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Cultures at the Crossroads: Art, Religion, and Interregional Interaction in Central Mexico, AD 600-900

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Anthropology

by

Andrew David Turner

March 2016

Thesis Committee:
Dr. Karl A. Taube, Chairperson
Dr. Wendy Ashmore
Dr. John M.D. Pohl
Dr. Thomas C. Patterson

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The Dissertation of Andrew David Turner is approved:

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Committee Chairperson

University of California, Riverside

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ABSTRACT OF THE DISSERTATION

Cultures at the Crossroads: Art, Religion, and Interregional Interaction
in Central Mexico, AD 600-900

by

Andrew Turner

Doctor of Philosophy, Graduate Program in Anthropology
University of California, Riverside, March 2016
Dr. Karl A. Taube, Chairperson

Following the collapse of the metropolis of Teotihuacan, several competing centers emerged in Central Mexico during the Late Classic period (AD 600-900), including Cacaxtla, Xochicalco, and Teotenango. Monumental artwork produced at these sites appears to proclaim affiliation with distant regions of Mesoamerica, including the Gulf Coast, Oaxaca, and the Maya Lowlands. During the relatively brief florescence of these cities, they combined imagery and religious symbolism in novel ways that set the stage for patterns of interaction and modes of visual representation of later epochs. However, neither the nature nor the extent of interaction between these polities and other regions has been thoroughly investigated. This study examines traits in the art, iconography, religious symbolism, and ritual practices shared between Cacaxtla, Xochicalco, and Teotenango and other sites and

regions with the aim of clarifying how and why these polities actively expressed multi-ethnic, or perhaps supra-ethnic identities, and it explores the complexity, nature, and extent of interregional interaction in Late Classic Mesoamerica. Chapter 2 of the dissertation provides a categorical examination of deities venerated in Late Classic Central Mexico. The third chapter explores the spread of the Flower World complex in Late Classic Mesoamerica, a suite of beliefs pertaining to aesthetics, the afterlife, and the glorification of warfare. Chapter 4 considers ritual practices shared throughout Late Classic Mesoamerica, including those pertaining to evoking water, the ballgame, human sacrifice, and creating fire. The fifth chapter traces the spread of shared art styles and iconographic themes in order to clarify patterns of cross-polity interaction. I argue that the rapid spread of artistic traits, religious beliefs, and ritual practices was due in large part to mercantile activity and overlapping networks of elites who used access to foreign powers and exotic goods to negotiate and maintain power.

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Chapter 1: Introduction

In the wake of Teotihuacan's decline, several competing centers emerged in Central Mexico, among them, Cacaxtla, in the state of Tlaxcala, Xochicalco, in Morelos, and Teotenango, in Estado de México. At its peak, Teotihuacan was Mesoamerica's largest and most powerful city, with an economic and political reach that extended across Mesoamerica. The construction of Cacaxtla, Xochicalco, and Teotenango on fortified hilltops suggests that Central Mexico's dynamic and pivotal Late Classic period (AD 600 to 900, also known as the Epiclassic period) was marked by intense rivalry, perhaps over control of Teotihuacan's former exchange network. Monumental artwork at these sites, in the form of mural painting, stone sculpture, and architecture, appears to proclaim affiliation with far-off regions of Mesoamerica, including the Gulf Coast, Oaxaca, and the Maya Lowlands. During the relatively brief florescence of these cities, they combined imagery and religious symbolism in novel ways that set the stage for patterns of interaction and modes of visual representation of later epochs. However, neither the nature nor the extent of interaction between these polities and other regions is clear. This study investigates traits in the art, iconography, religious symbolism, and ritual practices shared between Cacaxtla, Xochicalco, and Teotenango and other sites and regions with the aim of clarifying how and why these polities actively expressed multi-ethnic, or perhaps supra-ethnic identities, and it explores the complexity, nature, and extent of interregional interaction in Late Classic Mesoamerica.

