en los rituales otomíes*. Universidad Nacional Autónoma de México, Mexico.

Gallaga M., Emiliano
2016 How to Make a Pyrite Mirror: An Experimental Archaeology Project. In *Manufactured Light: Mirrors in the Mesoamerican Realm*, edited by Emiliano Gallaga M. and Marc G. Blainey, pp. 25-50. University of Colorado Press, Niwot.

Gallaga M., Emiliano, and Marc G. Blainey, eds.
2106 *Manufactured Light: Mirrors in the Mesoamerican Realm*. University of Colorado Press, Niwot.

Gallandro Paradí, María de Lourdes
2011 Conservación del material orgánico de la ofrenda 102 del Templo Mayor de Tenochtitlan. *Arqueología Mexicana* 18(108):61-65.

Gallareta Negrón, Tomás, and Karl Taube
2005 Late Postclassic Occupation in the Ruinas de San Angel Region. In *Quintana Roo Archaeology*, edited by Justine M. Shaw and Jennifer P. Mathews, pp. 87-111. University of Arizona Press, Tucson.

Gallenkamp, Charles, and Regina Elise Johnson, eds.
1985 *Maya: Treasures of an Ancient Civilization*. Harry N. Abrams, New York.

Gamio, Manuel, ed.
1922 *La población del Valle de Teotihuacán*. 2 vols. Dirección de Talleres Gráficos dependiente de la Secretaría de Educación Pública, Mexico.

Gann, Thomas
1900 Mounds in Northern Honduras. In *Nineteenth Annual Report of the Bureau of American Ethnology*, pt. 2, 655-692. Smithsonian Institution, Washington, D.C.
1928 *Maya Cities: A Record of Exploration and Adventure in Middle America*. Charles Scribner's Sons, New York.

Gann, Thomas, and Mary Gann
1939 *Archaeological Investigations in the Corozal District of British Honduras*. Anthropological Papers 7. Bulletin 123. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Garbe, Ann
1971 The Olmec Jaguar Paw-Wing Motif: Correspondences in Associated Contexts. M.A. thesis, University of Arizona, Tucson.

García Barrios, Ana, and Manuel Parada López de Corselas
2014 La cruz mexicana del siglo XVI de la catedral de Palencia (España): la vision indígina del Gólgota como "la montaña sagrada mesoamericana." *Anales del Instituto Nacional Estéticas* 36(105):127-184.
2015 La montaña sagrada mesoamericana y la cruz del altar de Palencia, España. *Arqueología Mexicana* 131:80-85.

- García Payón, José
1939 El simbolo del año en el México antiguo. *El México Antiguo* 4(7-8):241-253.
- Garibay Kintana, Ángel María
1945 *Épica náhuatl. Divulgación literaria*. Selection, introduction, and notes by Ángel María Garibay K. Biblioteca del Estudiante Universitario 51. Universidad Nacional Autónoma de México, Mexico.
1965 *Teogonía e historia de los mexicanos. Tres opúsculos del siglo XVI*. Edition prepared by Ángel María Garibay K. Editorial Porrúa, Mexico.
1979 *Teogonía e historia de los mexicanos. Tres opúsculos del siglo XVI*. Edition prepared by Ángel María Garibay K. 3rd ed. Editorial Porrúa, Mexico.
- Garrett, Wilbur E.
1989 La Ruta Maya. *National Geographic* 176(4):424-479.
- Garton, John, and Karl Taube
2017 An Olmec Style Statuette in the Worcester Art Museum. *Mexicon* 39(2):35-40.
- Gates, William E.
1931 The Thirteen Ahaus in the Kaua Manuscript and Related Katun Wheels in the Paris Codex, Landa, Cogolludo, and the Chumayel. *Maya Society Quarterly* 1:2-20. Baltimore.
- Gay, Carlo T. E.
1972 *Chalcacingo*. International Scholarly Book Services, Portland.
- Geertz, Armin W.
1984 A Reed Pierced the Sky: Hopi Indian Cosmography on Third Mesa, Arizona. *Numen* 31(2):216-241.
1987 *Hopi Indian Altar Iconography*. Iconography of Religions 10(5). Institute of Religious Iconography, State University Groningen; E. J. Brill, Leiden.
- Gendrop, Paul
1983 *Los estilos Río Bec, Chenes y Puuc en la arquitectura maya*. Universidad Nacional Autónoma de México, Mexico.
1985 Los remates o coronamientos de techo en la arquitectura mesoamericana. *Cuadernos de Arquitectura Mesoamericana* 4:47-50.
- Getino Granados, Fernando
2007 Los barrios de Tula. Estudios en la zona urbana norte. *Arqueología Mexicana* 15(85):58-63.
- Gillespie, Susan
1991 Ballgames and Boundaries. In *The Mesoamerican Ballgame*, edited by Vernon L. Scarborough and David R. Wilcox, pp. 317-345. University of Arizona Press, Tucson.
- Girard, Rafael
1949 *Los chortís ante el problema maya. Historia de las culturas indígenas de América, desde su origen hasta hoy*. 5 vols. Antigua Librería Robredo, Mexico.
1962 *Los mayas eternos*. Libro Mex Editores, Mexico.
1966 *Los mayas. Su civilización, su historia, sus vinculaciones continentales*. Libro Mex Editores, Mexico.
- Glass, John B.
1975 A Survey of Native Middle American Pictorial Manuscripts. In *Guide to Ethnohistorical Sources*, Part 3, edited by Howard F. Cline, pp. 3-80. Handbook of Middle American Indians 14. University of Texas Press, Austin.
- Gluckman, Max
1954 *Rituals of Rebellion in South-East Africa*. Manchester University Press, Manchester.
- Gómez Chavez, Sergio
1999 Nuevos datos sobre la relación entre Teotihuacán y el Occidente de México. Paper presented at the Primera Mesa Redonda de Teotihuacan, Instituto Nacional de Antropología e Historia, Centro de Estudios Teotihuacanos, San Juan Teotihuacán, Mexico.

Gómez-Pompa, Arturo, José Salvador Flores, and Mario Aliphath Fernández
1990 The Sacred Cacao Groves of the Maya. *Latin American Antiquity* 1(3):247-257.

Gómez Rueda, Hernando, and Valerie Courtes
1987 Un pectoral olmeca de La Encrucijada, Tabasco: observaciones sobre piezas menores olmecas. *Arqueología* 1:73-88. Instituto Nacional de Antropología e Historia, Mexico.

Goncalves de Lima, Oswaldo
1978 *El maguery y el pulque en los códices mexicanos*. Fondo de Cultura Económica, Mexico.

González, Arnoldo
1993 El Templo de la Cruz. *Arqueología Mexicana* 1(2):39-41.

González Lauck, Rebecca
1988 Proyecto arqueológico La Venta. *Arqueología* 4:121-165. Instituto Nacional de Antropología e Historia, Mexico.

González Licón, Ernesto
1990 *Los zapotecos y mixtecos. Tres mil años de civilización precolumbina*. Editorial Jaca Book, Milan; Consejo Nacional para la Cultura y las Artes, Mexico.

Goodman, Joseph T.
1897 The Archaic Maya Inscriptions. Appendix to *Biologia Centrali-Americana; or, Contributions to the Knowledge of the Fauna and Flora of Mexico and Central America: Archaeology*, by Alfred P. Maudslay. R. H. Porter and Dulau, London.

Gordon, George Byron
1896 *Prehistoric Ruins of Copan, Honduras*. Memoirs 1(1). Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1898 *Researches in the Uluu Valley, Honduras: Report on Explorations by the Museum, 1896-1897*. Memoirs 1(4). Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1902 *The Hieroglyphic Stairway, Ruins of Copan*. Memoirs 1(6). Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Gossen, Gary H.
1974a A Chamula Solar Calendar Board from Chiapas, Mexico. In *Mesoamerican Archaeology: New Approaches*, edited by Norman Hammond, pp. 217-253. University of Texas Press, Austin.
1974b *Chamulas in the World of the Sun: Time and Space in a Maya Oral Tradition*. Harvard University Press, Cambridge, Mass.
1979 Temporal and Spatial Equivalents in Chamula Ritual Symbolism. In *Reader in Comparative Religion*, edited by William A. Lessa and Evon Z. Vogt, pp. 116-129. Harper and Row, New York.

Graham, Ian
1967 *Archaeological Explorations in El Peten*. Publication 33. Middle American Research Institute, Tulane University, New Orleans.
1971 *The Art of Maya Hieroglyphic Writing*. Center for Inter-American Relations; Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1978 *Corpus of Maya Hieroglyphic Inscriptions, Volume 2, Part 2: Naranjo, Chunhuitz, Xunantunich*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1979 *Corpus of Maya Hieroglyphic Inscriptions, Volume 3, Part 2: Yaxchilan*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1982 *Corpus of Maya Hieroglyphic Inscriptions, Volume 3, Part 3: Yaxchilan*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1986 *Corpus of Maya Hieroglyphic Inscriptions, Volume 5, Part 3: Uaxactun*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1996 *Corpus of Maya Hieroglyphic Inscriptions, Volume 7, Part 1: Seibal*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Graham, Ian, and Eric von Euw

- 1975 *Corpus of Maya Hieroglyphic Inscriptions, Volume 2, Part 1: Naranjo*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
- 1977 *Corpus of Maya Hieroglyphic Inscriptions, Volume 3, Part 1: Yaxchilan*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
- 1992 *Corpus of Maya Hieroglyphic Inscriptions, Volume 4, Part 3: Uxmal, Xcalumkin*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Graham, John A., Robert F. Heizer, and Edwin M. Shook

- 1978 Abaj Takalik 1976: Exploratory Investigations. In *Studies in Ancient Mesoamerica 3*, edited by John A. Graham, pp. 85-109. Contributions of the University of California Archaeological Research Facility 36. Department of Anthropology, University of California, Berkeley.

Graulich, Michel

- 1983 Myths of Paradise Lost in Pre-Hispanic Central Mexico. *Current Anthropology* 24(5):575-581.

Griffin, Gillett G.

- 1981 Olmec Forms and Materials Found in Guerrero. In *The Olmec and Their Neighbors: Essays in Memory of Matthew W. Stirling*, edited by Elizabeth P. Benson, pp. 209-222. Dumbarton Oaks, Washington, D.C.

Grove, David C.

- 1970 *The Olmec Paintings of Oxtotitlan Cave, Guerrero, Mexico*. Studies in Pre-Columbian Art and Archaeology 6. Dumbarton Oaks, Washington, D.C.
- 1973 Olmec Altars and Myths. *Archaeology* 26(2):128-135.
- 1981 Olmec Monuments: Mutilation as a Clue to Meaning. In *The Olmec and Their Neighbors: Essays in Memory of Matthew W. Stirling*, edited by Elizabeth P. Benson, pp. 49-68. Dumbarton Oaks, Washington, D.C.
- 1984 *Chalcatzingo: Excavations on the Olmec Frontier*. Thames and Hudson, London.
- 1987 "Torches," "Knuckledusters," and the Legitimation of Formative Period Rulership. *Mexicon* 9(3):60-65.
- 1989 Chalcatzingo and its Olmec Connection. In *Regional Perspectives on the Olmec*, edited by Robert J. Sharer and David C. Grove, pp. 122-147. Cambridge University Press, Cambridge.
- 1992 The Olmec Legacy: Updating Olmec Prehistory. *National Geographic Society Research and Exploration* 8(2):148-165.

Grove, David C., and Jorge Angulo V.

- 1987 A Catalog and Description of Chalcatzingo's Monuments. In *Ancient Chalcatzingo*, edited by David C. Grove, pp. 114-131. University of Texas Press, Austin.

Grove, David C., and Louise I. Paradis

- 1971 An Olmec Stela from San Miguel Amuco, Guerrero. *American Antiquity* 36(1):95-102.

Grube, Nikolai

- 1990 Die Errichtung von Stelen: Entzifferung einer Verbhieroglyphe auf Monumenten der Klassischen Mayakultur. In *Circumpacifica: Festschrift für Thomas S. Barthel*, edited by Bruno Illius and Matthias Laubscher, pp. 189-215. Peter Lang, Frankfurt.
- 1992 Classic Maya Dance: Evidence from Hieroglyphs and Iconography. *Ancient Mesoamerica* 3(2):201-218.
- 2003 Appendix 2: Epigraphic Analysis of Altar 3 of Altar de los Reyes. In *Archaeological Reconnaissance in Southeastern Campeche, México, 2002 Field Report*, by Ivan Sprajk, pp. 34-40. Report submitted to the Foundation for the Advancement of Mesoamerican Studies, Inc. Available: www.famsi.org/reports/01014/index.html
- 2004 Akan: The God of Drinking, Disease and Death. In *Continuity and Change: Maya Religious Practices in Temporal Perspective*, edited by Daniel Graña Behrens, Nikolai Grube, Christian M. Prager, Frauke Sachse, Stefanie Teufel, and Elizabeth Wagner, pp. 59-76. Acta Mesoamericana 14. Verlag Anton Sauwein, Markt Schwaben.

Grube, Nikolai, Alfonso Lacadena, and Simon Martin

2003 Chichen Itza and Ek Balam: Terminal Classic Inscriptions from Yucatan. In *Notebook for the XXVIIIth Maya Hieroglyphic Forum at Texas, March, 2003*, pt. 2, pp. 1-84. Maya Workshop Foundation, Austin.

Grube, Nikolai, and Werner Nahm

1994 A Census of Xibalba: A Complete Inventory of *Way* Characters on Maya Ceramics. In *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 4*, edited by Barbara Kerr and Justin Kerr, pp. 686-715. Kerr Associates, New York.

Grube, Nikolai, and Linda Schele

1990 Royal Gifts to Subordinate Lords. *Copán Note 87*. Copán Mosaics Project, Copán, Honduras.

1991 Tzuk in the Classic Maya Inscriptions. *Texas Notes on Pre-Columbian Art, Writing, and Culture* 15. Center for the History and Art of Ancient American Culture, Art Department, University of Texas, Austin.

Grube, Nikolai, and David Stuart

1987 Observations on T110 as the Syllable *ko*. *Research Reports on Ancient Maya Writing* 8:1-14. Center for Maya Research, Washington, D.C.

Guernsey Kappelman, Julia

2002 Carved in Stone: The Cosmological Narratives of Late Preclassic Izapan-style Monuments from the Pacific Slope. In *Heart of Creation: The Mesoamerican World and the Legacy of Linda Schele*, edited by Andrea Stone, pp. 66-82. University of Alabama Press, Tuscaloosa.

Guiteras Holmes, Calixta

1960 La familia tzotzil en la salud y en la enfermedad. *Tlatoani* 2(13):4-6. Mexico.

1961 *Perils of the Soul: The World View of a Tzotzil Indian*. Free Press of Glencoe, New York.

Guthrie, Jill, ed.

1995 *The Olmec World: Ritual and Rulership*. The Art Museum, Princeton University, Princeton.

Gutiérrez, Mary Ellen

1990 Serpents and Mothers: Implications for the Interpretation of Apotheosis. Manuscript.

Haberland, Wolfgang

1971 *Die Kunst des indianischen Amerika*. Atlantis Verlag, Zurich.

Haile, Berard

1946 *The Navajo Fire Dance*. Saint Michaels Press, Saint Michaels, Arizona.

1947 *Starlore Among the Navajo*. Museum of Navajo Ceremonial Art, Santa Fe.

Hall, Clara

1962 A Chronological Study of the Mural Art of Teotihuacan. Ph.D. dissertation, Department of Anthropology, University of California, Berkeley.

Hall, Grant D.

1989 Realm of Death: Royal Mortuary Customs and Polity Interaction in the Classic Maya Lowlands. Ph.D. dissertation, Department of Anthropology, Harvard University.

Hall, Robert L., and Arthur E. Dennis

1986 Cultivated and Gathered Plant Foods. In *Archaeological Investigations at Antelope House*, edited by Don P. Morris, pp. 110-141. National Park Service, U.S. Department of the Interior, Washington, D.C.

Hammer, Olga

1971 *Ancient Art of Veracruz*. Ethnic Arts Council of Los Angeles, Los Angeles.

Hammond, Norman

- 1975 *Lubaantun: A Classic Maya Realm*. Monograph 2. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
 1987 *The Sun Also Rises: Iconographic Syntax of the Pomona Flare*. *Research Reports on Ancient Maya Writing* 7:11-24. Center for Maya Research, Washington, D.C.

Hamy, E. T., ed.

- 1899 *Codex Telleriano-Remensis: Manuscrit mexicain du cabinet de Ch. M. Le Tellier, Archevêque de Reims, à la Bibliothèque Nationale*. Duc de Loubat, Paris.

Hanks, William F.

- 1990 *Referential Practice: Language and Lived Space among the Maya*. University of Chicago Press, Chicago.

Hansen, Richard

- 1992 *The Archaeology of Ideology: A Study of Maya Preclassic Architectural Sculpture at Nakbe, Peten, Guatemala*. Ph.D. dissertation, University of California, Los Angeles.
 1994 *Investigaciones arqueológicas en Nakbé: el resumen de la temporada de campo de 1993*. Report submitted to the Instituto de Antropología e Historia de Guatemala, Guatemala.
 1995 *The Rise and Fall of Maya Civilization: New Perspectives from Northern Peten*. Paper presented at the Thirteenth Annual Maya Weekend, University of Pennsylvania, Philadelphia.

Harbottle, Garman, and Phil C. Weigand

- 1992 *Turquoise in Pre-Columbian America*. *Scientific American* 266(2):78-85.

Harlow, George E.

- 1993 *Middle American Jade: Geologic and Petrologic Perspectives on Variability and Source*. In *Precolumbian Jade: New Geological and Cultural Interpretations*, edited by Frederick W. Lange, pp. 9-29. University of Utah Press, Salt Lake City.

Harmer Rooke Galleries

- 1985 *Fine Pre-Columbian Art from the Collections of Mr. and Mrs. Peter G. Wray*. Harmer Rooke Galleries, New York.

Harrison, Peter D'Arcy

- 1970 *The Central Acropolis, Tikal, Guatemala: A Preliminary Study of the Functions of Its Structural Components during the Late Classic Period*. Ph.D. dissertation, University of Pennsylvania.

Hastorf, Christine A., and Sissel Johannessen

- 1994 *Becoming Corn-Eaters in Prehistoric America*. In *Corn and Culture in the Prehistoric New World*, edited by Sissel Johannessen and Christine Hastorf, pp. 427-443. Westview Press, Boulder.

Haviland, William A., Jr.

- 1962 *A "Miniature Stela" from Tikal*. *Expedition* 4:2-3. Philadelphia.

Hayes, Alden C., and James Lancaster

- 1975 *Badger House Community, Mesa Verde National Park, Colorado*. National Park Service, U.S. Department of the Interior, Washington, D.C.

Hayes, Alden C., Jon Nathan Young, and A. H. Warren

- 1981 *Excavation of Mound 7, Grand Quivira National Monument, New Mexico*. Publications on Archaeology 16. National Park Service, U.S. Department of the Interior, Washington, D.C.

Hays-Gilpin, Kelley, and Jane H. Hill

- 1999 *The Flower World in Material Culture: An Iconographic Complex in the Southwest and Mesoamerica*. *Journal of Anthropological Research* 55:1-37.

Headrick, Annabeth

- 1996 *The Teotihuacan Trinity: UnMASKing the Political Structure*. Ph.D. dissertation, Department of Art History, University of Texas, Austin.
- 1999 *The Street of the Dead . . . It Really Was: Mortuary Bundles at Teotihuacan*. *Ancient Mesoamerica* 10(1):69-85.
- 2007 *The Teotihuacan Trinity: The Sociopolitical Structure of an Ancient Mesoamerican City*. University of Texas Press, Austin.

Healy, Paul F.

- 1974 *An Olmec Vessel from Northeast Honduras*. *Katunob* 3(4):73-79.

Heizer, Robert F., and Jonas E. Gullberg

- 1981 *Concave Mirrors from the Site of La Venta, Tabasco: Their Occurrence, Mineralogy, Optical Description, and Function*. In *The Olmec and Their Neighbors: Essays in Memory of Matthew W. Stirling*, edited by Elizabeth P. Benson, pp. 109-116. *Dumbarton Oaks*, Washington, D.C.

Hellmuth, Nicholas M.

- 1975 *The Escuintla Hoards: Teotihuacan Art in Guatemala*. *Foundation for Latin American Research Progress Reports* 1(2). *Foundation for Latin American Research*, Guatemala.
- 1978a *A General Introduction to Maya Art, Architecture, and Archaeology: Tikal Copan Travel Guide*. *Foundation for Latin American Anthropological Research*, Guatemala.
- 1978b *Maya Archaeology: Tikal Copan Travel Guide*. *Foundation for Latin American Anthropological Research*, Saint Louis.
- 1978c *Teotihuacan Art in the Escuintla, Guatemala Region*. In *Middle Classic America: A.D. 400-700*, edited by Esther Pasztory, pp. 71-85. *Columbia University Press*, New York.
- 1987a *Monster und Menschen in der Maya-Kunst: Eine Ikonographie der alten Religionen Mexikos und Guatemalas*. *Academische Druck- u. Verlagsanstalt*, Graz.
- 1987b *The Surface of the Underwaterworld: Iconography of the Gods of Early Classic Maya Art in Peten, Guatemala*. *Foundation for Latin American Anthropological Research*, Culver City.
- 1988 *Early Maya Iconography on an Incised Cylindrical Tripod*. In *Maya Iconography*, edited by Elizabeth P. Benson and Gillett G. Griffin, pp. 152-174. *Princeton University Press*, Princeton.
- 1991 *A Hunting God and the Maya Ballgame of Guatemala: An Iconography of Maya Ceremonial Headdresses*. In *The Mesoamerican Ballgame*, edited by Gerard W. van Bussel, Paul L. F. van Dongen, and Ted J. J. Leyenaar, pp. 135-159. *Rijksmuseum voor Volkenkunde*, Leiden.

Helms, Mary W.

- 1992 *Cosmovision of the Chiefdoms of the Isthmus of Panama*. In *The Ancient Americas: Art from Sacred Landscapes*, edited by Richard F. Townsend, pp. 216-227. *The Art Institute of Chicago*, Chicago.

Hermitte, M. Esther

- 1970 *Poder sobrenatural y control social*. *Ediciones Especiales* 57. *Instituto Indigenista Interamericano*, Mexico.

Hernández, Francisco

- 1946 *Antigüedades de la Nueva España*. 2 vols. Joaquín García Pimentel, ed. *Editorial Pedro Robredo*, Mexico.
- 1959 *Historia natural de la Nueva España*. 2 vols. *Editorial Pedro Robredo*, Mexico.

Hernández Xolocotzi, Efraim

- 1985 *Maize and Man in the Greater Southwest*. *Economic Botany* 39:416-430.

Heyden, Doris

- 1975 *An Interpretation of the Cave Underneath the Pyramid of the Sun in Teotihuacan, Mexico*. *American Antiquity* 40(2):131-147.
- 1977 *The Year Sign in Ancient Mexico: A Hypothesis as to Its Origin and Meaning*. In *Pre-Columbian Art History: Selected Readings*, edited by Alana Cordy-Collins and Jean Stern, pp. 213-237. *Peek Publications*, Palo Alto.

- Hibben, Frank C.
1975 *Kiva Art of the Anasazi at Pottery Mound*. KC Publications, Las Vegas.
- Hill, Jane H.
1992 The Flower World of Old Uto-Aztecan. *Journal of Anthropological Research* 48:117-144.
- Hirth, Kenneth G.
1978 Interregional Trade and the Formation of Prehistoric Gateway Communities. *American Antiquity* 43(1):35-45.
- Hirth, Kenneth G., and Susan Grant Hirth
1993 Ancient Currency: The Style and Use of Jade and Marble Carvings in Central Honduras. In *Pre-Columbian Jade: New Geological and Cultural Interpretations*, edited by Frederick W. Lange, pp. 173-190. University of Utah Press, Salt Lake City.
- Hofling, Charles Andrew,
1991 *Itzá Maya Texts with a Grammatical Overview*. University of Utah Press, Salt Lake City.
- Hofling, Charles Andrew, and Félix Fernando Tesucún
1997 *Itzaj Maya-Spanish-English Dictionary*. University of Utah Press, Salt Lake City.
- Hohmann, Hasso, and Annegrete Vogrin
1982 *Die Architektur von Copan*. 2 vols. Akademische Druck- u. Verlagsanstalt, Graz.
- Holland, William R.
1961 El tonalismo y el nagualismo entre los tzotziles. *Estudios de Cultura Maya* 1:176-181.
1962 Highland Maya Folk Medicine: A Study of Cultural Exchange. Ph.D. dissertation, Department of Anthropology, University of Arizona.
1963 *Medicina maya en los altos de Chiapas. Un estudio del cambio socio-cultural*. Colección de Antropología Social 2. Instituto Nacional Indigenista, Mexico.
- Holmes, William H.
1915 Problems of the Twin Cups of San Juan Teotihuacan, Mexico. *Art and Archaeology* 1(5):210. Archaeological Institute of America, Washington, D.C.
- Houge, Charles L.
1993 *Latin American Insects and Entomology*. University of California Press, Berkeley.
- Houston, Stephen D.
1984 An Example of Homophony in Maya Script. *American Antiquity* 49(4):790-805.
1993a *Hieroglyphs and History at Dos Pilas: Dynastic Politics of the Classic Maya*. University of Texas Press, Austin.
1993b Sweatbaths That Aren't: Architectural Conflation in the Cross Group at Palenque. Manuscript.
1994 Literacy among the Pre-Columbian Maya: A Comparative Perspective. In *Writing Without Words: Alternative Literacies in Mesoamerica and the Andes*, edited by Elizabeth Hill Boone and Walter D. Mignolo, pp. 27-49. Duke University Press, Durham.
1998 Classic Maya Depictions of the Built Environment. In *Form and Function in Classic Maya Architecture*, edited by Stephen D. Houston, pp. 333-372. Dumbarton Oaks, Washington, D.C.
- Houston, Stephen D., and David Stuart
1989 *The Way Glyph: Evidence for "Co-essences" among the Classic Maya*. Research Reports on Ancient Maya Writing 30. Center for Maya Research, Washington, D.C.
1990 T632 as *Muyal*, "Cloud." *Central Tennessean Notes in Maya Epigraphy* 1. Nashville.
1996 Of Gods, Glyphs and Kings: Divinity and Rulership among the Classic Maya. *Antiquity* 70(268):289-312.
1997 The Ancient Maya Self: Personhood and Portraiture in the Classic Period. Manuscript.

Houston, Stephen D., and David Stuart, continued

- 1998 The Ancient Maya Self: Personhood and Portraiture in the Classic Period. *Res: Anthropology and Aesthetics* 33:73-101.
- 2001 Peopling the Classic Maya Court. In *Royal Courts of the Ancient Maya. Volume One: Theory, Comparison, and Synthesis*, edited by Takeshi Inomata and Stephen Houston, pp. 54-83. Westview Press, Boulder.

Houston, Stephen D., David Stuart, and Karl A. Taube

- 1989 Folk Classification of Classic Maya Pottery. *American Anthropologist* 91(3):720-726.
- 1992 Image and Text on the "Jauncy Vase." In *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 3*, edited by Barbara Kerr and Justin Kerr, pp. 12-26. Kerr Associates, New York.
- 2006 *The Memory of Bones: Body, Being, and Experience among the Classic Maya*. University of Texas Press, Austin.

Houston, Stephen D., and Karl A. Taube

- 2000 An Archaeology of the Senses: Perception and Cultural Expression in Ancient Mesoamerica. *Cambridge Archaeological Journal* 10(2):261-294.
- 2010 La sexualidad entre los antiguos mayas. *Arqueología Mexicana* 18(1):38-45.
- 2011 The Fiery Pool: Fluid Concepts of Water and Sea among the Classic Maya. In *Ecology, Power and Religion in Maya Landscapes*, edited by Christian Isendahl and Bodil Liljefors Persson, pp. 17-37. Verlag Anton Saurwein, Markt Schwaben.

Howell, Steve N. G., and Sophie Webb

- 1995 *A Guide to the Birds of Mexico and Northern Central America*. Oxford University Press, Oxford.

Hurley, Alfa, and Agustín Ruíz Sánchez

- 1986 *Diccionario tzotzil de San Andrés con variaciones dialectales*. Instituto Lingüístico de Verano, Mexico.

Ichon, Alain

- 1973 *La religión de los totonacas de la sierra*. Instituto Nacional Indigenista, Mexico.
- 1977 *Les sculptures de la Lagunita, El Quiché, Guatemala*. Centre National de la Recherche Scientifique, Institut d'Ethnologie; Editorial Piedra Santa, Guatemala.

Inomata, Takeshi, and Daniela Triadan

- 2015 Middle Preclassic Caches from Ceibal, Guatemala. In *Maya Archaeology 3*, edited by Charles Golden, Stephen Houston, and Joel Skidmore, pp. 56-91. Precolumbia Mesoweb Press, San Francisco.

Jackson, Frances, and Julia Supple

- 1952 *Vocabulario tojolabal*. Instituto Lingüístico de Verano, Mexico.

Janzen, Daniel H.

- 1966 Coevolution of Mutualism between Ants and Acacias in Central America. *Evolution* 20(3):249-275.
- 1967 Interaction of the Bull's-Horn Acacia (*Acacia cornigera* L.) with an Ant Inhabitant (*Pseudomyrmex ferruginea* F. Smith) in Eastern Mexico. *University of Kansas Science Bulletin* 47(6):315-558.

Jarquín Pacheco, Ana María, and Enrique Martínez Vargas

- 1982 Exploraciones en el lado este de la Ciudadela (Estructuras 1G, 1R, 1Q y 1P). In *Memoria del Proyecto Arqueológico Teotihuacan 80-82*, edited by Rubén Cabrera Castro, Ignacio Rodríguez García, and Noel Morelos García, pp. 19-47. Universidad Nacional Autónoma de México, Mexico.

Jáuregui, Jesús

- 2002 La serpiente emplumada entre los coras y huicholes. *Arqueología Mexicana* 9(53):64-69.
- 2008 El mariache-tarima. Un instrumento musical de tradición amerindia. *Arqueología Mexicana* 16(94):66-75.

Jiménez Moreno, Wigberto

1941 Tula y los toltecas según las fuentes. *Revista Mexicana de Estudios Antropológicos* 5:79-83.

Jiménez Ovando, Roberto

1988 Entierros humanos prehispánicos de la zona arqueológica de Cacaxtla, Tlaxcala. *Antropológicas* 2:57-72.

Johnson, Barbara C.

1986 *Four Dan Sculptors: Continuity and Change*. Fine Arts Museums of San Francisco, San Francisco.

Jones, Christopher

1977 Inauguration Dates of Three Late Classic Rulers of Tikal, Guatemala. *American Antiquity* 42(1):28-60.

1983a Monument 26, Quirigua, Guatemala. In *Quirigua Reports, Volume 2, Papers 6-15*, edited by Edward M. Schortman and Patricia A. Urban, pp. 118-128. University Museum, University of Pennsylvania, Philadelphia.

1983b New Drawings of Monuments 23 and 24, Quirigua, Guatemala. In *Quirigua Reports, Volume 2, Papers 6-15*, edited by Edward M. Schortman and Patricia A. Urban, pp. 137-140. University Museum, University of Pennsylvania, Philadelphia.

Jones, Christopher, and Miguel Orrego C.

1987 Corozal Stela I and Tikal Miscellaneous Stone 167: Two New Monuments from the Tikal Vicinity, Guatemala. *Mexicon* 9(6):129-133.

Jones, Christopher, and Linton Satterthwaite

1982 *The Monuments and Inscriptions of Tikal: The Carved Monuments*. Tikal Report 33, Part A. Monograph 44. University Museum, University of Pennsylvania, Philadelphia.

Jones, Julie, ed.

1998 *Jade in Ancient Costa Rica*. Metropolitan Museum of Art, New York.

Joralemon, Peter David

1971 *A Study of Olmec Iconography*. Studies in Pre-Columbian Art and Archaeology 7. Dumbarton Oaks, Washington, D.C.

1974 Ritual Blood-Sacrifice Among the Ancient Maya: Part I. In *Primera Mesa Redonda de Palenque, Part II: A Conference on the Art, Iconography, and Dynastic History of Palenque, 1973*, edited by Merle Greene Robertson, pp. 59-75. Robert Louis Stevenson School, Pebble Beach.

1976 The Olmec Dragon: A Study in Pre-Columbian Iconography. In *Origins of Religious Art and Iconography in Preclassic Mesoamerica*, edited by Henry B. Nicholson, pp. 27-71. UCLA Latin American Center Publications, Los Angeles.

1981 The Old Woman and the Child: Themes in the Iconography of Preclassic Mesoamerica. In *The Olmec and Their Neighbors: Essays in Memory of Matthew W. Stirling*, edited by Elizabeth P. Benson, pp. 163-180. Dumbarton Oaks, Washington, D.C.

1988 The Olmec. In *The Face of Ancient America: The Wally and Brenda Zollman Collection of Precolumbian Art*, by Lee A. Parsons, John B. Carlson, and Peter David Joralemon, pp. 9-50. Indianapolis Museum of Art, Indianapolis.

1996 In Search of the Olmec Cosmos: Reconstructing the World View of Mexico's First Civilization. In *Olmec Art of Ancient Mexico*, edited by Elizabeth Benson and Beatriz de la Fuente, pp. 51-59. National Gallery of Art, Washington, D.C.

Jordan, Keith

2016 From Tula Chico to Chichén Itzá: Implications of the Epiclassic Sculpture of Tula for the Nature and Timing of Tula-Chichén Contact. *Latin American Antiquity* 27(4):462-478.

Joyce, Rosemary A.

2001 Negotiating Sex and Gender in Classic Maya Society. In *Gender in Pre-Hispanic America*, edited by Cecelia Klein, pp. 109-141. Dumbarton Oaks, Washington, D.C.

Judd, Neil M.

1954 *The Material Culture of Pueblo Bonito*. Miscellaneous Collections 124. Smithsonian Institution, Washington, D.C.

Justeson, John S.

1984 Interpretations of Maya Hieroglyphs. In *Phoneticism in Mayan Hieroglyphic Writing*, edited by John S. Justeson and Lyle Campbell, pp. 315-362. Publication 9. Institute for Mesoamerican Studies, State University of New York, Albany.

Kampen, Michael E.

1972 *The Sculpture of El Tajín, Veracruz, Mexico*. University of Florida Press, Gainesville.

Kaplan, Jonathan

1995 The Incienso Throne and Other Thrones from Kaminaljuyu, Guatemala: Late Preclassic Examples of a Mesoamerican Throne Tradition. *Ancient Mesoamerica* 6(2):185-196.

Karttunen, Frances

1983 *An Analytical Dictionary of Nahuatl*. University of Texas Press, Austin.

Kelemen, Pál

1969 *Medieval American Art: Masterpieces of the New World before Columbus*. 2 vols. 3rd ed. Dover Publications, New York.

Kelley, David H.

1962a Fonetismo en la escritura maya. *Estudios de Cultura Maya* 2:277-317.

1962b Glyphic Evidence for a Dynastic Sequence at Quirigua, Guatemala. *American Antiquity* 27:323-335.

1965 The Birth of the Gods at Palenque. *Estudios de Cultura Maya* 5:93-134.

1976 *Deciphering the Maya Script*. University of Texas Press, Austin.

1983 The Maya Calendar Correlation Problem. In *Civilization in the Ancient Americas: Essays in Honor of Gordon R. Willey*, edited by Richard M. Leventhal and Alan L. Kolata, pp. 157-208. Peabody Museum of Archaeology and Ethnology, Harvard University; University of New Mexico Press, Albuquerque.

Kerr, Justin

1989 *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 1*. Kerr Associates, New York.

1990 *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 2*. Kerr Associates, New York.

1992a *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 3*. Kerr Associates, New York.

1992b Please Let's Stop Bashing the Baby. Manuscript.

1994 *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 4*. Kerr Associates, New York.

1997 *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 5*. Kerr Associates, New York.

2000 *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 6*. Kerr Associates, New York.

Kevan, D. Keith McE., and Geoffrey G. E. Scudder

1989 *Illustrated Keys to the Families of Terrestrial Arthropods of Canada: 1. Myriapods (Millipedes, Centipedes, etc.)*. Biological Survey of Canada, Ottawa.

Key, Harold, and Mary Ritchie de Key

1953 *Vocabulario de la Sierra de Zacapoaxtla, Puebla*. Summer Institute of Linguistics, Mexico.

Kidder, Alfred V.

1947 *Artifacts of Uaxactun, Guatemala*. Publication 576. Carnegie Institution of Washington, Washington, D.C.

- Kidder, Alfred V., Jesse D. Jennings, and Edwin M. Shook
 1946 *Excavations at Kaminaljuyu, Guatemala*. Publication 561. Carnegie Institution of Washington, Washington, D.C.
- Kidder, Alfred V., and Carlos Samayoa Chinchilla
 1959 *The Art of the Ancient Maya*. T. W. Crowell, New York.
- Kindl, Olivia
 2016 Ritual Use of Mirrors by the Wisaritari (Huichol Indians): Instruments of Reflexivity in Creative Processes. In *Manufactured Light: Mirrors in the Mesoamerican Realm*, edited by Emiliano Gallaga M. and Marc G. Blainey, pp. 255-283. University of Colorado Press, Niwot.
- King, J. C. H., Max Carocci, Carolyn Cartwright, Colin McEwan, and Rebecca Stacy, eds.
 2012 *Turquoise in Mexico and North America: Science, Conservation, Culture and Collections*. British Museum, London.
- Kirchhoff, Paul, Lina Odena Güemes, and Luis Reyes García
 1976 *Historia tolteca-chichimeca*. Instituto Nacional de Antropología e Historia, Mexico.
- Klein, Cecelia F.
 1976 *The Face of the Earth: Frontality in Two-Dimensional Mesoamerican Art*. Garland Publishing, New York.
 1980 Who Was Tlaloc? *Journal of Latin American Lore* 6(2):155-204. Los Angeles.
 1990 Fighting with Femininity: Gender and War in Aztec Mexico. Paper presented at the symposium "Gendering Rhetorics: Postures of Dominance and Submission in Human History," Center for Medieval and Early Renaissance Studies, State University of New York at Binghamton.
- Knorozov, Yuri V.
 1967 *Selected Chapters from The Writing of the Maya Indians*. Sophie Coe, trans. Tatiana Proskouriakoff, ed. Russian Translation Series 4. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
- Köhler, Ulrich
 1989 Comets and Falling Stars in the Perceptions of Mesoamerican Indians. In *World Archaeoastronomy*, edited by Anthony F. Aveni, pp. 289-299. Cambridge University Press, Cambridge.
- Kolb, Charles C.
 1987 *Marine Shell Trade and Classic Teotihuacan, Mexico*. BAR International Series 364. British Archaeological Reports, Oxford.
- Kowalski, Jeff K.
 1985 A Historical Interpretation of the Inscriptions of Uxmal. In *Fourth Palenque Round Table, 1980*, edited by Elizabeth P. Benson, pp. 235-247. Pre-Columbian Art Research Institute, San Francisco.
 1989 The Mythological Identity of the Figure on the La Esperanza ("Chinkultic") Ball Court Marker. *Research Reports on Ancient Maya Writing* 27:13-24. Center for Maya Research, Washington, D.C.
 1999 The Puuc as Seen from Uxmal. In *Hidden among the Hills: Maya Archaeology of the Northwestern Yucatan Peninsula*, edited by Hanns J. Prem, pp. 93-120. Acta Mesoamerica 7. Verlag von Flemming, Möckmühl.
- Krichman, Michael, and Eva Ungar Grudin
 1981 *Ancient American Art: An Aesthetic View*. Triad Press, Boston.
- Kristan-Graham, Cynthia B.
 1989 Art, Rulership, and the Mesoamerican Body Politic at Tula and Chichen Itza. Ph.D. dissertation, Department of Art History, University of California, Los Angeles.

Krickeberg, Walter

- 1949 *Felsplastik und Felsbilder bei den Kulturvölkern Altamerikas mit besonder Berücksichtigung Mexicos*. 2 vols. Palmes-Verlag, Berlin.

Krochock, Ruth

- 1988 *The Hieroglyphic Inscriptions and Iconography of Temple of the Four Lintels and Related Monuments, Chichén Itzá, Yucatán, México*. M.A. thesis, University of Texas, Austin.

Kubler, George

- 1961 *On the Colonial Extinction of the Motifs of Precolumbian Art*. In *Essays in Pre-Columbian Art and Archaeology*, edited by Samuel K. Lothrop, pp. 14-34. Harvard University Press, Cambridge, Mass.
- 1967 *The Iconography of the Art of Teotihuacan*. *Studies in Pre-Columbian Art and Archaeology* 4. Dumbarton Oaks, Washington, D.C.
- 1972 *Jaguars in the Valley of Mexico*. In *The Cult of the Feline*, edited by Elizabeth P. Benson, pp. 19-44. Dumbarton Oaks, Washington, D.C.
- 1976 *The Double-Portrait Lintels at Tikal*. In *Actas del XXIII Congreso Internacional de Historia del Arte*, v. 1, pp. 165-167. Universidad de Granada, Granada.
- 1980 *Eclecticism at Cacaxtla*. In *Third Palenque Round Table, 1978, Part 2*, edited by Merle Greene Robertson, pp. 163-172. University of Texas Press, Austin.
- 1982 *The Mazapan Maps of Teotihuacan in 1560*. *Indiana* 7(2):43-55. Berlin.

Kubler, George, ed.

- 1986 *Pre-Columbian Art of Mexico and Central America*. Yale University Art Gallery, New Haven.

Labbé, Armand J.

- 1982 *Religion, Art and Iconography: Man and Cosmos in Prehispanic Mesoamerica*. Bowers Museum Foundation, Santa Ana.

Lange, Frederick W.

- 1993 *Precolumbian Jade: New Geological and Cultural Interpretations*. University of Utah Press, Salt Lake City.

Langley, James C.

- 1986 *Symbolic Notation of Teotihuacan: Elements of Writing in a Mesoamerican Culture of the Classic Period*. BAR International Series 313. British Archaeological Reports, Oxford.
- 1992 *Teotihuacan Sign Clusters: Emblem or Articulation?* In *Art, Ideology, and the City of Teotihuacan*, edited by Janet C. Berlo, pp. 247-280. Dumbarton Oaks, Washington, D.C.
- 1993 *Symbols, Signs, and Writing Systems*. In *Teotihuacan: Art from the City of the Gods*, edited by Kathleen Berrin and Esther Pasztory, pp. 128-139. Thames and Hudson, New York.

Laporte, Juan Pedro, and Vilma Fialko

- 1995 *Un reencuentro con Mundo Perdido, Tikal, Guatemala*. *Ancient Mesoamerica* 6(1):41-94.

Laporte, Juan Pedro, and Juan Antonio Valdés

- 1993 *Tikal y Uaxactún en el Preclásico*. Universidad Nacional Autónoma de México, Mexico.

Larsen, Raymond

- 1955 *Vocabulario huasteco del estado de San Luis Potosí*. Instituto Lingüístico de Verano, Mexico.

Las Casas, Fray Bartolomé

- 1967 *Apologética historia sumaria*. Universidad Nacional Autónoma de México, Mexico.

Laughlin, Robert M.

- 1962 *El símbolo de la flor en la religión de Zinacantán*. *Estudios de Cultura Maya* 2:123-139.
- 1975 *The Great Tzotzil Dictionary of San Lorenzo Zinacantán*. Contributions to Anthropology 19. Smithsonian Institution Press, Washington, D.C.

- 1976 *Of Wonders Wild and New: Dreams from Zinacantán*. Contributions to Anthropology 22. Smithsonian Institution Press, Washington, D.C.
- 1977 *Of Cabbages and Kings: Tales from Zinacantán*. Contributions to Anthropology 23. Smithsonian Institution Press, Washington.
- 1988 *The Great Tzotzil Dictionary of Santo Domingo Zinacantán: With Grammatical Analysis and Historical Commentary*. 3 vols. Contributions to Anthropology 31. Smithsonian Institution Press, Washington, D.C.
- 2000 Poetic License. In *The Flowering of Man: A Tzotzil Botany of Zinacantán*, by Dennis E. Breedlove and Robert E. Laughlin, pp. 101-108. Smithsonian Institution Press, Washington, D.C.

Lawrence, R. F.

- 1984 *The Centipedes and Millipedes of Southern Africa: A Guide*. A. A. Balkema, Cape Town.

Lee, Thomas A., Jr.

- 1969 *The Artifacts of Chiapa de Corzo, Chiapas*. Papers 26. New World Archaeological Foundation, Brigham Young University, Provo.
- 1985 *Los códices mayas*. Universidad Autónoma de Chiapas, Tuxtla Gutiérrez.

Lenkersdorf, Carlos

- 1979 *Diccionario tojolabal-español*. 2 vols. Editorial Nuestro Tiempo, Mexico.

León-Portilla, Miguel

- 1963 *Aztec Thought and Culture*. University of Oklahoma Press, Norman.
- 1984 *Literaturas de Mesoamérica*. Secretaría de Educación Pública, Mexico.

Lewis, J. G. E.

- 1981 *The Biology of Centipedes*. Cambridge University Press, Cambridge.

Lincoln, Charles E.

- 1986 The Chronology of Chichen Itza: A Review of the Literature. In *Late Lowland Maya Civilization: Classic to Postclassic*, edited by Jeremy A. Sabloff and E. Wyllys Andrews V, pp. 141-196. University of New Mexico Press, Albuquerque.
- 1988 Dual Kingship at Chichen Itza. Paper presented at the 53rd Annual Meeting of the Society for American Archaeology, Phoenix.
- 1990 Ethnicity and Social Organization at Chichen Itza. Ph.D. dissertation, Harvard University, Cambridge, Mass.