Late Classic vs. Epiclassic Chronologies

I refer to the time period under investigation, which falls between the decline of Teotihuacan at the end of the Early Classic period, and the hegemonic prominence of the

Toltecs in Central Mexico and the Maya Lowlands, which serves as the basis for the designation of the Early Postclassic period, as the Late Classic period. Terminal Classic, Epiclassic, Late Classic, Middle Classic Second Phase, Proto-Post-Classic, and Phase One Second Intermediate period are all terms that have been applied to the period in question (Berlo 1989a; Diehl and Berlo 1989:3-4). Most contemporary scholars use the term "Epiclassic," coined by Wigberto Jiménez Moreno (1959, 1966), although I find it problematic for several reasons. As Janet Catherine Berlo (1989a:209) points out, Jiménez Moreno, like most scholars of his time, was working under the misconception that Teotihuacan was a relatively peaceful state whose collapse gave way to widespread militarism during the "Epiclassic." Few contemporary scholars would maintain that militarism was not an important component of Early Classic period politics in Central Mexico or the Maya Lowlands. Diehl and Berlo (1989:3) observe that "Epiclassic" implies that it was a transitional period between theocratic forms of rulership during the Early Classic and secular militarized Postclassic societies, although this dichotomy is also no longer tenable. Jiménez Moreno (1966:49) acknowledges that Epiclassic is roughly equivalent to the Late Classic period.

I favor "Late Classic," because it is an inclusive chronological distinction for both Central Mexico and the Maya region and it acknowledges the impact of Teotihuacan's decline and the subsequent restructuring of political and economic systems as a multi-regional phenomenon. Scholars have debated the nature of Teotihuacan involvement in the Maya Lowlands during the Early Classic period (papers in Braswell 2003). Epigraphic work by David Stuart (2000) provides strong evidence that Teotihuacan was directly embedded in politics and dynastic successions at some Maya sites, including Tikal beginning in AD 378. Teotihuacan involvement is also apparent in other regions, including West Mexico, Oaxaca,

Guerrero, the Gulf Coast, and southern Chiapas and Guatemala. The precise date of Teotihuacan's collapse is not conclusive. Linda Manzanilla (2003) dates the collapse of Teotihuacan to around AD 550, whereas George Cowgill (1997) places the destruction of several of the site's major monuments around AD 650. The collapse of Teotihuacan was accompanied by the decline of other major centers across Mesoamerica (Diehl and Berlo 1989:3). A date of AD 600 for the Early to Late Classic transition corresponds roughly with the hiatus of Tikal, one of the major Early Classic Maya city-states, and, as Patricia McAnany (2010, 2013) argues, a shift toward a more mercantile-based economy from a primarily tribute-based model in the Maya Lowlands. The abandonment and destruction of major Late Classic Maya sites between AD 800 to 900, attributable to a number of causes, including intermittent environmental stresses that effected Mesoamerica as a whole, corresponds to the abandonment and destruction of most of the non-Maya Late Classic polities discussed in this study. Furthermore, as this study argues, Late Classic polities of both Central Mexico and the Maya Lowlands (as well as other regions) were economically and politically intermeshed, reinforcing the need for a chronology suitable for Central Mexico, the Maya Lowlands, and adjoining regions during this period.

Previous Studies

Teotihuacan's decline led to several key social, political, and economic changes that characterize the Late Classic period and impacted Mesoamerica as a whole. As many as 32,500 people inhabited Coyotlatelco-period Teotihuacan (Diehl 1989:12), which lasted from approximately AD 650 to 950 (Manzanilla, et al. 1996:260). Although there is evidence that much of the Late Classic population may have immigrated from elsewhere (Beekman and Christensen 2003:144-145; Cowgill 2013; Mastache and Cobean 1989:55-56), the large population size suggests that Teotihuacan still maintained some of its political and

economic power in the Basin of Mexico, but it could not control populations and resources as it had before and sought smaller-scale social, economic, and political arrangements (Diehl 1989:16). Cacaxtla, Xochicalco, and Teotenango rose to prominence in Central Mexico, along with El Tajín on the Gulf Coast, although it remains unclear whether these polities contributed to the decline of Teotihuacan or quickly rose to power in the wake of its collapse. In the Maya Lowlands, sites such as Uxmal, Kabah, Sayil, and Palenque, emerged in areas that had been politically marginal (Diehl and Berlo 1989:3). Investigations have demonstrated that Tula Chico was more prominent during the Late Classic than previously recognized (Mastache and Cobean 1989) and shares several traits with Early Postclassic Tula Grande (Mastache, et al. 2009:316-322). The massive site of Cantona, in northeastern Puebla, likely served as a major trade hub linking the Gulf Coast to the Central Mexico, Guerrero, and Oaxaca (García Cook and Merino Carrión 1996). Sites such as Mitla, Yagul, and Zaachila in the Valley of Oaxaca (Winter 1989:123), and Ñuiñe centers of the Mixteca Baja (Paddock 1983) arose during this time as well.