Linné, Sigvald

- 1934 *Archaeological Researches at Teotihuacan, Mexico*. Publication n.s. 1. Ethnographical Museum of Sweden, Stockholm.
- 1942 *Mexican Highland Cultures: Archaeological Researches at Teotihuacan, Calpulalpan, and Chalchicomula in 1934-1935*. Publication 7. Ethnographical Museum of Sweden, Stockholm.

Lombardo de Ruiz, Sonia

- 1996 El estilo teotihuacano en la pintura mural. In *La pintura mural prehispánica en México, Teotihuacán*, edited by Beatriz de la Fuente, 1(1):3-64. Universidad Nacional Autónoma de México, Mexico.

Lombardo de Ruiz, Sonia, coord.

- 1987 *La pintura mural maya en Quintana Roo*. Instituto Nacional de Antropología e Historia, Chetumal.

Longyear, John M.

- 1952 *Copan Ceramics: A Study of Southeastern Maya Pottery*. Publication 597. Carnegie Institution of Washington, Washington, D.C.

Looper, Matthew, and Julia G. Kappelman

- 2001 The Cosmic Umbilicus in Mesoamerica: A Floral Metaphor for the Source of Life. *Journal of Latin American Lore* 21(1):3-53. Los Angeles.

López Austin, Alfredo

- 1979 Iconografía mexicana: el monolito verde del Templo Mayor. *Anales de Antropología* 16:133-153. Universidad Nacional Autónoma de México, Mexico.
- 1987 The Masked God of Fire. In *The Aztec Templo Mayor*, edited by Elizabeth H. Boone, pp. 257-291. Dumbarton Oaks, Washington, D.C.
- 1988 *The Human Body and Ideology: Concepts of the Ancient Nahuas*. 2 vols. University of Utah Press, Salt Lake City.

López Austin, Alfredo, Leonardo López Luján, and Saburo Sugiyama

- 1991 The Temple of Quetzalcoatl at Teotihuacan: Its Possible Ideological Significance. *Ancient Mesoamerica* 2(1):93-105.

López de Cogolludo, Diego

- [1688]1954 *Historia de Yucatán*. Talleres Graficos del Gobierno, Campeche.
- 1957 *Historia de Yucatán*. Facsimile of original 1688 edition. Prologue by J. Ignacio Rubio Mañe. Editorial Academia Literaria, Mexico.

López Luján, Leonardo

- 1994 *The Offerings of the Templo Mayor of Tenochtitlan*. University Press of Colorado, Niwot.
- 2002 The Aztecs' Search for the Past. In *Aztecs*, edited by Eduardo Matos Moctezuma and Felipe Solís Olguín, pp. 22-29. Royal Academy of Arts, London.

Loten, H. Stanley, and David M. Pendergast

- 1984 *A Lexicon for Maya Architecture*. Archaeology Monograph 8. Royal Ontario Museum, Toronto.

Lothrop, Samuel K.

- 1929 Further Notes on Indian Ceremonies in Guatemala. *Indian Notes* 6(1):1-25. Museum of the American Indian, Heye Foundation, New York.
- 1936 *Zacualpa: A Study of Ancient Quiche Artifacts*. Publication 472. Carnegie Institution of Washington, Washington, D.C.
- 1952 *Metals from the Cenote of Sacrifice, Chichén Itzá, Yucatán*. *Memoirs* 10(2). Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Lothrop, Samuel K., W. F. Foshag, and Joy Mahler

- 1957 *Pre-Columbian Art: The Robert Woods Bliss Collection*. Phaidon, London.

Lounsbury, Floyd G.

- 1973 On the Derivation and Reading of the "Ben-Ich" Prefix. In *Mesoamerican Writing Systems*, edited by Elizabeth P. Benson, pp. 99-143. Dumbarton Oaks, Washington, D.C.
- 1982 Astronomical Knowledge and Its Uses at Bonampak. In *Archaeoastronomy in the New World*, edited by Anthony F. Aveni, pp. 143-186. Cambridge University Press, Cambridge.
- 1983 Glyph Values: T:99, 155, 279, 280. In *Contributions to Maya Hieroglyphic Decipherment 1*, edited by Stephen D. Houston, pp. 44-47. Human Relations Area Files, New Haven.
- 1985 The Identities of the Mythological Figures in the Cross Group Inscriptions at Palenque. In *Fourth Palenque Round Table, 1980*, edited by Elizabeth P. Benson, pp. 45-58. Pre-Columbian Art Research Institute, San Francisco.

Love, Bruce

- 1986 Yucatec Maya Ritual: A Diachronic Perspective. Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles.
- 1989 Yucatec Breads through Time. In *Word and Image in Maya Culture*, edited by William F. Hanks and Don S. Rice, pp. 336-350. University of Utah Press, Salt Lake City.
- 1993 *The Paris Codex: Handbook for a Maya Priest*. University of Texas Press, Austin.

Lowe, Gareth W.

- 1965 Desarrollo y función del incensario en Izapa. *Estudios de Cultura Maya* 5:53-64.

- 1981 Olmec Horizons Defined in Mound 20, San Isidro, Chiapas. In *The Olmec and Their Neighbors: Essays in Memory of Matthew W. Stirling*, edited by Elizabeth P. Benson, pp. 231-255. Dumbarton Oaks, Washington, D.C.
- 1990 Izapa: Between Olmec and Maya. In *Mexico: Splendors of Thirty Centuries*, pp. 72-86. Metropolitan Museum of Art, New York.
- Lowe, Gareth W., Thomas A. Lee Jr., and Eduardo Martínez Espinosa
- 1982 *Izapa: An Introduction to the Ruins and Monuments*. Papers 31. New World Archaeological Foundation, Brigham Young University, Provo.
- Luckert, Karl W.
- 1976 *Olmec Religion: A Key to Middle America and Beyond*. Civilization of the American Indian Series 137. University of Oklahoma Press, Norman.
- Lumholtz, Carl
- 1900 *Symbolism of the Huichol Indians*. Memoirs 3(1). American Museum of Natural History, New York.
- Mace, Carroll Edward
- 1970 *Two Spanish-Quiché Dance-Dramas of Rabinal*. Tulane Studies in Romance Languages and Literature 3. Tulane University, New Orleans.
- MacLeod, Barbara
- 1990 The God N/Step Set in the Primary Standard Sequence. In *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 2*, edited by Barbara Kerr and Justin Kerr, pp. 331-347. Kerr Associates, New York.
- Macri, Martha J., and Laura M. Stark
- 1993 *A Sign Catalog of the La Mojarra Script*. Monograph 5. Pre-Columbian Art Research Institute, San Francisco.
- Makemson, Maud W.
- 1951 *The Book of the Jaguar Priest*. Henry Schuman, New York.
- Maler, Teobert
- 1901 *Researches in the Central Portion of the Usumatsintla Valley: Report of Explorations for the Museum 1898-1900*. Memoirs 2(1). Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.
- 1903 *Researches in the Central Portion of the Usumatsintla Valley: Reports of Explorations for the Museum, Part Second*. Memoirs 2(2). Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.
- Malinowski, Bronislaw
- 1922 *Argonauts of the Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagos of Melanesian New Guinea*. Routledge and Kegan Paul, London.
- 1934 Stone Implements in Eastern New Guinea. In *Essays Presented to C. G. Seligman*, edited by Edward Evans-Pritchard, Raymond Firth, Bronislaw Malinowski, and Isaac Schapera, pp. 189-196. Kegan Paul, Trench, Trubner and Company, London.
- Malotki, Ekkehart
- 2000 *Kokopelli: The Making of an Icon*. University of Nebraska Press, Lincoln.
- Manzanilla, Linda, ed.
- 1993 *Anatomía de un conjunto residencial teotihuacano en Oztoyahualco*. 2 vols. Universidad Nacional Autónoma de México, Mexico.

Marcus, Joyce

- 1976 *Emblem and State in the Classic Maya Lowlands: An Epigraphic Approach to Territorial Organization*. Dumbarton Oaks, Washington, D.C.
- 1978 Archaeology and Religion: A Comparison of the Zapotec and Maya. *World Archaeology* 10(2):172-191.
- 1980 Zapotec Writing. *Scientific American* 242(2):50-64.
- 1983a Stone Monuments and Murals of Monte Albán IIIa. In *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations*, edited by Kent V. Flannery and Joyce Marcus, pp. 137-143. Academic Press, New York.
- 1983b Teotihuacán Vistors on Monte Albán Monuments and Murals. In *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations*, edited by Kent V. Flannery and Joyce Marcus, pp. 175-181. Academic Press, New York.
- 1989 Zapotec Chiefdoms and the Nature of Formative Religions. In *Regional Perspectives on the Olmec*, edited by Robert J. Sharer and David C. Grove, pp. 148-197. School of American Research Advanced Seminar Series. Cambridge University Press, Cambridge.
- 1992 *Mesoamerican Writing Systems: Propaganda, Myth, and History in Four Ancient Civilizations*. Princeton University Press, Princeton.
- 1999 Men's and Women's Ritual in Formative Oaxaca. In *Social Patterns in Pre-Classical Mesoamerica*, edited by David C. Grove and Rosemary A. Joyce, pp. 67-96. Dumbarton Oaks, Washington, D.C.

Marquina, Ignacio

- 1951 *Arquitectura prehispánica*. Memorias 1. Instituto Nacional de Antropología e Historia, Mexico.

Martin, Alistair

- 1975 Pardon a Hunter. In *The Guennol Collection*, edited by Ida Elly Rubin, v. 1, pp. xxiii-xxv. Metropolitan Museum, New York.

Martin, Simon

- 2006 Cacao in Ancient Maya Religion: First Fruit from the Maize Tree and Other Tales from the Underworld. In *Chocolate in Mesoamerica: A Cultural History of Cacao*, edited by Cameron L. McNeil, pp. 154-183. University of Florida Press, Gainesville.

Martin, Simon, and Nikolai Grube

- 2000 *Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya*. Thames and Hudson, New York.

Martínez Donjuán, Guadalupe

- 1985 El sitio olmeca de Teopantecuanitlán en Guerrero. *Anales de Antropología* 22:215-226. Universidad Nacional Autónoma de México, Mexico.

Martínez Hernández, Juan

- 1913 La creación del mundo según los mayas: paginas inéditas del manuscrito Chumayel. In *Proceedings of the International Congress of Americanists (18th session, London, 1912)*, pp. 164-171. London.

Martínez Hernández, Juan, ed.

- 1929 *Diccionario de Motul, maya-español, atribuido a Fray Antonio de Ciudad Real, y Arte de lengua maya por Fray Juan Coronel*. Talleres de la Compañía Tipográfica Yucateca, Mérida.

Martínez López, Cira

- 1994 La cerámica de estilo teotihuacano en Monte Albán. In *Monte Albán. Estudios recientes*, edited by Marcus Winter, pp. 25-54. Proyecto Especial Monte Albán 1992-1994, Oaxaca.

Martínez López, Cira, Marcus Winter, and Pedro Antonio Juárez

- 1995 Entierros humanos del Proyecto Especial Monte Albán 1992-1994. In *Entierros humanos de Monte Albán. Dos Estudios*, edited by Marcus Winter, pp. 79-244. Centro INAH Oaxaca, Oaxaca.

Mastache, Alba Guadalupe, Dan M. Healan, and Robert H. Cobean

- 2009 Four Hundred Years of Settlement and Cultural Continuity in Epiclassic and Early Postclassic Tula. In *The Art of Urbanism: How Mesoamerican Peoples Represented Themselves in Architecture and Imagery*, edited by William A. Fash and Leonardo López Luján, pp. 290-328. Dumbarton Oaks, Washington, D.C.

Mathews, Peter

- 1976 Maya New Year Ceremonies. Manuscript.
 1980 Notes on the Dynastic Sequence of Bonampak, Part 1. In *Third Palenque Round Table, 1978, Part 2*, edited by Merle Greene Robertson, pp. 60-73. University of Texas Press, Austin.
 1983 *Corpus of Maya Hieroglyphic Inscriptions, Volume 6, Part 1: Tonina*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
 2001 Notes on the Inscriptions on the Back of Dos Pilas Stela 8. In *The Decipherment of Ancient Maya Writing*, edited by Stephen Houston, Oswaldo Chinchilla Mazariegos, and David Stuart, pp. 394-418. University of Oklahoma Press, Norman.

Mathews, Peter, and John S. Justeson

- 1984 Patterns of Sign Substitution in Maya Hieroglyphic Writing: The "Affix Cluster." In *Phoneticism in Mayan Hieroglyphic Writing*, edited by John S. Justeson and Lyle Campbell, pp. 185-231. Publication 9. Institute for Mesoamerican Studies, State University of New York, Albany.

Mathews, Peter, and Linda Schele

- 1974 Lords of Palenque: The Glyphic Evidence. In *Primera Mesa Redonda de Palenque, Part I: A Conference on the Art, Iconography, and Dynastic History of Palenque, 1973*, edited by Merle Greene Robertson, pp. 63-75. Robert Louis Stevenson School, Pebble Beach.

Matos Moctezuma, Eduardo

- 1988 *The Great Temple of the Aztecs: Treasures of Tenochtitlan*. Doris Heyden, trans. Thames and Hudson, London.
 1991 Los seis Coyolxauqui: variaciones sobre un mismo tema. *Estudios de Cultura Azteca* 21:15-30.

Matos Moctezuma, Eduardo, ed.

- 1995 *Dioses del México antiguo*. Antiguo Colegio de San Ildefonso, Mexico.

Matos Moctezuma, Eduardo, and Leonardo López Luján

- 1993 Teotihuacan and its Mexica Legacy. In *Teotihuacan: Art from the City of the Gods*, edited by Kathleen Berrin and Esther Pasztory, pp. 156-165. Thames and Hudson, New York.

Maudslay, Alfred P.

- 1889-1902 *Archaeology*. 5 vols. Appendix to *Biologia Centrali-Americana; or, Contributions to the Knowledge of the Fauna and Flora of Mexico and Central America*. R. H. Porter and Dulau, London.

Maxwell, Judith M., and Craig A. Hanson

- 1992 *Of the Manners of Speaking That the Old Ones Had: The Metaphors of Andrés de Olmos in the TULAL Manuscript "Arte para aprender la lengua mexicana," 1547*. University of Utah Press, Salt Lake City.

Mayer, Karl Herbert

- 1980 *Maya Monuments: Sculptures of Unknown Provenance in the United States*. Acoma Books, Ramona, California.
 1984 *Maya Monuments: Sculptures of Unknown Provenance in Middle America*. Verlag von Flemming, Berlin.
 1987 *Maya Monuments: Sculptures of Unknown Provenance, Supplement 1*. Verlag von Flemming, Berlin.
 1989 *Maya Monuments: Sculptures of Unknown Provenance, Supplement 2*. Verlag von Flemming, Berlin.
 1995 *Maya Monuments: Sculptures of Unknown Provenance, Supplement 4*. Academic Publishers, Graz.

McBride, Harold W.

1969 Teotihuacan Style Pottery and Figurines from Colima. *Katunob* 7(3):86-91.

1971 Figurine Types of Central and Southern Veracruz. In *Ancient Art of Veracruz*, edited by Olga Hammer, pp. 23-30. Ethnic Council of Los Angeles, Los Angeles.

McDonald, Andrew

1983 *Tzutzuculi: A Middle-Preclassic Site on the Pacific Coast of Chiapas, Mexico*. Papers 47. New World Archaeological Foundation, Brigham Young University, Provo.

Means, Philip Ainsworth

1917 *History of the Spanish Conquest of Yucatan and of the Itzas*. Papers 7. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Medellín Zenil, Alfonso

1971 *Monolitos olmecas y otros en el Museo de la Universidad Veracruzana*. Corpus Antiquitatum Americanensium 5. Instituto Nacional de Antropología e Historia, Mexico.

Mendelson, E. Michael

1959 Maximon: An Iconographical Introduction. *Man* 59:57-60. London.

1965 *Los escandalos de Maximon. Un estudio sobre la religión y la visión del mundo en Santiago Atitlán*. Seminario de Integración Social Guatemalteca, Guatemala.

1967 Ritual and Mythology. In *Social Anthropology*, edited by Manning Nash, pp. 392-415. Handbook of Middle American Indians 6. University of Texas Press, Austin.

Mendieta, Geronimo de

1980 *Historia eclesiastica indiana*. Editorial Porrúa, Mexico.

Mendoza, Francisco Pérez, and Miguel Hernández Mendoza

1996 *Diccionario tz'utujil*. Proyecto Lingüístico Francisco Marroquín, Antigua.

Merwin, Raymond E., and George C. Vaillant

1932 *The Ruins of Holmul, Guatemala*. Memoirs 3(2). Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Meyer, Anthony J. P.

1995 *Oceanic Art*. Könemann, Cologne.

Michelet, Dominique, ed.

2011 *Maya, de l'aube au crépuscule: Collections nationales du Guatemala*. Musée du quai Branly, Paris.

Milbrath, Susan

1979 *A Study of Olmec Sculptural Chronology*. Studies in Pre-Columbian Art and Archaeology 23. Dumbarton Oaks, Washington, D.C.

Miles, Susan W.

1957 The Sixteenth-Century Pokom Maya: A Documentary Analysis of Social Structure and Archaeological Setting. *Transactions of the American Philosophical Society*, n.s. 47:735-781.

Miller, Arthur G.

1973 *The Mural Painting of Teotihuacan*. Dumbarton Oaks, Washington, D.C.

1977 Captains of the Itza: Unpublished Mural Evidence from Chichen Itza. In *Social Process in Maya Prehistory*, edited by Norman Hammond, pp. 197-225. Academic Press, London.

1978 A Brief Outline of the Artistic Evidence for Classic Period Cultural Contact between Maya Lowlands and Central Mexican Highlands. In *Middle Classic America: A.D. 400-700*, edited by Esther Pasztor, pp. 63-70. Columbia University Press, New York.

1982 *On the Edge of the Sea: Mural Painting at Tancah-Tulum, Quintana Roo, Mexico*. Dumbarton Oaks, Washington, D.C.

- 1988 Pre-Hispanic Mural Painting in the Valley of Oaxaca, Mexico. *National Geographic Research* 4(2):233-258.
- Miller, Jeffrey
 1974 Notes on a Stelae Pair Probably from Calakmul. In *Primera Mesa Redonda de Palenque, Part I: A Conference on the Art, Iconography, and Dynastic History of Palenque, 1973*, edited by Merle Greene Robertson, pp. 63-75. Robert Louis Stephenson School, Pebble Beach.
- Miller, Mary Ellen
 1975 *Jaina Figurines: A Study of Maya Iconography*. The Art Museum; Princeton University Press, Princeton.
 1986 *The Murals of Bonampak*. Princeton University Press, Princeton.
 1988 The Boys in the Bonampak Band. In *Maya Iconography*, edited by Elizabeth P. Benson and Gillett G. Griffin, pp. 318-330. Princeton University Press, Princeton.
 1996 *The Art of Mesoamerica: From Olmec to Aztec*. Thames and Hudson, London.
- Miller, Mary E., and Stephen D. Houston
 1987 The Classic Maya Ballgame and its Architectural Setting. *Res: Anthropology and Aesthetics* 14:46-65.
- Miller, Mary, and Simon Martin
 2004 *Courtly Art of the Ancient Maya*. Fine Arts Museums of San Francisco; Thames and Hudson, New York.
- Miller, Mary, and Marco Samayoa
 1998 Where Maize Grows: Jade, Chacmoos, and the Maize God. *Res: Anthropology and Aesthetics* 33:54-72.
- Miller, Mary, and Karl Taube
 1993 *The Gods and Symbols of Ancient Mexico and the Maya: An Illustrated Dictionary Of Mesoamerican Religion*. Thames and Hudson, London.
- Miller, Virginia E.
 1989 Star Warriors at Chichen Itza. In *Word and Image in Maya Culture*, edited by William F. Hanks and Don S. Rice, pp. 287-305. University of Utah Press, Salt Lake City.
 1991 *The Frieze of the Palace of the Stuccoes, Acanceh, Yucatan, Mexico*. Studies in Pre-Columbian Art and Archaeology 31. Dumbarton Oaks, Washington, D.C.
- Millon, Clara H.
 1972 The History of Mural Art at Teotihuacan. In *Teotihuacan. XI Mesa Redonda*, edited by Alberto Ruz Lhuillier, v. 2, pp. 1-16. Sociedad Mexicana de Antropología, Mexico.
 1973 Painting, Writing, and Polity in Teotihuacan, Mexico. *American Antiquity* 38(3):294-314.
 1988 A Reexamination of the Teotihuacan Tassel Headdress. In *Feathered Serpents and Flowering Trees: Reconstructing the Murals of Teotihuacán*, edited by Kathleen Berrin, pp. 114-134. Fine Arts Museums of San Francisco, San Francisco.
- Millon, René F.
 1973 *Urbanization at Teotihuacan, Mexico, Volume 1: The Teotihuacan Map*. Text by René F. Millon; maps by René F. Millon, R. Bruce Drewitt, and George L. Cowgill. University of Texas Press, Austin.
 1976 Social Relations in Ancient Teotihuacan. In *The Valley of Mexico: Studies in Pre-Hispanic Ecology and Society*, edited by Eric R. Wolf, pp. 205-248. University of New Mexico Press, Albuquerque.
 1981 Teotihuacan: City, State, and Civilization. In *Supplement to the Handbook of Middle American Indians, Volume 1: Archaeology*, edited by Jeremy A. Sabloff, pp. 198-243. University of Texas Press, Austin.
- Mock, Shirley, ed.
 1998 *The Sowing and the Dawning: Termination, Dedication and Transformation in the Archaeological and Ethnological Record of Mesoamerica*. University of New Mexico Press, Albuquerque.

Moedano Köer, Hugo

1951 Ce acatl igual ome acatl, como fin de xiuholpilli. *Revista Mexicana de Estudios Antropológicos* 12:103-131.

Molina, Alonso de

1977 *Vocabulario en lengua castellana y mexicana y mexicana y castellana*. 2nd ed. Editorial Porrúa, Mexico.

Monaghan, John

1989 The Feathered Serpent in Oaxaca. *Expedition* 31:12-18. Philadelphia.

1995 *The Covenants with Earth and Rain*. University of Oklahoma Press, Norman.

Moore, Frank

1966 An Excavation at Tetitla, Teotihuacan. *Mesoamerican Notes* 7-8. University of the Americas, Puebla.

Morales, Alfonso

1989 Reporte de excavación lado norte de la Estructura 10L-16. Manuscript on file at the Instituto Hondureño de Antropología e Historia, Tegucigalpa and Copan.

Morán, Francisco

1935 *Arte y Diccionario en Lengua Choltí: a manuscript copied from the Libro Grande of fr. Pedro Moran of about 1625: In Facsimile*. Publication 9. Maya Society, Baltimore.

Morena de los Arcos, Roberto

1969 Los cinco soles cosmogónicos. *Estudios de Cultura Náhuatl* 7:183-210.

Morley, Grace

1968 *Pre-Columbian Art*. National Museum, New Delhi.

Morley, Sylvanus G.

1920 *The Inscriptions at Copan*. Publication 219. Carnegie Institution of Washington, Washington, D.C.

1937-1938 *The Inscriptions of Peten*. 5 vols. Publication 437. Carnegie Institution of Washington, Washington, D.C.

1970 The Stela Platform at Uxmal. In *Archaeological Studies in Middle America*, edited with notes by H. E. D. Pollock, pp. 151-180. Publication 26. Middle American Research Institute, Tulane University, New Orleans.

Morley, Sylvanus G., and George W. Brainerd

1956 *The Ancient Maya*. 3rd ed. Stanford University Press, Stanford.

Morley, Sylvanus G., George W. Brainerd, and Robert J. Sharer

1983 *The Ancient Maya*. 4th ed. Stanford University Press, Stanford.

Morris, Ann A.

1931 Murals from the Temple of the Warriors and Adjacent Structures. In *The Temple of the Warriors at Chichen Itzá, Yucatan*, by Earl H. Morris, Jean Charlot, and Ann Axtell Morris, v. 1, pp. 347-485. Publication 406. Carnegie Institution of Washington, Washington, D.C.

Morris, Earl H.

1939 *Archaeological Studies in the La Plata District: Southwestern Colorado and Northwestern New Mexico*. Publication 519. Carnegie Institution of Washington, Washington, D.C.

Morris, Earl H., Jean Charlot, and Ann Axtell Morris

1931 *The Temple of the Warriors at Chichen Itzá, Yucatan*. 2 vols. Publication 406. Carnegie Institution of Washington, Washington, D.C.

Morris, Walter F., Jr.

1979 *A Catalog of Textiles and Folkart of Chiapas, Mexico*. 2 vols. Publicaciones Pokok de la Cooperativa de Artesenías Indígenas, San Cristobal de las Casas.

Moseley, Michael

1992 *The Incas and their Ancestors: The Archaeology of Peru*. Thames and Hudson, London.

Münch, Guido

1983 *Etnología del Istmo Veracruzano*. Universidad Nacional Autónoma de México, Mexico.

Múnera, Carlos

1991 Una representación de bulto mortuorio. In *Teotihuacán 1980–1982. Nuevas interpretaciones*, edited by Rubén Cabrera Castro, Ignacio Rodríguez García, and Noel Morelos García, pp. 335-341. Instituto Nacional de Antropología e Historia, Mexico.

Muñoz Cosme, Gaspar, Cristina Vidal Lorenzo, and Juan Antonio Valdés

1999 *Los mayas. Ciudades milenarias de Guatemala*. Talleres de Edelvives, Zaragoza.

Musée Barbier-Mueller

1992 *Art millénaire des Amériques: De la découverte à l'admiration, 1492–1992*. Musée Barbier-Mueller, Geneva.

Musée Rath

1998 *Mexique: Terre des Dieux: Musée Rath, 8 octobre 1998–24 janvier 1999*. Musées d'Art et d'Histoire, Geneva.

Nagao, Debra

1985 The Planting of Sustenance: Symbolism of the Two-Horned God in Offerings from the Templo Mayor. *Res: Anthropology and Aesthetics* 10:5-27.

1989 Public Proclamation in the Art of Cacaxtla and Xochicalco. In *Mesoamerica after the Decline of Teotihuacan*, edited by Richard A. Diehl and Janet C. Berlo, pp. 83-104. Dumbarton Oaks, Washington, D.C.

Nakamura, Seiichi

2000 Las excavaciones de rescate en el Cuadrante 10J, al sur de las Estelas 5 y 6, Copán: informe preliminar. Manuscript.

2003 The Rise and Fall of the Copan Dynasty. In *Shipono ocho maya bunmeiten (Dynasties of Mystery: Maya Exhibit Catalog)*, edited by Masahiro Ono and Hisao Baba, pp. 89-104. TBS, Tokyo.

Navarrete, Carlos

1974 *The Olmec Rock Carvings at Pijijiapan, Chiapas, Mexico, and Other Pieces from Chiapas and Guatemala*. Papers 35. New World Archaeological Foundation, Brigham Young University, Provo.

Navarrete, Carlos, Thomas A. Lee, and Carlos Silva Rhoads

1993 *Un catálogo de frontera. Esculturas, petroglifos y pinturas de la región media del Grijalva, Chiapas*. Universidad Nacional Autónoma de México, Mexico.

Navarrete, Carlos, and Eduardo Martínez

1977 *Exploraciones arqueológicas en la cueva de los Andasolos, Chiapas*. Universidad Autónoma de Chiapas, Tuxtla Gutiérrez.

Negrín, Juan

1975 *The Huichol Creation of the World*. E. B. Crocker Art Gallery, Sacramento.

Neurath, Johannes

2002 *Las fiestas de la Casa Grande. Procesos rituales, cosmovisión y estructura social en una comunidad Huichola*. Conaculta; Instituto Nacional de Antropología e Historia; Universidad de Guadalajara, Mexico.

Newman, Sarah, Stephen Houston, Thomas Garrison, and Edwin Román
 2015 *Outfitting a King*. In *Temple of the Night Sun: A Royal Tomb at El Diablo, Guatemala*, by Stephen Houston, Sarah Newman, Edwin Roman, and Thomas Garrison, pp. 84-179. Precolumbia Mesoweb Press, San Francisco.

Nicholson, Henry B.

1957 *Topiltzin Quetzalcoatl of Tollan: A Problem in Mexican Ethnohistory*. Ph.D. dissertation, Department of Anthropology, Harvard University, Cambridge, Mass.

1971 *Religion in Pre-Hispanic Central Mexico*. In *Archaeology of Northern Mesoamerica*, Part 1, edited by Gordon F. Ekholm and Ignacio Bernal, pp. 395-446. Handbook of Middle American Indians 10. University of Texas Press, Austin.

1977 *An Aztec Stone Image of a Fertility Goddess*. In *Pre-Columbian Art History: Selected Readings*, edited by Alana Cordy-Collins and Jean Stern, pp. 145-162. Peek Publications, Palo Alto.

1987 *The "Feathered Serpents" of Copan*. In *The Periphery of the Southeastern Classic Maya Realm*, edited by Gary W. Pahl, pp. 171-188. UCLA Latin American Center Publications, University of California, Los Angeles.

1991 *The Octli Cult in Late Pre-Hispanic Central Mexico*. In *To Change Place: Aztec Ceremonial Landscapes*, edited by David Carrasco, pp. 158-183. University Press of Colorado, Niwot.

Nicholson, Henry B., and Rainer Berger

1968 *Two Aztec Wood Idols: Iconographic and Chronologic Analysis*. Studies in Pre-Columbian Art and Archaeology 5. Dumbarton Oaks, Washington, D.C.

Nicholson, Henry B., and Alana Cordy-Collins

1979 *Pre-Columbian Art from the Land Collection*. California Academy of Sciences, San Francisco.

Nicholson, Henry B., with Eloise Quiñones Keber

1983 *Art of Ancient Mexico: Treasures of Tenochtitlan*. National Gallery of Art, Washington, D.C.

Niederberger, Christine

1987 *Paléopaysages et archéologie pré-urbaine du Bassin de Mexico (Mexique)*. 2 vols. Collection Études Mésoaméricaines 11. Centre d'Études Mexicaines et Centraméricaines, Mexico.

Noguera, Eduardo

1944 *Excavaciones en Jiquilpan*. *Anales del Museo Michoacano* 3:37-52.

Norman, V. Garth

1973 *Izapa Sculpture, Part 1: Album*. Papers 30(1). New World Archaeological Foundation, Brigham Young University, Provo.

1976 *Izapa Sculpture, Part 2: Text*. Papers 30(2). New World Archaeological Foundation, Brigham Young University, Provo.

Nowotny, Karl A., and Jacqueline de Durand-Forest

1974 *Codex Borbonicus*. Akademische Druck-u. Verlagsanstalt, Graz.

Noyes, Ernest, trans.

1932 *Fray Alonso Ponce in Yucatan, 1588*. *Middle American Papers*, pp. 297-372. Middle American Research Institute, Publication 4. Department of Middle American Research, Tulane University, New Orleans.

Oakes, Maud

1951 *The Two Crosses of Todos Santos: Survivals of Mayan Religious Ritual*. Princeton University Press, Princeton.

Ochiai, Kazuyasu

1984 *Revolta y renacimiento: una lectura cosmológica del carnaval tzotzil*. *Estudios de Cultura Maya* 15:207-223.

- Ochoa, Lorenzo
 1983 El medio Usumacinta: un eslabón en los antecedentes olmecas de los mayas. In *Antropología e historia de los mixe-zoques y mayas. Homenaje a Frans Blom*, edited by Lorenzo Ochoa and Thomas A. Lee, pp. 147-174. Universidad Nacional Autónoma de México, Mexico.
- Ochoa, Lorenzo, and Marcia Castro-Leal
 1986 *Archaeological Guide of the Park-Museum of La Venta*. Villahermosa.
- Ochoa Castillo, Patricia, and Óscar Orueta
 1994 *La sala del Preclásico del Altiplano*. Instituto Nacional de Antropología e Historia, Mexico.
- Olivier, Guilhem
 2002 The Hidden King and the Broken Flutes: Mythical and Royal Dimensions of the Feast of Tezcatlipoca in Toxcatl. In *Representing Aztec Ritual: Performance, Text, and Image in the Work of Sahagún*, edited by Eloise Quiñones Keber, pp. 107-142. University Press of Colorado, Boulder.
- Olmedo Vera, Bertina
 2002 *Los templos rojos del recinto sagrado de Tenochtitlan*. Instituto Nacional de Antropología e Historia, Mexico.
- Orrego Corzo, Miguel
 1990 *Investigaciones arqueológicas en Abaj Takalik*. Instituto Nacional de Antropología e Historia de Guatemala, Guatemala.
- Ortiz, Alfonso
 1972 Ritual Drama and Pueblo World View. In *New Perspectives on the Pueblos*, edited by Alfonso Ortiz, pp. 135-161. University of New Mexico Press, Albuquerque.
- Ortiz, Ponciano, and María del Carmen Rodríguez
 1993 Olmec Ceremonial Behavior Seen in the Offerings at El Manatí. Paper presented at the "Pre-Columbian Symposium at Dumbarton Oaks," Washington, D.C.
- Ortiz, Ponciano, and María del Carmen Rodríguez
 2000 The Sacred Hill of El Manatí: A Preliminary Discussion of the Site's Ritual Paraphernalia. In *Olmec Art and Archaeology in Mesoamerica*, edited by John E. Clark and Mary E. Pye, pp. 75-93. National Gallery of Art, Washington, D.C.
- Ortiz, Ponciano, and Robert Santley
 1998 Matacapán: un ejemplo de enclave teotihuacano en la costa del Golfo. In *Los ritmos de cambio en Teotihuacán. Reflexiones y discusiones de su cronología*, edited by Rosa Brambila Paz and Rubén Cabrera Castro, pp. 360-377. Instituto Nacional de Antropología e Historia, Mexico.
- Ortiz de Montellano, Bernardo
 1980 Las hierbas de Tlaloc. *Estudios de Cultura Náhuatl* 14:287-314.
 1989 Ghosts of the Imagination: John Bierhorst's Translation of Cantares Mexicanos. *Tlalocan* 11:469-482. Mexico.
 1990 *Aztec Medicine, Health, and Nutrition*. Rutgers University Press, New Brunswick.
- Pahl, Gary W.
 1975 The Iconography of an Engraved Olmec Figurine. *Masterkey* 49(3):84-94. Los Angeles.
 1977 The Iconography of an Engraved Olmec Figurine. In *Pre-Columbian Art History: Selected Readings*, edited by Alana Cordy-Collins and Jean Stern, pp. 35-42. Peek Publications, Palo Alto.
 1987 The Survey and Excavation of La Canteada, Copan, Honduras: Preliminary Report, 1975 Season. In *The Periphery of the Southeastern Classic Maya Realm*, edited by Gary W. Pahl, pp. 227-263. Latin American Studies Series 61. Latin American Center Publications, University of California, Los Angeles.

Palacios, Enrique J.

- 1929 *La piedra de escudo nacional de México*. Publicaciones de la Secretaría de Educación Pública 22(9). Talleres Gráficos de la Nación, Mexico.

Parsons, Elsie Clews

- 1920 Notes on Ceremonialism at Laguna. *Anthropological Papers* 29(4):8-131. American Museum of Natural History, New York.
- 1932 Isleta, New Mexico. In *Forty-Seventh Annual Report of the Bureau of American Ethnology, 1929-1930*, pp. 193-466. Smithsonian Institution, Washington, D.C.
- 1939 *Pueblo Indian Religion*. 2 vols. University of Chicago Press, Chicago.

Parsons, Elsie Clews, ed.

- 1936a Early Relations between Hopi and Keres. *American Anthropologist* 38:554-560.
- 1936b *Hopi Journal of Alexander M. Stephen*. 2 vols. Columbia University Press, New York.

Parsons, Elsie Clews, and Ralph L. Beals

- 1934 The Sacred Clowns of the Pueblo and Mayo-Yaqui Indians. *American Anthropologist* 36:491-514.

Parsons, Lee Allen

- 1969 *Bilbao, Guatemala: An Archaeological Study of the Pacific Coast Cotzumalhuapa Region*. 2 vols. Publications in Anthropology 12. Milwaukee Public Museum, Milwaukee.
- 1980 *Pre-Columbian Art: The Morton D. May and the St. Louis Art Museum Collections*. Harper and Row, New York.
- 1986 *The Origins of Maya Art: Monumental Stone Sculpture of Kaminaljuyu, Guatemala, and the Southern Pacific Coast*. Studies in Pre-Columbian Art and Archaeology 28. Dumbarton Oaks, Washington, D.C.
- 1993 The Izapa Style and the Tibas Jade. In *Pre-Columbian Jade: New Geological and Cultural Interpretations*, edited by Frederick W. Lange, pp. 251-259. University of Utah Press, Salt Lake City.

Parsons, Lee A., John B. Carlson, and Peter David Joralemon

- 1988 *The Face of Ancient America: The Wally and Brenda Zollman Collection of Precolumbian Art*. Indianapolis Museum of Art, Indianapolis.

Paso y Troncoso, Francisco del

- 1905 *Códices Matritenses en lengua mexicana*. Hauser y Menet, Madrid.

Pasztory, Esther

- 1983 *Aztec Art*. Harry N. Abrams, New York.
- 1988 Feathered Serpents and Flowering Trees with Glyphs. In *Feathered Serpents and Flowering Trees: Reconstructing the Murals of Teotihuacán*, edited by Kathleen Berrin, pp. 136-161. Fine Arts Museums of San Francisco, San Francisco.
- 1997 *Teotihuacan: An Experiment in Living*. University of Oklahoma Press, Norman.

Paulinyi, Paul

- 1997 El rayo del dios de la lluvia: imágenes de serpientes ígneas en el arte teotihuacano. *Mexicon* 19(2):27-33.

Pearson, Michael Parker, and Colin Richards

- 1994 Ordering the World: Perceptions of Architecture, Space, and Time. In *Architecture and Order: Approaches to Social Space*, edited by Michael Parker and Colin Richards, pp. 1-37. Routledge, London.

Pellizzi, Francesco

- 1996 Editorial: The Pre-Columbian. *Res: Anthropology and Aesthetics* 29/30:5-15.

Pendergast, David M.

- 1967 Altun Ha, Honduras Britanica: temporadas 1964 y 1965. *Estudios de Cultura Maya* 6:149-169.
 1972 Altun Ha, Honduras Britanica (Belice): temporadas 1966-1968. *Estudios de Cultura Maya* 8:35-56.
 1979 *Excavations at Altun Ha, Belize, 1964-1970*, vol. 1. Royal Ontario Museum, Toronto.
 1982 *Excavations at Altun Ha, Belize, 1964-1970*, vol. 2. Royal Ontario Museum, Toronto.

Peraza Lope, Carlos A.

- 1999 Mayapan. Ciudad-capital del Posclásico. *Arqueología Mexicana* 7(37):48-53.

Pérez Mendoza, Francisco, and Miguel Hernández Mendoza

- 1996 *Diccionario tz'utujil*. Proyecto Lingüístico Francisco Marroquín, Antigua.

Peterson, Jeanette Favrot

- 1983 Sacrificial Earth: The Iconography and Function of Malinalli Grass in Aztec Culture. In *Flora and Fauna in Pre-Columbian Cultures: Iconography and Function*, edited by Jeanette F. Peterson, pp. 113-148. BAR International Series 171. British Archaeological Reports, Oxford.
 1992 *The Paradise Garden Murals of Malinalco: Utopia and Empire in Sixteenth Century Mexico*. University of Texas Press, Austin.

Pettersen, Carmen L.

- 1977 *Maya of Guatemala*. Georg Westermann Verlag, Braunschweig.

Piña Chan, Román

- 1958 *Tlatilco. A través de su cerámica*. Serie Investigaciones 2. Instituto Nacional de Antropología e Historia, Mexico.
 1960 Algunos sitios arqueológicos de Oaxaca y Guerrero. *Revista Mexicana de Estudios Antropológicos* 16:65-76.
 1964 Algunas consideraciones sobre las pinturas de Mulchic, Yucatán. *Estudios de Cultura Maya* 4:63-78.
 1968 *Jaina. La casa en el agua*. Instituto Nacional de Antropología e Historia, Mexico.
 1977 *Quetzalcóatl. Serpiente emplumada*. Fondo de Cultura Económica, Mexico.

Pitt-Rivers, Julian

- 1970 Spiritual Power in Central America: The Naguals of Chiapas. In *Witchcraft, Confessions and Accusations*, edited by Mary Douglas, pp. 183-206. Tavistock Publications, London.

Plog, Stephen

- 1976 Measurement of Prehistoric Interaction Between Communities. In *The Early Mesoamerican Village*, edited by Kent V. Flannery, pp. 255-272. Academic Press, New York.

Pohl, John

- 1994 *The Politics of Symbolism in the Mixtec Codices*. Publications in Anthropology 46. Vanderbilt University, Nashville.

Pollock, Harry E. D.

- 1970 Architectural Notes on Some Chenes Ruins. In *Monographs and Papers in Maya Archaeology*, edited by William R. Bullard, Jr., pp. 1-87. Papers 61. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
 1980 *The Puuc: An Architectural Survey of the Hill Country of Yucatan and Northern Campeche, Mexico*. Memoirs 19. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Porter, James B.

- 1996 Celtiform Stelae: A New Olmec Sculpture Type and Its Implication for Epigraphers. In *Beyond Indigenous Voices: LAILA/ALILA 11th International Symposium on Latin American Indian Literatures (1994)*, edited by Mary H. Preuss, pp. 65-72. Labyrinthos, Lancaster.

Prager, Christian M., and Geoffrey E. Braswell

- 2016 Maya Politics and Ritual: An Important New Hieroglyphic Text on a Carved Jade from Belize. *Ancient Mesoamerica* 27(2):267-278.

Preuss, Konrad Theodor

- 1907 Die Hochzeit des Maises und andere Geschichten der Huichol-Indianer. *Globus* 91:185-192.
 1911 Die Opferblutschale der alten Mexikaner erläutert nach den Angaben der Cora-Indianer. *Zeitschrift für Ethnologie* 43:293-306.

Proskouriakoff, Tatiana

- 1950 *A Study of Classic Maya Sculpture*. Publication 593. Carnegie Institution of Washington, Washington, D.C.
 1955 The Death of a Civilization. *Scientific American* 192(5):82-88.
 1960 Historical Implications of a Pattern of Dates at Piedras Negras, Guatemala. *American Antiquity* 25:454-475.
 1961 The Lords of the Maya Realm. *Expedition* 4(1):14-21. Philadelphia.
 1962a Civic and Religious Structures of Mayapan. In *Mayapan, Yucatan, Mexico*, by H. E. D. Pollock, Ralph L. Roys, T. Proskouriakoff, and A. Ledyard Smith, pp. 87-163. Publication 619. Carnegie Institution of Washington, Washington, D.C.
 1962b The Artifacts of Mayapan. In *Mayapan, Yucatan, Mexico*, by H. E. D. Pollock, Ralph L. Roys, T. Proskouriakoff, and A. Ledyard Smith, pp. 321-442. Publication 619. Carnegie Institution of Washington, Washington, D.C.
 1965 Sculpture and Major Arts of the Classic Maya Lowlands. In *Archaeology of Southern Mesoamerica*, Part 1, edited by Gordon R. Willey, pp. 469-497. Handbook of Middle American Indians 2. University of Texas Press, Austin.
 1970 On Two Inscriptions at Chichen Itza. In *Monographs and Papers in Maya Archaeology*, edited by William J. Bullard, pp. 457-467. Papers 61. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
 1974 *Jades from the Cenote of Sacrifice, Chichen Itza, Yucatan*. *Memoirs* 10(1). Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Proskouriakoff, Tatiana, and Charles R. Temple

- 1955 A Residential Quadrangle: Structures R-85 to R-90. *Current Reports* 2(29):289-362. Carnegie Institution of Washington, Cambridge, Mass.

Puleston, Dennis E.

- 1977 The Art and Archaeology of Hydraulic Agriculture in the Maya Lowlands. In *Social Process in Maya Prehistory*, edited by Norman Hammond, pp. 449-467. Academic Press, London.

Pyburn, K. Anne

- 1989 Maya Cuisine: Hearths and the Lowland Economy. In *Prehistoric Economics of Belize*, edited by Patricia McAnany and Barry L. Isaac, pp. 325-344. Research in Economic Anthropology Supplement 4. JAI Press, Greenwich.

Pyne, Nanette M.

- 1976 The Fire-Serpent and Were-Jaguar in Formative Oaxaca: A Contingency Table Analysis. In *The Early Mesoamerican Village*, edited by Kent V. Flannery, pp. 272-282. Academic Press, New York.

Quenon, Michel, and Geneviève Le Fort

- 1997 Rebirth and Resurrection in Maize God Iconography. In *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 5*, edited by Barbara Kerr and Justin Kerr, pp. 884-902. Kerr Associates, New York.

Quiñones Keber, Eloise

- 1995 *Codex Telleriano-Remensis: Ritual, Divination and History in a Pictorial Aztec Manuscript*. University of Texas, Austin.

Quirarte, Jacinto

- 1973 Izapan and Mayan Traits in Teotihuacan III Pottery. In *Studies in Ancient Mesoamerica*, edited by John A. Graham, pp. 11-29. Contributions of the University of California Archaeological Research Facility 18. Department of Anthropology, University of California, Berkeley.
- 1976 The Relationship of Izapan-Style Art to Olmec and Maya Art: A Review. In *Origins of Religious Art and Iconography in Preclassic Mesoamerica*, edited by Henry B. Nicholson, pp. 73-86. UCLA Latin American Center, Los Angeles.
- 1981 Tricephalic Units in Olmec, Izapan-Style, and Maya Art. In *The Olmec and Their Neighbors: Essays in Memory of Matthew W. Stirling*, edited by Elizabeth P. Benson, pp. 289-308. Dumbarton Oaks, Washington, D.C.

Ramírez Castañeda, Isabel

- 1913 El folk-lore de Milpa Alta, D. F., México. In *Proceedings of the International Congress of Americanists (18th session, London, 1912)*, v. 2, pp. 352-361. London.

Ramírez Pérez, José, Andrés Montejo, and Baltazar Díaz Hurtado

- 1996 *Diccionario del idioma jakalteko*. Proyecto Lingüístico Francisco Marroquín, Antigua.

Rands, Robert L., Ronald L. Bishop, and Garman Harbottle

- 1979 Thematic and Compositional Variation in Palenque Region Incensarios. In *Tercera Mesa Redonda de Palenque*, edited by Merle Greene Robertson and Donnan Call Jeffers, pp. 19-30. Pre-Columbian Art Research; Herald Printers, Monterey, California.

Ratray, Evelyn C.

- 1977 Los contactos entre Teotihuacan y Veracruz. In *XV Mesa Redonda, Sociedad Mexicana de Antropología*, v. 2, pp. 301-311. Universidad de Guanajuato, Guanajuato.
- 1987 Los barrios foráneos de Teotihuacan. In *Teotihuacan. Nuevos datos, nuevas síntesis, nuevos problemas*, edited by Emily McClung de Tapia and Evelyn C. Ratray, pp. 243-273. Universidad Nacional Autónoma de México, Mexico.
- 1989 El barrio de los comerciantes y el conjunto Tlamimilolpa: un estudio comparativo. *Arqueología* 5:105-129. Instituto Nacional de Antropología e Historia, Mexico.
- 1992 *The Teotihuacan Burials and Offerings: A Commentary and Inventory*. Vanderbilt University Publications in Anthropology 42. Vanderbilt University, Nashville.
- 2001 *Teotihuacan: Ceramics, Chronology, and Cultural Trends*. Instituto Nacional de Antropología e Historia, Mexico; University of Pittsburgh, Pittsburgh.

Ravicz, Robert, and A. Kimball Romney

- 1969 The Mixtec. In *Ethnology*, edited by Evon Z. Vogt, pp. 367-399. Handbook of Middle American Indians 7. University of Texas Press, Austin.

Recinos, Adrián

- 1950 *Popol Vuh: The Sacred Book of the Ancient Quiché Maya*. English version by Delia Goetz and Sylvanus G. Morley from the Spanish translation of Adrián Recinos. University of Oklahoma Press, Norman.

Redfield, Robert

- 1930 *Tepoztlán: A Mexican Village*. University of Chicago Press, Chicago
- 1936 The Coati and Ceiba. *Maya Research* 3:231-243. New Orleans.

Redfield, Robert, and Alfonso Villa Rojas

- 1934 *Chan Kom: A Maya Village*. Publication 448. Carnegie Institution of Washington, Washington, D.C.

Reents-Budet, Dorie

- 1988 The Iconography of Lamanai Stela 9. *Research Reports on Ancient Maya Writing* 22:17-32. Center for Maya Research, Washington, D.C.
- 1994 *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Duke University Press; Duke University Museum of Art, Durham.

Reents-Budet, Dorie, Ellen E. Bell, Loa P. Traxler, and Ronald L. Bishop
 2004 Early Classic Ceramic Offerings at Copan: A Comparison of the Hunal, Margarita, and Sub-Jaguar Tombs. In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello A. Canuto, and Robert J. Sharer, pp. 159-190. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

Reents, Dorie J., and Ronald L. Bishop
 1985 History and Ritual Events on a Petexbatun Classic Maya Polychrome Vessel. In *Fifth Palenque Round Table, 1983*, edited by Virginia M. Fields, pp. 57-63. Pre-Columbian Art Research Institute, San Francisco.

Reichard, Gladys A.
 1963 *Navajo Indian Religion: A Study of Symbolism*. 2nd ed. Bollingen Foundation, New York.

Reilly, F. Kent, III
 1989 The Shaman in Transformation Pose: A Study of the Theme of Rulership in Olmec Art. *Record of the Art Museum* 48(2):16-17. Princeton.
 1990 Cosmos and Rulership: The Function of Olmec-Style Symbols in Formative Period Mesoamerica. *Visible Language* 24(1):12-35.
 1991 Olmec Iconographic Influences on the Symbols of Maya Rulership. In *Sixth Palenque Round Table, 1986*, edited by Virginia M. Fields, pp. 151-166. University of Oklahoma Press, Norman.
 1994a Cosmología, soberanismo y espacio ritual en la Mesoamérica del Formativo. In *Los olmecas en Mesoamérica*, edited by John E. Clark, pp. 238-259. El Equilibrista, Mexico.
 1994b Visions to Another World: Art, Shamanism, and Political Power in Middle Formative Mesoamerica. Ph.D. dissertation, University of Texas, Austin.
 1995 Art, Ritual, and Rulership in the Olmec World. In *The Olmec World: Ritual and Rulership*, edited by Jill Guthrie, pp. 27-45. The Art Museum, Princeton University, Princeton.

Reina, Ruben E.
 1966 *The Law of the Saints: A Pokomam Community and Its Community Culture*. Bobbs Merrill, Indianapolis.

Rejón García, Manuel
 1905 *Supersticiones y leyendas mayas*. La Revista de Mérida, Mérida.

Reyna Robles, Rosa María, and Felipe Rodríguez Betancourt
 1990 La época Clásica en el estado de Guerrero. In *La época Clásica. Nuevos hallazgos, nuevas ideas*, edited by Amalia Cardós de Méndez, pp. 221-236. Instituto Nacional de Antropología e Historia, Mexico.

Rice, Prudence
 1999 Rethinking Classic Lowland Maya Pottery Censers. *Ancient Mesoamerica* 10(1):25-50.

Ricketson, Oliver G., and Edith B. Ricketson
 1937 *Uaxactun, Guatemala: Group E, 1926-1931*. Publication 477. Carnegie Institution of Washington, Washington, D.C.

Riley, Carroll L.
 1963 Color-direction Symbolism: An Example of Mexican-Southwestern Contacts. *América Indígena* 23:49-60.

Rinaldo, John B.
 1974 Medio Period Stone Artifacts. In *Casas Grandes: A Fallen Trading Center of the Gran Chichimeca, Volume 7: Stone and Metal*, by Charles C. Di Peso, John B. Rinaldo, and Gloria J. Fenner, pp. 38-481. Amerind Foundation; Northland Press, Flagstaff.

Ringle, William, George J. Bey, and Tomás Gallareta Negrón
 2009 A New Monument from Huntichmul, Yucatán, Mexico. *Research Reports on Ancient Maya Writing* 57:1-19. Center for Maya Research, Barnardville.

- Ringle, William M., Tomás Gallareta Negrón, and George J. Bey III
 1998 The Return of Quetzalcoatl: Evidence for the Spread of a World Religion During the Epiclassic Period. *Ancient Mesoamerica* 9(2):183-232.
- Rivera Dorado, Miguel
 1989 Una estatuilla de Ix Chel en Oxkintok. In *Oxkintok 2. Misión Arqueológica de España en México. Proyecto Oxkintok Año 1988*, pp. 121-126. Ministerio de Cultura, Madrid.
- Rivera, Víctor, and Daniel Schávelzon
 1984 Los tableros de Kaminaljuyu. *Cuadernos de Arquitectura Mesoamericana* 2:51-56.
- Robelo, Cecilio Agustín
 1980 *Diccionario de mitología nahuatl*. 2 vols. Editorial Innovación, Mexico.
- Roberts, Frank H. H.
 1932 *The Village of the Great Kivas on the Zuñi Reservation, New Mexico*. Bulletin 11. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.
- Robertson, Merle Greene
 1983 *The Sculpture of Palenque, Volume I: The Temple of the Inscriptions*. Princeton University Press, Princeton.
 1985 *The Sculpture of Palenque, Volume III: The Late Buildings of the Palace*. Princeton University Press, Princeton.
- Robicsek, Francis
 1975 *A Study in Maya Art and History: The Mat Symbol*. Museum of the American Indian, Heye Foundation, New York.
 1978 *The Smoking Gods: Tobacco in Maya Art, History, and Religion*. University of Oklahoma Press, Norman.
- Robicsek, Francis, and Donald M. Hales
 1981 *The Maya Book of the Dead: The Ceramic Codex*. University of Virginia Art Museum, Charlottesville.
 1982 *Maya Ceramic Vases from the Classic Period: The November Collection of Maya Ceramics*. University of Virginia Art Museum, Charlottesville.
 1984 Maya Heart Sacrifice: Cultural Perspective and Surgical Technique. In *Ritual Human Violence in Mesoamerica*, edited by Elizabeth Boone, pp. 49-90. Dumbarton Oaks, Washington, D.C.
- Robles Castellanos, José F.
 1987 La secuencia cerámica preliminar de Isla Cerritos, costa centro-norte de Yucatán. In *Maya Ceramics: Papers from the 1985 Maya Ceramic Conference*, edited by Prudence M. Rice and Robert J. Sharer, pp. 99-109. BAR International Series 345. British Archaeological Reports, Oxford.
- Robles Castellanos, José F., and Anthony P. Andrews
 1986 A Review and Synthesis of Recent Postclassic Archaeology in Northern Yucatan. In *Late Lowland Maya Civilization: Classic to Postclassic*, edited by Jeremy A. Sabloff and E. Wyllys Andrews V, pp. 53-98. University of New Mexico Press, Albuquerque.
- Rodríguez, María de Carmen, and Ponciano Ortiz
 2000 A Massive Offering of Axes at La Merced, Hidalgotitlán, Veracruz, Mexico. In *Olmec Art and Archaeology in Mesoamerica*, edited by John E. Clark and Mary E. Pye, pp. 154-167. National Gallery of Art, Washington, D.C.
- Roediger, Virginia More
 1941 *Ceremonial Costumes of the Pueblo Indians*. University of California Press, Berkeley.
- Rohn, Arthur H.
 1971 *Mug House, Mesa Verde National Park, Colorado: Wetherill Mesa Excavations*. National Park Service, U.S. Department of the Interior, Washington, D.C.

Romano Pacheco, Carlos Navarette, and Victor Segovia Pinto

1981 *Kohunlich. Una ciudad maya del clásico temprano*. San Ángel Ediciones, Mexico.

Romney, Kimball, and Romaine Romney

1966 *The Mixtecan of Juxtlahuaca, Mexico*. John Wiley and Sons, New York.

Roys, Ralph L.

1933 *The Book of Chilam Balam of Chumayel*. Publication 438. Carnegie Institution of Washington, Washington, D.C.

1939 *The Titles of Ebtun*. Publication 505. Carnegie Institution of Washington, Washington, D.C.

1943 *The Indian Background of Colonial Yucatan*. Publication 548. Carnegie Institution of Washington, Washington, D.C.

1949 The Prophecies for the Maya Tuns or Years in the Books of Chilam Balam of Tizimin and Mani. *Contributions to American Anthropology and History* 10(51):153-186. Publication 585. Carnegie Institution of Washington, Washington, D.C.

1954 The Maya Katun Prophecies of the Books of Chilam Balam, Series I. *Contributions to American Anthropology and History* 12(57):1-60. Publication 596. Carnegie Institution of Washington, Washington, D.C.

1962 Literary Sources for the History of Mayapan. In *Mayapan, Yucatan, Mexico*, by H. E. D. Pollock, Ralph L. Roys, T. Proskouriakoff, and A. Ledyard Smith, pp. 25-86. Publication 619. Carnegie Institution of Washington, Washington, D.C.

1965 *Ritual of the Bacabs*. University of Oklahoma Press, Norman.

1967 *The Book of Chilam Balam of Chumayel*. University of Oklahoma Press, Norman.

Rubín de la Borbolla, Daniel F.

1947 Teotihuacan: ofrendas de los templos de Quetzalcóatl. *Anales* 2:61-72. Instituto Nacional de Antropología e Historia, Mexico.

Ruiz de Alarcón, Hernando

1984 *Treatise on the Heathen Superstitions That Today Live Among the Indians Native to This New Spain, 1629*. J. Richard Andrews and Ross Hassig, trans. and ed. University of Oklahoma Press, Norman.

Ruiz Gallut, María Elena

1999 Imágenes en Tetitla: de disfraces y vecinos. Paper presented at the Primera Mesa Redonda de Teotihuacán, Centro de Estudios Teotihuacanos, San Juan Teotihuacán, Mexico.

Ruppert, Karl

1935 *The Caracol at Chichen Itza, Yucatan, Mexico*. Publication 454. Carnegie Institution of Washington, Washington, D.C.

1943 The Mercado, Chichen Itza, Yucatan. *Contributions to American Anthropology and History* 8(43):223-260. Publication 546. Carnegie Institution of Washington, Washington, D.C.

Rust, William F., and Barbara F. Leyden

1994 Evidence of Maize Use at Early and Middle Preclassic La Venta Olmec Sites. In *Corn and Culture in the Prehistoric New World*, edited by Sissel Johannessen and Christine Hastorf, pp. 181-201. Westview Press, Boulder.

Ruz, Mario Humberto

1982 *Los legítimos hombres. Aproximación antropológica al grupo tojolabal*, vol. 2. Universidad Nacional Autónoma de México, Mexico.

1986 *Vocabulario de lengua tzeldal según el orden de Copanabastla*. Universidad Nacional Autónoma de México, Mexico.

Ruz Lhuillier, Alberto

1962 Chichén Itzá y Tula: comentarios a un ensayo. *Estudios de Cultura Maya* 2:205-223.

1973 *El Templo de las Incripciones, Palenque*. Instituto Nacional de Antropología e Historia, Mexico.

Sabloff, Jeremy A.

- 1970 Type Descriptions of the Fine Paste Ceramics of the Bayal Boca Complex, Seibal, Peten, Guatemala. In *Monographs and Papers in Maya Archaeology*, edited by William J. Bullard, pp. 357-404. Papers 61. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Sáenz, César A.

- 1961 Tres estelas de Xochicalco. *Revista Mexicana de Estudios Antropológicos* 17:39-65.

Sahagún, Bernardino de

- 1950-1982 *Florentine Codex: General History of the Things of New Spain*. Arthur J. O. Anderson and Charles E. Dibble, trans. 12 vols. School of American Research; University of Utah, Santa Fe.
- 1997 *Primeros Memoriales*. Thelma D. Sullivan, trans. University of Oklahoma Press, Norman.

Sánchez González, José Jesus

- 1994 Evidence of Maize Use at Early and Middle Preclassic La Venta Olmec Sites. In *Corn and Culture in the Prehistoric New World*, edited by Sissel Johannessen and Christine Hastorf, pp. 135-156. Westview Press, Boulder.

Sandstrom, Alan R.

- 1991 *Corn Is Our Blood: Culture and Ethnic Identity in a Contemporary Aztec Village*. University of Oklahoma Press, Norman.

Satterthwaite, Linton

- 1936 *A Pyramid without Temple Ruins*. Piedras Negras Preliminary Papers 5. University Museum, University of Pennsylvania, Philadelphia.

Saturno, William A., Karl Taube, and David Stuart

- 2005 *The Murals of San Bartolo, El Petén, Guatemala, Part 1: The North Wall*. Ancient America 7. Center for Ancient American Studies, Barnardsville

Saunders, Nicholas J.

- 1988 Chatoyer: Anthropological Reflections on Archaeological Mirrors. In *Recent Studies in Pre-Columbian Archaeology 1*, edited by Nicholas J. Saunders and Olivier de Montmollin, pp. 1-39. BAR International Series 413. British Archaeological Reports, Oxford.

Saville, Marshall H.

- 1921 Reports on the Maya Indians of Yucatan by Santiago Mendez, Antonio Garcia y Cubas, Pedro Sanchez de Aguilar, and Francisco Hernandez. *Notes and Monographs* 9:133-226. Museum of the American Indian, Heye Foundation, New York.
- 1922 *Turquoise Mosaic Art in Ancient Mexico*. Contributions 6. Museum of the American Indian, Heye Foundation, New York.
- 1925 *The Wood-carver's Art in Ancient Mexico*. Contributions 9. Museum of the American Indian, Heye Foundation, New York
- 1929 Votive Axes from Ancient Mexico. *Indian Notes* 6(3):266-299. Museum of the American Indian, Heye Foundation. New York.

Schaafsma, Polly

- 1999 Tlalocs, Kachinas, Sacred Bundles, and Related Symbolism in the Southwest and Mesoamerica. In *The Casas Grandes World*, edited by Curtis F. Schaafsma and Carroll L. Riley, pp. 164-192. University of Utah Press, Salt Lake City.

Schaafsma, Polly, and Karl Taube

- 2006 Bringing the Rain: An Ideology of Rain Making in the Pueblo Southwest and Mesoamerica. In *A Pre-Columbian World: Searching for a Unitary Vision of Ancient America*, edited by Jeffrey Quilter and Mary Miller, pp. 231-285. *Dumbarton Oaks*, Washington, D.C.

Schaefer, Stacy

- 1989 The Loom and Time in the Huichol World. *Journal of Latin American Lore* 15:179-194. Los Angeles.

Schele, Linda

- 1974 Observations on the Cross Motif at Palenque. In *Primera Mesa Redonda de Palenque, Part I: A Conference on the Art, Iconography, and Dynastic History of Palenque, 1973*, edited by Merle Greene Robertson, pp. 41-61. Robert Louis Stevenson School, Pebble Beach.
- 1976 Accession Iconography of Chan-Bahlum in the Group of the Cross at Palenque. In *The Art, Iconography and Dynastic History of Palenque, Part III: Proceedings of the Segunda Mesa Redonda de Palenque, 1974*, edited by Merle Greene Robertson, pp. 9-34. Robert Louis Stevenson School, Pebble Beach.
- 1979 Genealogical Documentation on the Tri-figure Panels at Palenque. In *Tercera Mesa Redonda de Palenque*, edited by Merle Greene Robertson and Donnan Call Jeffers, pp. 41-70. Pre-Columbian Art Research; Herald Printers, Monterey, California.
- 1982 *Maya Glyphs: The Verbs*. University of Texas Press, Austin.
- 1986 The Tlaloc Complex in the Classic Period: War and the Interaction between the Lowland Maya and Teotihuacan. Paper presented at the symposium "The New Dynamics," Kimbell Art Museum, Fort Worth.
- 1991 *Notebook for the 15th Maya Hieroglyphic Writing Workshop at Texas*. Department of Art and Art History, College of Fine Arts; Institute of Latin American Studies, University of Texas, Austin.
- 1992a *Notebook for the 16th Maya Hieroglyphic Writing Workshop at Texas*. Department of Art and Art History, College of Fine Arts; Institute of Latin American Studies, University of Texas, Austin.
- 1992b Sprouts and the Early Symbolism of Rulers in Mesoamerica. Paper presented at the symposium "Die Welt der Maya," Hildesheim, Germany.
- 1992c The Founders of Lineages at Copan and Other Maya Sites. *Ancient Mesoamerica* 3(1):135-144.
- 1995 The Olmec Mountain and Tree of Creation in Mesoamerican Cosmology. In *The Olmec World: Ritual and Rulership*, edited by Jill Guthrie, pp. 105-117. The Art Museum, Princeton University, Princeton.
- 1997 *Hidden Faces of the Maya*. Impetus Comunicación, Mexico.
- 1998 The Iconography of Maya Architectural Façades during the Late Classic Period. In *Function and Meaning in Classic Maya Architecture*, edited by Stephen D. Houston, pp. 479-517. Dumbarton Oaks, Washington, D.C.

Schele, Linda, and David Freidel

- 1990 *A Forest of Kings: The Untold Story of the Ancient Maya*. William Morrow, New York.

Schele, Linda, and Peter Mathews

- 1979 *The Bodega of Palenque, Chiapas, Mexico*. Dumbarton Oaks, Washington, D.C.
- 1998 *The Code of Kings: The Language of Seven Sacred Maya Temples and Tombs*. Scribner, New York.

Schele, Linda, Peter Mathews, and Floyd G. Lounsbury

- 1977 Parentage Statements in Classic Maya Inscriptions. Paper presented at the International Conference on Maya Iconography and Hieroglyphic Writing, Guatemala.

Schele, Linda, and Jeffrey H. Miller

- 1983 *The Mirror, the Rabbit, and the Bundle: "Accession" Expressions from the Classic Maya Inscriptions*. Studies in Pre-Columbian Art and Archaeology 25. Dumbarton Oaks, Washington, D.C.

Schele, Linda, and Mary Ellen Miller

- 1986 *The Blood of Kings: Dynasty and Ritual in Maya Art*. Braziller; Kimbell Art Museum, Fort Worth.

Schellhas, Paul

- 1897 *Die Göttergestalten der Mayahand-schriften: Ein mythologisches Kulturbild aus dem alten Amerika*. Verlag von Richard Bertling, Dresden.
- 1904 *Representation of Deities of the Maya Manuscripts*. Papers 4(1). Peabody Museum of American Archaeology and Ethnology, Cambridge, Mass.

Scherer, Andrew K.

- 2015 *Mortuary Landscapes of the Classic Maya: Rituals of Body and Soul*. University of Texas Press, Austin.

Schmidt, Peter J.

- 1981 Chichén Itzá. Apuntes para el estudio del patrón de asentamiento. In *Memoria del Congreso Interno, 1979*, pp. 55-70. Centro Regional del Sureste; Instituto Nacional de Antropología e Historia, Mexico.
- 1999 Chichén Itzá. Resultados y proyectos nuevos (1992–1999). *Arqueología Mexicana* 7(37):32-39.
- 2003 Proyecto Chichen Itza. Informe de actividades, julio de 1999 a diciembre de 2002. 3 vols. Archivo técnico, Sección de Arqueología, Centro INAH Yucatán, Mérida.
- 2007 Birds, Ceramics and Cacao: New Excavations at Chichén Itzá, Yucatan. In *Twin Tollans: Chichén Itzá, Tula, and the Epiclassic to Early Postclassic Mesoamerican World*, edited by Jeff Karl Kowalski and Cynthia Kristan Graham, pp. 151-203. *Dumbarton Oaks*, Washington, D.C.

Schmidt, Peter, Mercedes de la Garza, and Enrique Nalda, eds.

- 1998 *Maya*. Rizzoli, New York.

Schoenhals, Alvin, and Louise Schoenhals

- 1965 *Vocabulario mixe de Totontepec*. Instituto Lingüístico de Verano, Mexico.

Schultze-Jena, Leonhard

- 1946 *La vida y las creencias de los indígenas quichés de Guatemala*. Antonio Goubaud Carrera and Herbert D. Sapper, trans. Publicaciones Especiales del Instituto Indigenista Nacional 1. Tipografía Nacional, Guatemala.
- 1954 *La vida y las creencias de los indígenas quichés de Guatemala*. Biblioteca Cultura Popular 49. Ministerio de la Cultura Pública, Guatemala.

Scott, John F.

- 1977 Masters and Followers: Preclassic Oaxacan Clay Sculptors. In *Del arte. Homenaje a Justino Fernández*, pp. 19-26. Universidad Nacional Autónoma de México, Mexico.
- 1978 *The Danzantes of Monte Albán, Part 1: Text*. *Studies in Pre-Columbian Art and Archaeology* 19. *Dumbarton Oaks*, Washington, D.C.

Sedat, David W.

- 1997a *The Earliest Ancestor to Copan Str. 10L-16*. ECAP Paper 3. Instituto Hondureño de Antropología e Historia; University of Pennsylvania Museum Early Copan Acropolis Program, Philadelphia.
- 1997b *The Founding Stage of the Copan Acropolis*. ECAP Paper 2. Instituto Hondureño de Antropología e Historia; University of Pennsylvania Museum Early Copan Acropolis Program, Philadelphia.

Sedat, David W., and Fernando López

- 1999 Tunneling into the Heart of the Copan Acropolis. *Expedition* 41(2):16-21. Philadelphia.
- 2004 Initial Stages in the Formation of the Copan Acropolis. In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello A. Canuto, and Robert J. Sharer, pp. 85-99. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

Sedat, Guillermo

- 1955 *Nuevo diccionario de las lenguas k'ekchi' y española*. Chamelco, Guatemala.

Seitz, Russell, George E. Harlow, Virginia B. Sisson, and Karl Taube

- 2001 'Olmec Blue' and Formative Jade Sources: New Discoveries in Guatemala. *Antiquity* 75(290):687-688.

Séjourné, Laurette

- 1959 *Un palacio en la Ciudad de los Dioses. Exploraciones en Teotihuacán, 1955–1958*. Instituto Nacional de Antropología e Historia, Mexico.
- 1960 *Burning Water: Thought and Religion in Ancient Mexico*. Irene Nicholson, trans. Grove Press, New York.
- 1962 Interpretación de un jeroglífico teotihuacano. *Cuadernos Americanos* 124:137-158.
- 1964 La simbólica del fuego. *Cuadernos Americanos* 135:149-178.
- 1966a *Arqueología de Teotihuacán. La cerámica*. Fondo de Cultura Económica, Mexico.

Séjourné, Laurette, continued

1966b *Arquitectura y pintura en Teotihuacán*. Siglo Veintiuno Editores, Mexico.

1966c *El lenguaje de las formas en Teotihuacán*. Fondo de Cultura Económica, Mexico.

1976 *Burning Water: Thought and Religion in Ancient Mexico*. Shambhala, Berkeley.

Sekaquaptewa, Emory, Kenneth C. Hill, and Dorothy Washburn

2015 *Hopi Katsina Songs*. University of Nebraska Press, Lincoln.

Seler, Eduard

1887 Über die Namen der in der Dresdener Handschrift abgebildeten Maya-Götter. *Zeitschrift für Ethnologie* 19:224-231. [in Seler 1902-1923:1:367-389]

1901 *Codex Fejérváry-Mayer: Eine altmexikanische Bilderhandschrift der Free public museums in Liverpool 12014/M. Auf Kosten Seiner Excellenz des Herzogs von Loubat herausgegeben. Erläutert von Dr. Eduard Seler*. Berlin.

1902 Das Pulquegefäß der Bilimek'schen Sammlung im k.k. naturhistorischen Hofsmuseum. *Annalen des K. K. Naturhistorischen Hofsmuseums* 17:913-952. Vienna.

1902-1903 *Codex Vaticanus No. 3773 (Codex Vaticanus B)*. T. and A. Constable, Edinburgh.

1902-1923 *Gesammelte Abhandlungen zur Amerikanischen Sprach- und Altertumskunde*. 5 vols. Asher; Behrend, Berlin.

1904a The Mexican Chronology, with Special Reference to the Zapotec Calendar. In *Mexican and Central American Antiquities, Calendar Systems, and History*, edited by Charles P. Bowditch, pp. 11-55. Bulletin 28. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

1904b The Venus Period in the Borgian Codex Group. In *Mexican and Central American Antiquities, Calendar Systems, and History*, edited by Charles P. Bowditch, pp. 353-391. Bulletin 28. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

1907 Einiges über die natürlichen Grundlagen mexikanischer Mythen. *Zeitschrift für Ethnologie* 39:1-41.

1916 *Die Quetzalcouatl-Fassaden yucatekischer Bauten*. Abhandlungen der Königlich Preussischen Akademie der Wissenschaften, Philosophisch-Historische Klasse 2. Verlag der Akademie der Wissenschaften, Berlin.

1917 *Die Ruinen von Uxmal*. Abhandlungen der Königlich Preussischen Akademie der Wissenschaften, Philosophisch-Historische Klasse 3. Verlag der Akademie der Wissenschaften, Berlin.

1939 *Gesammelte Abhandlungen zur Amerikanischen Sprach- und Altertumskunde*. J. Eric S. Thompson and Francis B. Richardson, trans. and ed. Charles P. Bowditch, supervisor. 5 vols. Mimeograph. Carnegie Institution of Washington, Cambridge, Mass.

1963 *Comentarios al Códice Borgia*. 2 vols. accompanying facsimile. M. Fenk, trans. Fonda de Cultura Económica, Mexico.

1976 *Observations and Studies in the Ruins of Palenque, 1915*. Gisela Morgner, trans. Thomas Bartman and George Kubler, eds. Robert Louis Stevenson School, Pebble Beach.

1990-1998 *Collected Works in Mesoamerican Linguistics and Archaeology*. 6 vols. Frank E. Comparato, gen. ed. Labyrinthos, Culver City.

Sempowski, Martha L.

1992 Economic and Social Implications of Variations in Mortuary Practices at Teotihuacan. In *Art, Ideology, and the City of Teotihuacan*, edited by Janet C. Berlo, pp. 27-58. Dumbarton Oaks, Washington, D.C.

1994 Mortuary Practices at Teotihuacan. In *Mortuary Practices and Skeletal Remains at Teotihuacan*, edited by Martha L. Sempowski and Michael W. Spence, pp. 1-314. University of Utah Press, Salt Lake City.

Sempowski, Martha L., and Michael W. Spence

1994 *Mortuary Practices and Skeletal Remains at Teotihuacan*. University of Utah Press, Salt Lake City.

Serrano, Carlos

1993 Funerary Practices and Human Sacrifice in Teotihuacan Burials. In *Teotihuacan: Art from the City of the Gods*, edited by Kathleen Berrin and Esther Pasztory, pp. 109-115. Thames and Hudson, New York.

Serrano, Carlos, and Zaíd Lagunas

1975 Sistema de enterramiento y notas sobre el material osteológico de La Ventilla, Teotihuacán, Mexico. *Anales*, época 7a, 4:105-144. Instituto Nacional de Antropología e Historia, Mexico.

Sharer, Robert J.

1994 *The Ancient Maya*. 5th ed. Stanford University Press, Stanford.

1995 *Excavation of Early Classic Royal Architecture at Copan, Honduras*. Report submitted to the Foundation for the Advancement of Mesoamerican Studies, Crystal River, Florida. Available: www.famsi.org/reports/95060/index.html

1999 Archaeology and History in the Royal Acropolis, Copán, Honduras. *Expedition* 41(2):8-15. Philadelphia.

2003 Founding Events and Teotihuacan Connections at Copán, Honduras. In *The Maya and Teotihuacan: Reinterpreting Early Classic Maya Interaction*, edited by Geoffrey E. Braswell, pp. 143-165. University of Texas Press, Austin.

2004 External Interaction at Early Classic Copan. In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello A. Canuto, and Robert J. Sharer, pp. 297-317. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

Sharer, Robert J., William L. Fash Jr., David W. Sedat, Loa P. Traxler, and Richard V. Williamson

1999 Continuities and Contrasts in Early Classic Architecture of Central Copan. In *Mesoamerican Architecture as a Cultural Symbol*, edited by Jeff K. Kowalski, pp. 220-249. Oxford University Press, New York.

Sharer, Robert J., Christopher Jones, Wendy Ashmore, and Edward Schortman

1979 The Quirigua Project: 1976 Season. In *Quirigua Reports, Volume 1, Papers 1-5*, edited by Wendy Ashmore, pp. 45-73. University Museum, University of Pennsylvania, Philadelphia.

Sharer, Robert J., Loa P. Traxler, David W. Sedat, Ellen E. Bell, Marcello A. Canuto, and Christopher Powell

1999 Early Classic Architecture Beneath the Copan Acropolis: A Research Update. *Ancient Mesoamerica* 10(1):3-23.

Sheets, Payson

1992 *The Ceren Site: A Prehistoric Village Buried by Volcanic Ash in Central America*. Harcourt Brace Jovanovich, Fort Worth.

Shelton, Anthony A.

1996 The Girl Who Ground Herself: Huichol Attitudes toward Maize. In *People of the Peyote: Huichol Indian History, Religion, and Survival*, edited by Stacy B. Schaefer and Peter T. Furst, 451-467. University of New Mexico Press, Albuquerque.

Shepard, Anna O.

1948 *Plumbate: A Mesoamerican Trade Ware*. Publication 573. Carnegie Institution of Washington, Washington, D.C.

Shook, Edwin M., and Robert F. Heizer

1976 An Olmec Sculpture from the South (Pacific) Coast of Guatemala. *Journal of New World Archaeology* 1(3):1-8.

Shook, Edwin M., and William N. Irving

1955 Colonnaded Buildings at Mayapan. *Current Reports* 2(22):127-167. Carnegie Institution of Washington, Washington, D.C.

Shook, Edwin M., and Alfred Kidder II

1961 The Painted Tomb at Tikal. *Expedition* 4(1):2-7. Philadelphia.

Simeón, Remi

1977 *Diccionario de la lengua nahuatl o mexicano*. Siglo Veintiuno Editores, Mexico.

Simmons, Marc

1964 Tlascalans in the Spanish Borderlands. *New Mexico Historical Review* 39(2):101-110.

Slocum, Marianna C.

1953 *Vocabulario tzeltal-español*. Instituto Lingüístico de Verano, Mexico.

Slocum, Marianna C., and Florencia L. Gerdel

1965 *Vocabulario tzeltal de Bachajón*. Instituto Lingüístico de Verano, Mexico.

Smith, A. Ledyard

1950 *Uaxactun, Guatemala: Excavations of 1931-1937*. Publication 588. Carnegie Institution of Washington, Washington, D.C.

1982 Major Architecture and Caches. In *Excavations at Seibal, Department of Peten, Guatemala*, edited by Gordon R. Willey, pp. 1-263. *Memoirs* 15(1). Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Smith, A. Ledyard, and Alfred V. Kidder

1943 Explorations in the Motagua Valley, Guatemala. *Contributions to American Anthropology and History* 8(41):101-182. Publication 546. Carnegie Institution of Washington, Washington, D.C.

1951 *Excavations at Nebaj, Guatemala*. Publication 594. Carnegie Institution of Washington, Cambridge, Mass.

Smith, A. Ledyard, and Karl Ruppert

1956 Excavations in House Mounds at Mayapan IV. *Current Reports* 2(36):471-528. Carnegie Institution of Washington, Cambridge, Mass.

Smith, Mary Elizabeth

1973 The Relationship Between Mixtec Manuscript Painting and the Mixtec Language: A Study of Some Personal Names in Codices Muro and Sánchez Solís. In *Mesoamerican Writing Systems*, edited by Elizabeth P. Benson, pp. 47-98. *Dumbarton Oaks*, Washington, D.C.

Smith, Robert E.

1952 *Pottery from Chipoc, Alta Verapaz, Guatemala*. Publication 596. Carnegie Institution of Washington, Washington, D.C.

1955 *Ceramic Sequence at Uaxactun, Guatemala*. 2 vols. Publication 20. Middle American Research Institute, Tulane University, New Orleans.

1971 *The Pottery of Mayapan: Including Studies of Ceramic Material from Uxmal, Kabah, and Chichen Itza*. 2 vols. *Papers* 66. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.

1987 *A Ceramic Sequence from the Pyramid of the Sun, Teotihuacan, Mexico*. *Papers* 75. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Smith, Virginia

2000 The Iconography of Power at Xochicalco: The Pyramid of the Plumed Serpents. In *Archaeological Research at Xochicalco, Volume 2: The Xochicalco Mapping Project*, edited by Kenneth Hirth, pp. 57-82. University of Utah Press, Salt Lake City.

Smith, Watson

1952 *Kiva Mural Decorations at Awatovi and Kawaika-a*. *Papers* 37. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Solís, Felipe

1981 *Escultura del Castillo de Teayo, Veracruz, México*. Universidad Nacional Autónoma de México, Mexico.

1992 Labor de dioses y hombres. *Artes de México* 17:67-79.

- Sosa, John Robert
1985 *The Maya Sky, the Maya World: A Symbolic Analysis of Yucatec Maya Cosmology*. Ph.D. dissertation, Department of Anthropology, State University of New York, Albany.
- Sotheby's
1990 *Pre-Columbian Art, 12 November 1990*. Sotheby's, New York.
- Soustelle, Jaques
1967 *Mexico*. James Hogarth, trans. World Publishing Company, Cleveland.
- Soustelle, Jaques, and Ignacio Bernal
1958 *Mexico: Pre-Hispanic Paintings*. United Nations Educational, Scientific and Cultural Organization, Paris.
- Souza Novelo, Narciso
1970 *Leyendas mayas*. Distribuidora de Libros Yucatecos, Mérida.
- Spence, Michael W.
1992 Tlailotlacan, a Zapotec Enclave in Teotihuacan. In *Art, Ideology, and the City of Teotihuacan*, edited by Janet C. Berlo, pp. 59-88. *Dumbarton Oaks*, Washington, D.C.
1994 Human Skeletal Material from Teotihuacan. In *Mortuary Practices and Skeletal Remains at Teotihuacan*, edited by Martha L. Sempowski and Michael W. Spence, pp. 315-411. University of Utah Press, Salt Lake City.
- Spero, Joanne M.
1991 Beyond Rainstorms: The Kawak as an Ancestor, Warrior, and Patron of Witchcraft. In *Sixth Palenque Round Table, 1986*, edited by Virginia M. Fields, pp. 184-193. University of Oklahoma Press, Norman.
- Spinden, Herbert J.
1913 *A Study of Maya Art: Its Subject Matter and Historical Development*. *Memoirs 6*. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1924 *The Reduction of Maya Dates*. *Papers 6(4)*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
1975 *A Study of Maya Art: Its Subject Matter and Historical Development*. Dover Publications, New York.
- Staines Cicero, Leticia, and Christophe Helmke, eds.
2017 *Las Pinturas Realistas de Tetitla, Teotihuacan. Estudios a través las acuarelas de Agustín Villagra Caletí*. Universidad Nacional Autónoma de México, Mexico.
- Standley, Paul C., and Julian A. Steyermark
1946 *Flora of Guatemala*. *Fieldiana: Botany*, v. 24, pt. 5. Field Museum of Natural History, Chicago.
- Stanzione, Vincent James
2000 *Rituals of Sacrifice: Walking the Face of the Earth on the Sacred Path of the Sun: A Journey through the Tz'utujil Maya World of Santiago Atitlán*. Vincent Stanzione and Angelika Bauer, publishers, Antigua.
- Starr, Frederick
1902 *Notes upon the Ethnography of Southern Mexico, Part 2*. *Proceedings 9*. Davenport Academy of Natural Sciences, Davenport, Iowa.
- Stebbins, Robert C.
1954 *Amphibians and Reptiles of Western North America*. McGraw-Hill, New York.
- Steggerda, Morris
1941 *Maya Indians of Yucatan*. Publication 531. Carnegie Institution of Washington, Washington, D.C.

Stendahl, Alfred

1950 *Pre-Columbian Art*. Museum of Fine Arts, Dallas.

Stephen, Alexander MacGregor

1936 *Hopi Journal of Alexander M. Stephen*. Elsie C. Parsons, ed. Contributions to Anthropology 23. Columbia University, New York.

Stevenson, Matilda Coxe

1894 The Sia. *Eleventh Annual Report of the Bureau of American Ethnology, 1889–1890*, pp. 3-157. Smithsonian Institution, Washington, D.C.

1904 The Zuñi Indians: Their Mythology, Esoteric Fraternities, and Ceremonies. *Twenty-third Annual Report of the Bureau of American Ethnology, 1901–1902*, pp. 3-608. Smithsonian Institution, Washington, D.C.

Stevenson, Richard

1986 Henry Taube: The Boy from the Prairie Who Made Good. *Chemistry in Britain*, November:975-976.

Steward, Julian H.

1931 The Ceremonial Buffoon of the American Indian. *Papers* 14:187-207. Michigan Academy of Science, Arts, and Letters, Ann Arbor.

Stierlin, Henri

1981 *Art of the Maya: From the Olmecs to the Toltec-Maya*. Rizzoli International Publications, New York.

Stierlin, Henri, ed.

1998 *Mexique: Terre des Dieux: Musée Rath, 8 octobre 1998–24 janvier 1999*. Musées d'Art et d'Histoire, Geneva.

Stirling, Matthew W.

1942 *The Origin Myth of Acoma and Other Records*. Bulletin 135. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

1943 *Stone Monuments of Southern Mexico*. Bulletin 138. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Stocker, Terrance L., and Michael W. Spence

1973 Trilobal Eccentrics at Teotihuacan and Tula. *American Antiquity* 38:195-199.

Stone, Andrea J.

1986 Aspects of Impersonation in Classic Maya Art. Paper presented at the Sixth Palenque Round Table, Palenque, Chiapas, Mexico.

1988 Sacrifice and Sexuality: Some Structural Relationships in Pre-Columbian Art. In *The Role of Gender in Precolumbian Art and Architecture*, edited by Virginia E. Miller, pp. 75-103. University Press of America, Lanham.

1989 Disconnection, Foreign Insignia, and Political Expansion: The Warrior Stelae of Piedras Negras. In *Mesoamerica After the Decline of Teotihuacan, A.D. 700–900*, edited by Richard A. Diehl and Janet Catherine Berlo, pp. 153-172. Dumbarton Oaks, Washington, D.C.

1991 Aspects of Impersonation in Classic Maya Art. In *Sixth Palenque Round Table, 1986*, edited by Virginia M. Fields, pp. 194-202. University of Oklahoma Press, Norman.

1995a *Images from the Underworld: Naj Tunich and the Tradition of Maya Cave Painting*. University of Texas Press, Austin.

1995b The Painted Walls of Xibalba: Maya Cave Painting as Evidence of Cave Ritual. In *Word and Image in Maya Culture: Explorations in Language, Writing, and Culture*, edited by William Hanks and Donald Rice, pp. 319-335. University of Utah Press, Salt Lake City.

Stone, Andrea, and Marc Zender

2011 *Reading Maya Art: A Hieroglyphic Guide to Ancient Maya Painting and Sculpture*. Thames and Hudson, New York.

Stone, Donna K., and David W. Kluth

1989 1989 Field Season Report: Operation 41, Sub-operation 5 and 8. Manuscript on file at the Instituto Hondureño de Antropología e Historia, Tegucigalpa and Copan.

Stone, Doris, and Carlos Balsler

1965 Incised Slate Disks from the Atlantic Watershed of Costa Rica. *American Antiquity* 30(3):310-329.

Stresser-Péan, Guy

1952 Montagnes calcaires et sources vaclusiennes dans la religion des Indiens Huastèques de la région de Tampico. *Revue de l'Histoire des Religions* 141(1):84-90. Paris.

1959 Ixtab, Maximon et Judas: Croyances sur la pendaison chez les Mayas du Yucatán, du Guatemala et de la Huasteca. In *Proceedings of the International Congress of Americanists (33rd session, San José, 1958)*, v. 2, pp. 456-461. San José.

1971 Ancient Sources on the Huasteca. In *Archaeology of Northern Mesoamerica*, edited by Gordon F. Ekholm and Ignacio Bernal, pp. 582-602. Handbook of Middle American Indians 11. University of Texas Press, Austin.

Strömmsvik, Gustav

1941 Substela Caches and Stela Foundations at Copan and Quirigua. *Contributions to American Archaeology* 7(37):63-96. Publication 528. Carnegie Institution of Washington, Washington, D.C.

Stross, Brian

1978 *Demons and Monsters: Tzeltal Tales*. Museum Brief 24. Museum of Anthropology, University of Missouri, Columbia.

1992 Maize and Blood: Mesoamerican Symbolism on an Olmec Vase and a Maya Plate. *Res: Anthropology and Aesthetics* 22:82-107.

Stuart, David

1982 The Iconography of Blood in the Symbolism of Maya Rulership. Paper presented at the Princeton Conference on the Beginnings of Maya Iconography.

1987 *Ten Phonetic Syllables*. Research Reports on Ancient Maya Writing 14. Center for Maya Research, Washington, D.C.

1988 Blood Symbolism in Maya Iconography. In *Maya Iconography*, edited by Elizabeth P. Benson and Gillett G. Griffin, pp. 175-221. Princeton University Press, Princeton.

1992a Flower Symbolism in Maya Iconography. Paper presented at the Fifth Symposium of the Maya Meetings at Texas, "Origins: Creation and Continuity, Mythology and History in Mesoamerica," University of Texas, Austin.

1992b Hieroglyphs and Archaeology at Copan. *Ancient Mesoamerica* 3(1):161-168.

1996 Kings of Stone: A Consideration of Stelae in Ancient Maya Ritual and Representation. *Res: Anthropology and Aesthetics* 29-30:148-171.

1997 Smoking Frog, K'inich Yax K'uk' Mo', and the Epigraphic Evidence for Ties between Teotihuacan and the Classic Maya. Paper presented at the symposium "A Tale of Two Cities: Copan and Teotihuacan," Department of Anthropology, Harvard University, Cambridge, Mass.

1998 "The Fire Enters His House": Architecture and Ritual in Classic Maya Texts. In *Function and Meaning in Classic Maya Architecture*, edited by Stephen D. Houston, pp. 373-425. Dumbarton Oaks, Washington, D.C.

2000 "The Arrival of Strangers": Teotihuacan and Tollan in Classic Maya History. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by David Carrasco, Lindsay Jones, and Scott Sessions, pp. 465-513. University Press of Colorado, Boulder.

2004 The Beginnings of the Copan Dynasty: A Review of the Hieroglyphic and Historical Evidence. In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello A. Canuto, and Robert J. Sharer, pp. 215-247. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

2005 *The Inscriptions from Temple XIX at Palenque*. Pre-Columbian Art Research Institute, San Francisco.

Stuart, David, continued

2012 The Name of Paper: The Mythology of Crowning and Royal Nomenclature on Palenque's Palace Tablet. In *Maya Archaeology 2*, edited by Charles Golden, Stephen Houston, and Joel Skidmore, pp. 116-142. Precolumbia Mesoweb Press, San Francisco.

in press The *Wahys* of Witchcraft: Sorcery and Political Power among the Classic Maya. In *Witchcraft and Sorcery in Ancient and Contemporary Mesoamerica*, edited by Jeremy D. Coltman and John M. D. Pohl. University Press of Colorado, Boulder.

Stuart, David, and Stephen Houston

1987 Classic Maya Place-names. Paper presented at the Meetings of the American Anthropological Association, Chicago.

1994 *Classic Maya Place Names*. Studies in Pre-Columbian Art and Archaeology 33. Dumbarton Oaks, Washington, D.C.

Stuart, David, Stephen Houston, and John Robertson

1999 Recovering the Past: Classic Mayan Language and Classic Maya Gods. In *Notebook for the XXIIIrd Maya Hieroglyphic Forum at Texas, March, 1999*, pt. 2. Department of Art and Art History, College of Fine Arts; Institute of Latin American Studies, University of Texas, Austin.

Stuart, George

1997 The Royal Crypts from Copan. *National Geographic* 192(6):68-93.

Sugiyama, Nawa, Saburo Sugiyama, and William Fash

2016 ¿Artistas mayas en Teotihuacan? *Arqueología Mexicana* 24(142):8.

Sugiyama, Saburo

1988 Iconographic Interpretation of the Temple of Quetzalcoatl at Teotihuacan. Manuscript.

1989a Burials Dedicated to the Old Temple of Quetzalcoatl at Teotihuacan, Mexico. *American Antiquity* 54(1):85-106.

1989b Iconographic Interpretation of the Temple of Quetzalcoatl at Teotihuacan. *Mexicon* 9(4):68-74.

1992 Rulership, Warfare, and Human Sacrifice at the Ciudadela: An Iconographic Study of Feathered Serpent Representations. In *Art, Ideology, and the City of Teotihuacan*, edited by Janet C. Berlo, pp. 205-230. Dumbarton Oaks, Washington, D.C.

1993 Wordview Materialized in Teotihuacán, Mexico. *Latin American Antiquity* 4(3):103-129.

1995 Mass Human Sacrifice and Symbolism of the Feathered Serpent Pyramid in Teotihuacan, Mexico. Ph.D. dissertation, Department of Anthropology, Arizona State University, Tempe.

2000 Teotihuacan as the Origin for Postclassic Feathered Serpent Symbolism. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by David Carrasco, Lindsay Jones, and Scott Sessions, pp. 117-143. University Press of Colorado, Boulder.

2005 *Human Sacrifice, Militarism and Rulership: Materialization of State Ideology at the Feathered Serpent Pyramid, Teotihuacan*. Cambridge University Press, Cambridge.

Sugiyama, Saburo, and Rubén Cabrera Castro

1999 Se descubren dos ofrendas de notable importancia en la Pirámide de la Luna en Teotihuacan. *Arqueología Mexicana* 7(40):71-73.

Sullivan, Thelma

1982 Tlazolteotl-Ixcuina: The Great Spinner and Weaver. In *The Art and Iconography of Late Post-Classic Central Mexico*, edited by Elizabeth H. Boone, pp. 7-35. Dumbarton Oaks, Washington, D.C.

Taggart, James M.

1983 *Nahuatl Myth and Social Structure*. University of Texas Press, Austin.

Tarn, Nathaniel, and Martín Prechtel

1981 "Eating the Fruit": Sexual Metaphor and Initiation in Santiago Atitlan. Paper presented at the XVII Mesa Redonda, Sociedad Mexicana de Antropología, San Cristobal de las Casas.

- 1986 Constant Inconstancy: The Feminine Principle in Atiteco Mythology. In *Symbol and Meaning Beyond the Closed Community*, edited by Gary H. Gossen, pp. 173-184. Institute for Mesoamerican Studies, State University of New York, Albany.
- Tate, Carolyn Elaine
- 1986 The Language of Symbols in the Ritual Environment of Yaxchilan, Chiapas. Ph.D. dissertation, Department of Art History, University of Texas, Austin.
- 1992 *Yaxchilan: The Design of a Ceremonial City*. University of Texas Press, Austin.
- Taube, Karl A.
- 1983 The Teotihuacan Spider Woman. *Journal of Latin American Lore* 9(2):107-189. Los Angeles.
- 1985 The Classic Maya Maize God: A Reappraisal. In *Fifth Palenque Round Table, 1983*, edited by Merle Greene Robertson, pp. 171-181. Pre-Columbian Art Research Institute, San Francisco.
- 1986 The Teotihuacan Cave of Origin: The Iconography and Architecture of Emergence Mythology in Mesoamerica and the American Southwest. *Res: Anthropology and Aesthetics* 12:51-82.
- 1987 A Representation of the Principal Bird Deity in the Paris Codex. *Research Reports on Ancient Maya Writing* 6:1-10. Center for Maya Research, Washington, D.C.
- 1988a A Prehispanic Maya Katun Wheel. *Journal of Anthropological Research* 44(2):183-203. Albuquerque.
- 1988b A Study of Classic Maya Scaffold Sacrifice. In *Maya Iconography*, edited by Elizabeth P. Benson and Gillett G. Griffin, pp. 331-351. Princeton University Press, Princeton.
- 1988c *The Albers Collection of Pre-Columbian Art*. Hudson Hills Press, New York.
- 1988d The Ancient Yucatec New Year Festival: The Liminal Period in Maya Ritual and Cosmology. Ph.D. dissertation, Department of Anthropology, Yale University.
- 1988e The Iconography of Mirrors at Classic Teotihuacan. Paper presented at the symposium "Art, Polity and the City of Teotihuacan," Dumbarton Oaks, Washington, D.C.
- 1989a A Classic Maya Entomological Observation. *Mesoamerica: The Journal of Middle America* 2(1):13-17. Mérida.
- 1989b Itzam Cab Ain: Caimans, Cosmology, and Calendrics in Postclassic Yucatán. *Research Reports on Ancient Maya Writing* 26:1-12. Center for Maya Research, Washington, D.C.
- 1989c Ritual Humor in Classic Maya Religion. In *Word and Image in Maya Culture*, edited by William F. Hanks and Don S. Rice, pp. 351-382. University of Utah Press, Salt Lake City.
- 1989d The Maize Tamale in Maya Diet, Epigraphy, and Art. *American Antiquity* 54(1):31-51.
- 1992a The Iconography of Mirrors at Teotihuacan. In *Art, Ideology, and the City of Teotihuacan*, edited by Janet C. Berlo, pp. 169-204. Dumbarton Oaks, Washington, D.C.
- 1992b *The Major Gods of Yucatan: Schellhas Revisited*. Studies in Pre-Columbian Art and Archaeology 32. Dumbarton Oaks, Washington, D.C.
- 1992c The Temple of Quetzalcoatl and the Cult of Sacred War at Teotihuacan. *Res: Anthropology and Aesthetics* 21:53-87.
- 1993a *Aztec and Maya Myths*. British Museum Press, London.
- 1993b The Bilimek Pulque Vessel: Starlore, Calendrics, and Cosmology of Late Postclassic Central Mexico. *Ancient Mesoamerica* 4(1):1-15.
- 1994a The Birth Vase: Natal Imagery in Ancient Maya Myth and Ritual. In *The Maya Vase Book: A Corpus of Rollout Photographs of Maya Vases, Volume 4*, edited by Barbara Kerr and Justin Kerr, pp. 650-685. Kerr Associates, New York.
- 1994b The Iconography of Toltec Period Chichen Itza. In *Hidden among the Hills: Maya Archaeology of the Northwestern Yucatan Peninsula*, edited by Hanns J. Prem, pp. 212-246. Verlag von Flemming, Möckmühl.
- 1995 The Rainmakers: The Olmec and their Contribution to Mesoamerican Belief and Ritual. In *The Olmec World: Ritual and Rulership*, edited by Jill Guthrie, pp. 83-103. The Art Museum, Princeton University, Princeton.
- 1996 The Olmec Maize God: The Face of Corn in Formative Mesoamerica. *Res: Anthropology and Aesthetics* 29-30:39-81.
- 1997a A God Named Zip. *Archaeology* 50(3):39.
- 1997b Transformations and Use of Teotihuacan Symbolism at Copan and Other Maya Cities. Paper presented at the symposium "A Tale of Two Cities: Copan and Teotihuacan," Department of Anthropology, Harvard University, Cambridge, Mass.

Taube, Karl A., continued

- 1998a Enemas rituales en Mesoamérica. *Arqueología Mexicana* 6(34):38-45.
- 1998b Iconographic Investigations of Structure 10L-16, Copan, Honduras: Report of the 1995-1997 Field Seasons. Manuscript on file at the Instituto Hondureño de Antropología e Historia, Tegucigalpa and Copan.
- 1998c The Jade Hearth: Centrality, Rulership, and the Classic Maya Temple. In *Function and Meaning in Classic Maya Architecture*, edited by Stephen D. Houston, pp. 427-478. Dumbarton Oaks, Washington, D.C.
- 2000a Lightning Celts and Corn Fetishes: The Formative Olmec and the Development of Maize Symbolism in Mesoamerica and the American Southwest. In *Olmec Art and Archaeology in Mesoamerica*, edited by John E. Clark and Mary E. Pye, pp. 297-337. National Gallery of Art, Washington, D.C.
- 2000b The Stairway Block Sculptures of Structure 10L-16, Copán, Honduras: Fire and the Evocation and Resurrection of K'inich Yax K'uk' Mo'. Paper presented at the 65th Annual Meeting of the Society for American Archaeology, Philadelphia.
- 2000c The Turquoise Hearth: Fire, Self-Sacrifice, and the Central Mexican Cult of War. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by David Carrasco, Lindsay Jones, and Scott Sessions, pp. 269-340. University Press of Colorado, Boulder.
- 2000d *The Writing System of Ancient Teotihuacan*. Ancient America 1. Center for Ancient American Studies, Barnardsville.
- 2001a Cipactli. In *The Oxford Encyclopedia of Mesoamerican Cultures: The Civilizations of Mexico and Central America*, edited by David Carrasco, v. 1, pp. 218-220. Oxford University Press, New York.
- 2001b The Breath of Life: The Symbolism of Wind in Mesoamerica and the American Southwest. In *The Road to Aztlan: Art from a Mythic Homeland*, edited by Virginia M. Fields and Victor Zamudio-Taylor, pp. 102-123. Los Angeles County Museum of Art, Los Angeles.
- 2001c The Classic Maya Gods. In *Maya: Divine Kings of the Rain Forest*, edited by Nikolai Grube, Eva Eggebrecht, and Matthias Seidel, pp. 262-277. Könemann, Cologne.
- 2001d The Symbolism of Jade among the Classic Period Maya. Paper presented at the Congreso Internacional de Copán, Copán Ruinas, July 14.
- 2002a Heaven and Hell: Portals, Xibalba and the Flowery Paradise. Paper presented at the symposium "Jaws of the Underworld: Life, Death, and Rebirth among the Ancient Maya," 7th European Maya Conference, British Museum, London.
- 2002b La serpiente emplumada de Teotihuacan. *Arqueología Mexicana* 9(53):36-41.
- 2003a Ancient and Contemporary Maya Conceptions about Field and Forest. In *The Lowland Maya Area: Three Millennia at the Human-Wildland Interface*, edited by Arturo Gómez-Pompa, Michael F. Allen, Scott L. Fedick, and Juan J. Jiménez-Osornio, pp. 461-492. Haworth Press, New York.
- 2003b Maws of Heaven and Hell: The Symbolism of the Centipede and Serpent in Classic Maya Religion. In *Antropología de la eternidad: la muerte en la cultura maya*, edited by Andrés Ciudad Ruiz, Mario Humberto Ruz Sosa, and María Josefa Iglesias Ponce de León, pp. 405-442. Sociedad Española de Estudios Mayas, Madrid.
- 2003c Tetitla and the Maya Presence at Teotihuacan. In *The Maya and Teotihuacan: Reinterpreting Early Classic Maya Interaction*, edited by Geoffrey E. Braswell, pp. 273-314. University of Texas Press, Austin.
- 2004a Aztec Religion: Creation, Sacrifice, and Renewal. In *The Aztec Empire*, pp. 168-177. Guggenheim Museum, New York.
- 2004b Flower Mountain: Concepts of Life, Beauty, and Paradise among the Classic Maya. *Res: Anthropology and Aesthetics* 45:69-98.
- 2004c *Olmec Art at Dumbarton Oaks*. Dumbarton Oaks, Washington, D.C.
- 2004d Structure 10L-16 and Its Early Classic Antecedents: Fire and the Evocation and Resurrection of K'inich Yax K'uk' Mo'. In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello A. Canuto, and Robert J. Sharer, pp. 265-295. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.
- 2005a Representaciones del paraíso en el arte cerámico del Clásico Temprano de Escuintla, Guatemala. In *Iconografía y escritura teotihuacana en la costa sur de Guatemala y Chiapas*, edited by Oswaldo Chinchilla and Bárbara Arroyo, U tz'ib, Serie Reportes 1(5):33-54. Asociación Tikal, Guatemala.

- 2005b The Symbolism of Jade in Classic Maya Religion. *Ancient Mesoamerica* 16(1):23-50.
- 2006 Climbing Flower Mountain: Concepts of Resurrection and the Afterlife in Ancient Teotihuacan. In *Arqueología e historia del Centro de México. Homenaje a Eduardo Matos Moctezuma*, edited by Leonardo López Luján, David Carrasco, and Lordes Cué, pp. 153-170. Instituto Nacional de Antropología e Historia, Mexico.
- 2009a El dios de la lluvia Olmeca. *Arqueología Mexicana* 16(96):26-29.
- 2009b The Maya Maize God and the Mythic Origins of Dance. In *The Maya and their Sacred Narratives: Text and Context of Maya Mythologies*, edited by Genevieve Le Fort, Raphael Gardiol, Sebastian Matteo, and Christophe Helmke, pp. 41-52. Verlag Anton Saurwein, Markt Schwaben.
- 2009c The Womb of the World: The Cuauhxicalli and Other Offering Bowls of Ancient and Contemporary Mesoamerica. In *Maya Archaeology 1*, edited by Charles Golden, Stephen Houston, and Joel Skidmore, pp. 86-106. Precolumbia Mesoweb Press, San Francisco
- 2010a At Dawn's Edge: Tulúm, Santa Rita, and Floral Symbolism in the International Style of Late Postclassic Mesoamerica. In *Astronomers, Scribes, and Priests: Intellectual Interchange between the Northern Maya Lowlands and Highland Mexico in the Late Postclassic Period*, edited by Gabrielle Vail and Christine Hernandez, pp. 145-191. Dumbarton Oaks, Washington, D.C.
- 2010b Gateways to Another World: The Symbolism of Flowers in Mesoamerica and the American Southwest. In *The Land Brightened with Flowers: The Hopi Iconography Project*, edited by Kelley Hays-Gilpin and Polly Schaafsma, pp. 73-120. Bulletin 67. Museum of Northern Arizona, Flagstaff.
- 2010c Where Earth and Sky Meet: The Sea in Ancient and Contemporary Maya Cosmology. In *The Fiery Pool: The Maya and the Mythic Sea*, edited by Daniel Finamore and Stephen Houston, pp. 202- 219. Yale University Press, New Haven.
- 2011 Teotihuacan and the Development of Writing in Early Classic Central Mexico. In *Their Way of Writing: Scripts, Signs, and Pictographies in Pre-Columbian America*, edited by Elizabeth H. Boone and Gary Urton, pp. 77-109. Dumbarton Oaks, Washington, D.C.
- 2012a Ancient Maya Calendrics, Cosmology and Creation: 2012 and Beyond. *Backdirt: Annual Review of the Cotsen Institute of Archaeology at UCLA*:10-21.
- 2012b Jade maya: piedra de dioses y reyes antiguos. In *Piedras del cielo. Civilizaciones del jade*, edited by Mariana Roca Cogordan, pp. 33-40. Instituto Nacional de Antropología e Historia, Mexico.
- 2012c The Symbolism of Turquoise in Postclassic Mexico. In *Turquoise in Mexico and North America: Science, Conservation, Culture and Collections*, edited by J. C. H. King, Max Carocci, Carolyn Cartwright, Colin McEwan, and Rebecca Stacy, pp. 117-134. British Museum, London.
- 2013 The Classic Maya Temple: Centrality, Cosmology, and Sacred Geography in Ancient Mesoamerica. In *Heaven on Earth: Temples, Ritual, and Cosmic Symbolism in the Ancient World*, edited by Deena Ragavan, pp. 89-125. Oriental Institute, University of Chicago, Chicago.
- 2015 The Huastec Sun God: Portrayals of Solar Imagery, Sacrifice, and War in Postclassic Huastec Iconography. In *The Huasteca: Cultural History and Regional Exchange*, edited by Katherine A. Faust and Kim N. Richter, pp. 98-127. University of Oklahoma Press, Norman.
- 2016 Through a Glass, Brightly: Recent Investigations Concerning Mirrors and Scrying in Ancient and Contemporary Mesoamerica. In *Manufactured Light: Mirrors in the Mesoamerican Realm*, edited by Emiliano Gallaga M. and Marc G. Blainey, pp. 285-314. University of Colorado Press, Niwot.
- 2017a Aquellos del este: representaciones de dioses y hombres mayas en las pinturas realistas de Tetitla, Teotihuacan. In *Las pinturas realistas de Tetitla, Teotihuacan: estudios a través las acuarelas de Agustín Villagra Caletí*, edited by Leticia Staines Cicero and Christophe Helmke, pp. 71-99. Universidad Nacional Autónoma de México, Mexico.
- 2017b Pillars of the World: Cosmic Trees in Ancient Maya Thought. In *Del saber ha hecho su razón de ser... Homenaje a Alfredo López Austin*, edited by Eduardo Matos Moctezuma and Ángela Ochoa, pp. 269-302. Universidad Nacional Autónoma de México, Mexico.
- 2017c The Weapon of Huitzilopochtli: The Symbolism of the Xiuhcoatl in Ancient Mexico. Paper presented at the symposium "The Foundation of Heaven: The Great Temple of the Aztecs," California State University, Los Angeles.
- 2018 The Ballgame, Boxing and Ritual Bloodsport in Ancient Mesoamerica. In *Ritual, Play and Belief in Animals and Early Human Societies*, edited by Colin Renfrew, Iain Morley, and Michael Boyd, pp. 264-301. Cambridge University Press, Cambridge.

- Taube, Karl A., and Bonnie L. Bade
1991 An Appearance of Xiuhtecuhtli in the Dresden Codex Venus Pages. *Research Reports on Ancient Maya Writing* 35:13-22. Center for Maya Research, Washington, D.C.
- Taube, Karl, and Stephen Houston
2015 Masks and Iconography. In *Temple of the Night Sun: A Royal Tomb at El Diablo, Guatemala*, by Stephen Houston, Sarah Newman, Edwin Román, and Thomas Garrison, pp. 208-229. Precolumbia Mesoweb Press, San Francisco.
- Taube, Karl, Zachary Hrubby, and Luis Romero
2011 Ancient Maya Jade Workshops: Archaeological Reconnaissance in the Upper Río El Tambor, Guatemala. In *The Technology of Maya Civilization: Political Economy and Beyond in Lithic Studies*, edited by Zachary X. Hrubby, Geoffrey E. Braswell, and Oswaldo Chinchilla Mazariegos, pp. 141-148. Equinox, Sheffield.
- Taube, Karl, and Reiko Ishihara-Brito
2012 From Stone to Jewel: Jade in Ancient Maya Religion and Rulership. In *Maya Art at Dumbarton Oaks*, edited by Joanne Pillsbury, Miriam Doutriaux, Reiko Ishihara, and Andrew Tokovinine, pp. 134-153. Dumbarton Oaks, Washington, D.C.
- Taube, Karl, José Osorio Leon, and Rocío González de la Mata
2014 El yacimiento de Ehecatl y el origen mítico de la música: estudios iconográficos del grupo arquitectónico de la Serie Inicial de Chichén Itzá. Keynote address, Primera Mesa Redonda de Mayab, Festival Internacional de la Cultura Maya, Mérida.
- Taube, Karl, and William Saturno
2008 Los murales de San Bartolo: desarrollo temprano del simbolismo y del mito del maíz en la antigua Mesoamérica. In *Olmeca. Balance y perspectivas. Memoria de la Primera Mesa Redonda*, edited by María Teresa Uriarte and Rebecca B. González Lauck, v. 1, pp. 287-318. Universidad Nacional Autónoma de México, Mexico.
- Taube, Karl A., William Saturno, David Stuart, and Heather Hurst
2010 *The Murals of San Bartolo, El Petén, Guatemala, Part 2: The West Wall*. Ancient America 10. Center for Ancient American Studies, Barnardsville.
- Taube, Karl, and Polly Schaafsma
2006 Bringing the Rain: An Ideology of Rain Making in the Pueblo Southwest and Mesoamerica. In *A Pre-Columbian World: Searching for a Unitary Vision of Ancient America*, edited by Jeffrey Quilter and Mary Miller, pp. 231-285. Dumbarton Oaks, Washington, D.C.
- Taube, Karl, Virginia Sisson, Russell Seitz, and George Harlow
2004 The Sourcing of Mesoamerican Jade: Expanded Geological Reconnaissance in the Motagua Region, Guatemala. Appendix to *Olmece Art at Dumbarton Oaks*, by Karl A. Taube, pp. 203-220. Dumbarton Oaks, Washington, D.C.
- Taube, Karl, and Marc Zender
2009 American Gladiators: Ritual Boxing in Ancient Mesoamerica. In *Blood and Beauty: Organized Violence in the Art and Archaeology of Mesoamerica and Central America*, edited by Heather Orr and Rex Koontz, pp. 161-220. Cotsen Institute of Archaeology, University of California, Los Angeles.
- Taube, Rhonda
2015 Figurines: Mesoamerica. In *The International Encyclopedia of Human Sexuality*, edited by Patricia Whelehan and Anne Bolin, pp. 369-426. John Wiley and Sons, Hoboken.
- Taube, Rhonda, and Karl Taube
2009 The Beautiful, the Bad, and the Ugly: Aesthetics and Morality in Maya Figurines. In *Mesoamerican Figurines: Small Scale Indices of Large Scale Phenomena*, edited by Christina Halperin, Katherine Faust, Rhonda Taube, and Aurore Giguët, pp. 236-258. University Press of Florida, Gainesville.

Tedlock, Barbara

- 1982 *Time and the Highland Maya*. University of New Mexico Press, Albuquerque.
 1988 Person and Body in Quiche-Mayan Healing. Manuscript.
 1992 The Road of Light: Theory and Practice of Mayan Skywatching. In *The Sky in Mayan Literature*, edited by Anthony F. Aveni, pp. 18-42. Oxford University Press, New York.

Tedlock, Dennis

- 1985 *Popol Vuh: The Mayan Book of the Dawn of Life*. Simon and Schuster, New York.
 1996 *Popol Vuh: The Mayan Book of the Dawn of Life*. Rev. ed. Simon and Schuster, New York.

Termer, Franz

- 1930 Los bailes de culebra entre los indios quichés en Guatemala. In *Proceedings of the International Congress of Americanists (23rd session, New York, 1928)*, pp. 661-667. Science Printing Company, Lancaster.

Thomas, Cyrus

- 1882 A Study of the Manuscript Troano. *Contributions to North American Ethnology* 5:1-237. U.S. Department of the Interior, Washington, D.C.

Thompson, Donald E.

- 1955 An Altar and Platform at Mayapan. *Current Reports* 2(28):281-288. Carnegie Institution of Washington, Cambridge, Mass.

Thompson, Edward H.

- 1892 The Ancient Structures of Yucatan Not Communal Dwellings. *Proceedings of the American Antiquarian Society* 8:262-269.
 1911 The Genesis of the Maya Arch. *American Anthropologist* 13(4):501-516.

Thompson, J. Eric S.

- 1930 *Ethnology of the Mayas of Southern and Central Honduras*. Publication 274. Anthropological Series 17(2). Field Museum of Natural History, Chicago.
 1934 Sky Bearers, Colors and Directions in Maya and Mexican Religion. *Contributions to American Archaeology* 2(10):209-242. Publication 36. Carnegie Institution of Washington, Washington, D.C.
 1937 A New Method of Deciphering Yucatecan Dates with Special Reference to Chichen Itza. *Contributions to American Archaeology* 4(22):177-197. Publication 483. Carnegie Institution of Washington, Washington, D.C.
 1938 Sixteenth and Seventeenth Century Reports on the Chol Mayas. *American Anthropologist* 40:584-604.
 1939 *Excavations at San Jose, British Honduras*. Publication 506. Carnegie Institution of Washington, Washington, D.C.
 1942 Representations of Tezcatlipoca at Chichen Itza. *Notes on Middle American Archaeology and Ethnology* 1(12):48-50. Carnegie Institution of Washington, Cambridge, Mass.
 1943 Las llamadas "Fachadas de Quetzalcoatl." In *XXVII Congreso Internacional de Americanistas. Actas de la sesión celebrada en México en 1939*, v. 1, pp. 391-400. Instituto Nacional de Antropología e Historia, Mexico.
 1950 *Maya Hieroglyphic Writing: Introduction*. Publication 589. Carnegie Institution of Washington, Washington, D.C.
 1955 The Subject Matter of the Murals. In *Bonampak, Chiapas, Mexico*, by Karl Ruppert, J. Eric S. Thompson, and Tatiana Proskouriakoff, pp. 47-59. Publication 602. Carnegie Institution of Washington, Washington, D.C.
 1958 *Thomas Gage's Travels in the New World*. University of Oklahoma Press, Norman.
 1962 *A Catalog of Maya Hieroglyphs*. University of Oklahoma Press, Norman.
 1963 Pictorial Synonyms and Homonyms in the Maya Dresden Codex. *Tlalocan* 4(2):148-156. Mexico.
 1970a The Bacabs: Their Portraits and their Glyphs. In *Monographs and Papers in Maya Archaeology*, edited by William R. Bullard, pp. 469-485. Papers 61. Peabody Museum of Archaeology and Ethnology, Cambridge, Mass.
 1970b *Maya History and Religion*. Civilization of the American Indian Series 99. University of Oklahoma Press, Norman.

Thompson, J. Eric S., continued

- 1971 *Maya Hieroglyphic Writing: An Introduction*. 3rd ed. University of Oklahoma Press, Norman.
 1972 *A Commentary on the Dresden Codex: A Maya Hieroglyphic Book*. Memoirs 93. American Philosophical Society, Philadelphia.

Thomson, Charlotte

- 1975 *A Study of Olmec Art*. Ph.D. dissertation, Department of Anthropology, Harvard University, Cambridge, Mass.
 1987 *Chalcatzingo Jade and Fine Stone Objects*. In *Ancient Chalcatzingo*, edited by David C. Grove, pp. 295-304. University of Texas Press, Austin.

Thouvenot, Marc

- 1982 *Chalchihuitl: Le jade chez les Aztèques*. Mémoires de l'Institut d'Ethnologie 21. Musée de l'Homme, Paris.

Tibón, Gutierre

- 1983 *El jade de México. El mundo esotérico del "chalchihuite."* Panorama Editorial, Mexico.

Tolstoy, P.

- 1958 *Surface Survey of the Northern Valley of Mexico: The Classic and Post-Classic Periods*. *Transactions of the American Philosophical Society* 48(5):1-101.

Townsend, Richard F.

- 1991 *The Mount Tlaloc Project*. In *To Change Place: Aztec Ceremonial Landscapes*, edited by David Carrasco, pp. 26-30. University Press of Colorado, Niwot.
 1999 *The Aztecs*. Thames and Hudson, London.

Tozzer, Alfred M.

- 1907 *A Comparative Study of the Mayas and the Lacandones*. Archaeological Institute of America; Macmillan, New York.
 1930 *Maya and Toltec Figures at Chichen Itza*. In *Proceedings of the International Congress of Americanists (23rd session, New York, 1928)*, pp. 155-164. Science Printing Company, Lancaster.
 1941 *Landa's Relación de las Cosas de Yucatan: A Translation*. Edited with notes by Alfred M. Tozzer. Papers 18. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.
 1957 *Chichen Itza and its Cenote of Sacrifice: A Comparative Study of Contemporaneous Maya and Toltec*. Memoirs 11-12. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Trenary, Carlos

- 1987-1988 *Universal Meteor Metaphors and their Occurrence in Mesoamerican Astronomy*. *Archaeoastronomy* 10:99-116.

Trigger, Bruce G.

- 1990 *Monumental Architecture: A Thermodynamic Explanation of Symbolic Behavior*. *World Archaeology* 22:119-132.

Trik, Aubrey S.

- 1963 *The Splendid Tomb of Temple I at Tikal, Guatemala*. *Expedition* 6(1):2-18. Philadelphia.

Trik, Helen, and Michael E. Kampen

- 1983 *The Graffiti of Tikal*. Tikal Report 31. Monograph 57. University Museum, University of Pennsylvania, Philadelphia.

Turner, Andrew D.

- 2017 *Ixtapan del Oro Monument 1 and the Transition from War Serpent to Xiuhcoatl in Late Classic Mesoamerica*. *Mexicon* 39(3):55-64.

Turner, Victor

1969 *The Ritual Process: Structure and Anti-Structure*. Cornell University Press, Ithaca.

Ulrich, E. Matthew, and Rosemary Dixon de Ulrich

1976 *Diccionario maya mopan-español, español-maya mopan*. Instituto Lingüístico de Verano, Guatemala

Umberger, Emily Good

1981 *Aztec Sculptures, Hieroglyphs, and History*. Ph.D. dissertation, Department of Art History, Columbia University, New York.

1987 Antiques, Revivals, and References to the Past in Aztec Art. *Res: Anthropology and Aesthetics* 13:62-105.

Universidad Francisco Marroquín

2007 *El lienzo de la Conquista: Quauhquechollan*. Universidad Francisco Marroquín, Guatemala.

Urcid, Javier

1995 La conquista del Señor 1 Muerte: inscripción zapoteca en un cilindrico cerámico. Manuscript.

2011 The Written Surface as a Cultural Mode: A Comparative Perspective of Scribal Traditions from Southwestern Mesoamerica. In *Their Way of Writing: Scripts, Signs, and Pictographies in Pre-Columbian America*, edited by Elizabeth H. Boone and Gary Urton, pp. 111-148. Dumbarton Oaks, Washington, D.C.

Valdés, Juan Antonio

1987 Los mascarones preclásicos de Uaxactún: el caso del Grupo H. In *Primer Simposio Mundial sobre Epigrafía Maya*, pp. 165-181. Asociación Tikal, Guatemala.

Valenzuela, Juan

1945 La segunda temporada de exploraciones en la region de las Tuxtlas, estado de Veracruz. *Anales* 1:81-105. Instituto Nacional de Antropología e Historia, Mexico.

Valladares, León A.

1957 *El hombre y el maíz. Etnografía y etnopsicología de Colotenango*. Universidad de San Carlos de Guatemala, Guatemala.

van Gennep, Arnold

1960 *The Rites of Passage*. Monika B. Vizedom and Gabrielle L. Caffee, trans. Routledge and Kegan Paul, London.

van Zantwijk, Rudolf A. M.

1967 *Servants of the Saints: The Social and Cultural Identity of a Tarascan Community in Mexico*. Van Gorcum, Assen.

Velázquez, Primo Feliciano

1945 *Códice Chimalpopoca: Anales de Cuauhtitlan y Leyenda de los soles*. Universidad Nacional Autónoma de México, Mexico.

Vidarte de Linares, Juan

1968 Teotihuacan, la ciudad del quinto sol. *Cuadernos Americanos* 158:133-145.

Viel, René, and Charles D. Cheek

1983 Sepulturas. In *Introducción a la arqueología de Copán, Honduras 1*, pp. 551-628. Instituto Hondureño de Antropología e Historia, Tegucigalpa.

Villacorta C., J. Antonio, and Carlos A. Villacorta

1976 *Códices mayas. Reproducidos y desarrollados*. 2nd ed. Tipografía Nacional, Guatemala.

Villagra Caletí, Agustín

- 1954 Trabajos realizados en Teotihuacán: 1952. *Anales* 4, Part 1(34):69-78. Instituto Nacional de Antropología e Historia, Mexico.
- 1971 Mural Painting in Central Mexico. In *Archaeology of Northern Mesoamerica*, edited by Gordon F. Ekholm and Ignacio Bernal, pp. 135-156. Handbook of Middle American Indians 10. University of Texas Press, Austin.

Villa Rojas, Alfonso

- 1945 *The Maya of East Central Quintana Roo*. Publication 559. Carnegie Institution of Washington, Washington, D.C.

Villela, Khris

- 1989 Canoes and Quatrefoils: The Tonsured Maize God and the Paddlers. Manuscript.

Vivó Escoto, Jorge

- 1964 Weather and Climate of Mexico and Central America. In *Natural Environment and Early Cultures*, edited by Robert C. West and Robert Wauchope, pp. 187-215. Handbook of the Middle American Indians 1. University of Texas Press, Austin.

Vogt, Evon Z.

- 1969 *Zinacantan: A Maya Community in the Highlands of Chiapas*. Harvard University Press, Cambridge, Mass.
- 1976 *Tortillas for the Gods: A Symbolic Analysis of Zinacanteco Rituals*. Harvard University Press, Cambridge, Mass.

von Euw, Eric

- 1977 *Corpus of Maya Hieroglyphic Inscriptions, Volume 4, Part 1: Itzimte, Pixoy, Tzum*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.
- 1978 *Corpus of Maya Hieroglyphic Inscriptions, Volume 5, Part 1: Xultun*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

von Winning, Hasso

- 1947 *Representations of Temple Buildings as Decorative Patterns on Teotihuacan Pottery and Figurines*. Notes on Middle American Archaeology and Ethnology 83. Carnegie Institution of Washington, Washington, D.C.
- 1948 The Teotihuacan Owl-and-Weapon Symbol and Its Association with 'Serpent Head X' at Kaminaljuyu. *American Antiquity* 14(2):120-132.
- 1968 *Pre-Columbian Art of Mexico and Central America*. Harry N. Abrams, New York.
- 1971 Relief-decorated Pottery from Central Veracruz, Mexico: Addenda. *Ethnos* 36:38-51.
- 1977 The Old Fire God and His Symbolism at Teotihuacan. *Indiana* 4:7-61.
- 1979 The "Binding of the Years" and the "New Fire" at Teotihuacan. *Indiana* 5:15-32.
- 1985 *Two Maya Monuments in Yucatan: The Palace of the Stuccoes at Acanceh and the Temple of the Owls at Chichén Itzá*. Southwest Museum, Los Angeles.
- 1987 *La iconografía de Teotihuacan. Los dioses y los signos*. 2 vols. Universidad Nacional Autónoma de México, Mexico.
- 1990 Altmexikanische Pyritspiegel mit reliefierter Rückseite. In *Circumpacifica: Festschrift für Thomas S. Barthel*, edited by Bruno Illius and Matthias Laubscher, pp. 455-481. Peter Lang, Frankfurt.

von Winning, Hasso, and Dieter Dutting

- 1987 Supplementary Information on the Polychrome Vessel with Four Straight Walls, Illustrated on the Cover of *Mexicon* VII: 6, December 1985. *Mexicon* 9(2):32-34.

von Winning, Hasso, and Nelly Gutiérrez Solana

- 1993 La iconografía de la cerámica de Río Blanco, Veracruz. Manuscript.
- 1996 *La iconografía de la cerámica de Río Blanco, Veracruz*. Universidad Nacional Autónoma de México, Mexico.

von Winning, Hasso, and Alfred Stendahl

1968 *Pre-Columbian Art of Mexico and Central America*. Harry N. Abrams, New York.

Voth, Henry R.

1901 The Oraibi Powamu Ceremony. *Anthropological Series* 3(2):61-158. Publication 61. Field Columbian Museum, Chicago.

1903 The Oraibi Summer Snake Ceremony. *Anthropological Series* 3(4):262-358. Publication 83. Field Columbian Museum, Chicago.

1905 *The Traditions of the Hopi*. *Anthropological Series* 8. Publication 96. Field Columbian Museum, Chicago.

Wagley, Charles W.

1949 *The Social and Religious Life of a Guatemalan Village*. Memoirs 71. American Anthropological Association, Menasha.

Wagner, Elizabeth

2001 Jade: The Green Gold of the Maya. In *Maya: Divine Kings of the Rain Forest*, edited by Nikolai Grube, pp. 66-69. Könemann, Cologne.

Warren, Kay B.

1978 *The Symbolism of Subordination: Indian Identity in a Guatemalan Town*. University of Texas Press, Austin.

Watanabe, John M.

1989 Elusive Essences: Souls and Social Identity in Two Highland Maya Communities. In *Ethnographic Encounters in Southern Mesoamerica: Essays in Honor of Evon Zartman Vogt, Jr.*, edited by Victoria R. Bricker and Gary H. Gossen, pp. 263-274. Institute for Mesoamerican Studies, State University of New York, Albany.

Wauchope, Robert

1938 *Modern Maya Houses: A Study of Their Archaeological Significance*. Publication 502. Carnegie Institution of Washington, Washington, D.C.

Webster, David

1979 *Cuca, Chacchob, Dzonot Ake: Three Walled Sites of the Northern Maya Lowlands*. Occasional Papers in Anthropology 11. Department of Anthropology, Pennsylvania State University, University Park.

Webster, David, ed.

1989 *The House of the Bacabs, Copan, Honduras*. Studies in Pre-Columbian Art and Archaeology 29. Dumbarton Oaks, Washington, D.C.

Webster, David, Barbara Fash, Randolph Widmer, and Scott Zeleznik

1998 The Skyband Group: Investigation of a Classic Maya Elite Residential Complex at Copan Honduras. *Journal of Field Archaeology* 25(3):319-343.

Weigand, Phil C.

1997 La turquesa. *Arqueología Mexicana* 5(27):26-33.

Weigand, Phil C., Garman Harbottle, and Edward V. Sayre

1977 Turquoise Sources and Source Analysis: Mesoamerica and the Southwestern U.S.A. In *Exchange Systems in Prehistory*, edited by Timothy K. Earle and Jonathon E. Ericson, pp. 15-34. Academic Press, New York.

Wesche, Alice

1967 Sabichil Tets Vara (Maya New Year Rites). *El Palacio* 74(4):5-16. Santa Fe.

Westheim, Paul

1957 *Ideas fundamentales del arte prehispánico en México*. Fondo de Cultura Económica, Mexico.

1965 *The Art of Ancient Mexico*. Doubleday, Garden City.

Westheim, Paul, Alberto Ruz, Pedro Armillas, Ricardo de Robina, and Alfonso Caso

1969 *Cuarenta siglos de plástica mexicana*. Editorial Herrero, Mexico.

Wheeler, Richard P.

1980 Stone Artifacts and Minerals. In *Long House, Mesa Verde National Park, Colorado*, by George Cattanach, Jr., with contributions by Richard P. Wheeler, Carolyn M. Osborne, Charmion R. McKusick, and Paul S. Martin, pp. 243-306. National Park Service, U.S. Department of the Interior, Washington, D.C.

White, Leslie A.

1942 *The Pueblo of Santa Ana, New Mexico*. Memoirs 60. American Anthropological Association, Menasha.

1943 *New Material from Acoma*. Bulletin 136. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

1962 *The Pueblo of Sia, New Mexico*. Bulletin 184. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Whittaker, Gordon

1986 The Mexican Names of Three Venus Gods in the Dresden Codex. *Mexicon* 8(3):56-60.

Wilkerson, S. Jeffrey K.

1985 The Usumacinta River: Troubles on a Wild Frontier. *National Geographic* 168(4):514-543.

Wiley, Gordon R.

1978 Artifacts. In *Excavations at Seibal, Department of Peten, Guatemala*, edited by Gordon R. Wiley, pp. 1-189. Memoirs 14(1). Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Williams García, Roberto

1972 *Mitos tepehuas*. Secretaría de Educación Pública, Mexico.

Williamson, Richard

1996 Excavations, Interpretations, and Implications of the Earliest Structures Beneath Structure 10L-26 at Copan, Honduras. In *Eighth Palenque Round Table, 1993*, edited by Martha J. Macri and Jan McHargue, pp. 169-175. Pre-Columbian Art Research Institute, San Francisco.

Wilson, Richard

1990 Mountain Spirits and Maize: Catholic Conversion and Renovation of Traditions among the Q'eqchi of Guatemala. Ph.D. dissertation, London School of Economics, University of London.

Winfield Capitaine, Fernando

1988 *La Estela 1 de La Mojarra, Veracruz, México*. Research Reports on Ancient Maya Writing 16. Center for Maya Research, Washington, D.C.

Winter, Marcus

1974 Residential Patterns at Monte Albán, Oaxaca, Mexico. *Science* 186(4168):981-987.

1998 Monte Albán and Teotihuacan. In *Rutas de intercambio en Mesoamérica*, edited by Evelyn C. Rattray, pp. 153-184. Universidad Nacional Autónoma de México, Mexico.

Winters, Howard D.

1955 Excavation of a Colonnaded Hall at Mayapan. *Current Reports* 1(31):381-396. Carnegie Institution of Washington, Cambridge, Mass.

Wisdom, Charles

1940 *The Chorti Indians of Guatemala*. University of Chicago, Chicago.

Woodbury, Richard B.

1954 *Prehistoric Stone Implements of Northeastern Arizona*. Papers 34. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass.

Woodbury, Richard B., and Aubrey S. Trik

1953 *The Ruins of Zaculeu, Guatemala*. 2 vols. United Fruit Company; William Byrd Press, Richmond, Virginia.

Wren, Linnea H., and Peter Schmidt

1991 Elite Interaction during the Terminal Classic Period: New Evidence from Chichen Itza. In *Classic Maya Political History: Hieroglyphic and Archaeological Evidence*, edited by T. Patrick Culbert, pp. 199-225. Cambridge University Press, Cambridge.

Wren, Linnea, Peter Schmidt, and Ruth Krochock

1989 The Great Ball Court Stone of Chichén Itzá. *Research Reports on Ancient Maya Writing* 25:23-27. Center for Maya Research, Washington, D.C.

Wright, Barton

1973 *Katsinas: A Hopi Artist's Documentary*. Northland Publishing, Flagstaff.

1994 *Clowns of the Hopi: Tradition Keepers and Delight Makers*. Northland Publishing, Flagstaff.

Wyman, Leland C.

1975 *The Mountainway of the Navajo*. University of Arizona Press, Tuscon.

Yadeun, Juan

1992a *Toniná*. Citibank, Mexico.

1992b *Toniná. El laberinto del inframundo*. Gobierno del Estado de Chiapas, Tuxtla Gutiérrez.

Yoneda, Keiko

1981 *Los mapas de Cuauhtinchan y la historia cartográfica prehispánica*. Fondo de Cultura Económica, Mexico.

Young-Sánchez, Margaret

1990 Veneration of the Dead: Religious Ritual on a Pre-Columbian Mirror-Back. *Bulletin of the Cleveland Museum of Art* 77(9):326-351.

Zender, Marc

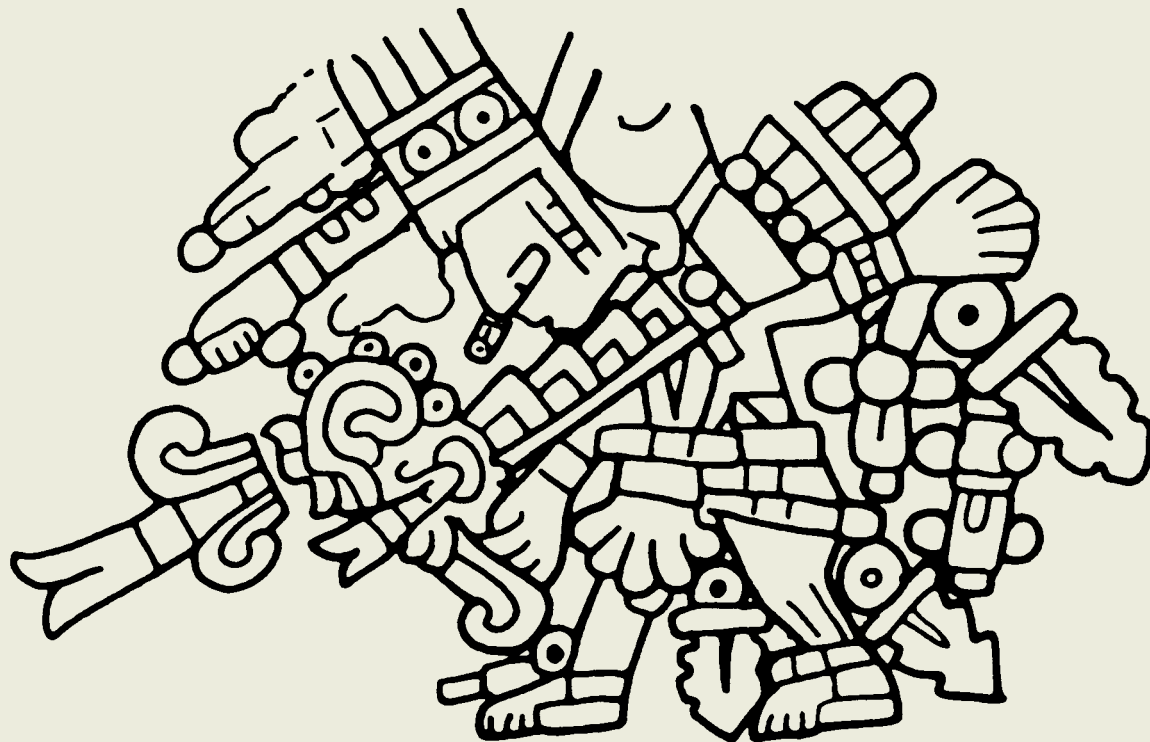
2014 On the Reading of Three Classic Maya Portrait Glyphs. *The PARI Journal* 15(2):1-14.

Zimmermann, Gunter

1956 *Die Hieroglyphen der Maya-Handschriften*. Cram, de Gruyter, Hamburg.

Zingg, Robert M.

1938 *The Huichols: Primitive Artists*. G. E. Stechert, New York.



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