The artwork of Late Classic Central Mexico has been described as "eclectic" (Cohodas 1989; Foncerrada de Molina 1980:184; Hirth 2000:246; Kubler 1980; McVicker 1985; Nagao 1989), and authors have noted stylistic and iconographic affinities with traditions of the Gulf Coast, Oaxaca, Teotihuacan, and especially the Lowland Maya (e.g. Baird 1989; Helmke and Nielsen 2013b; Koontz 2009a; Nicholson 1971a:104; Quirarte 1983; Robertson 1985; Romero Quiroz 1963:92). However, several authors contend that the apparent eclecticism in the art of Late Classic Central Mexico was not haphazardly created, but rather was deliberately employed to construct coherent, and intelligible ideological, economic, and political messages (Baird 1989:118; Brittenham 2008, 2009; Nagao 1989). In general, the authors point to the implementation of a discourse that

simultaneously evokes Teotihuacan's past grandeur and the desire to create ideological distance from the fallen giant by looking beyond Central Mexico. Recent dissertations by Debra Nagao (2014) and Juliette Testard (2014) explore artistic discourse between Cacaxtla and Xochicalco, and Cacaxtla, Xochicalco, Cantona, and Cholula, respectively.

Diehl and Berlo (1989:3) describe important characteristics of the Late Classic which include 1) the emergence of new political centers, 2) population movements, 3) new commercial arrangements, and 4) innovations in religion and architecture. López Austin and López Luján (2000:22) add that salient features found throughout Mesoamerica after the decline of Teotihuacan include: "political instability, social mobility, the emergence of new multi-ethnic centers of power, the restructuring of mercantile networks, the intensification of trade, the change of spheres of political and cultural interaction, and a distinct relationship between religion and politics." Kenneth Hirth (1989:69) sees an increase in state-sponsored militarism in Late Classic Central Mexico due to the emergence of new state systems and competition for scarce resources, and argues that Late Classic political systems grew through military conquest and tribute extraction from conquered provinces. Sites such as Xochicalco, Cacaxtla, and Teotenango are fortified and built on hilltops, suggesting that warfare and defense were major concerns in Late Classic Central Mexico. Joyce Marcus (1989) notes that city-states often form after the dissolution of a centralized state, and such city-states are often fiercely competitive with one another. Malcolm Webb (1978) points to increased competition among states for exotic luxury items as a cause of political competition during the Late Classic period. The balkanization of Central Mexico during the Late Classic may be a direct result of competition for the control of branches of Teotihuacan's vast trade network that extended to West Mexico, Guerrero, Oaxaca, the Maya region, and the Gulf Coast.

Widespread traits that appeared in Central Mexico and affected Mesoamerica as a whole during the Late Classic shaped political and economic developments during the Postclassic period. Mid twentieth-century scholarship tended to favor explanations that placed culpability for the radical transformations, spread of new art styles, and eventual collapse of the Classic Maya on waves of invaders, such as Eric Thompson's (1970) Mexicanized Putun (Chontal) Maya. Migration theories fell out of fashion with the rise of the New Archaeology (Smith 2007:591), which stressed environmental factors as catalysts of culture change. Current scholarship places greater emphasis on economic factors that account for the social and political transformations and widespread distribution of art styles and objects in Late Classic Mesoamerica.

Two similar models have recently been advanced by López Austin and López Luján (2000) and Ringle, Gallareta Negrón, and Bey (1998) as means of explaining the nature of cross-cultural interaction in Late Classic and Early Postclassic Mesoamerica as a religious, economic, and militaristic phenomenon. Ringle, Gallareta Negrón, and Bey (1998:184-185) suggest that the mechanism for the spread of common characteristics across cultures during the Late Classic was "a regional cult focused upon Quetzalcoatl/Kukulcan in his aspects as Feathered Serpent, as Venus, as wind god, and as a patron of merchants and leaders." In López Austin and López Luján "Zuyuan" model, so named after Zuyua, an elite language exclusive to Yucatec elites around the time of contact, a religious, economic, and political ideology was spread through aggressive expansionist campaigns as "an enterprise of enforced harmony" (López Austin and López Luján 2000:33). The Zuyuan system was devised as a means of creating a supra-ethnic elite identity after the population movements resulting from the fall of Teotihuacan. Cacaxtla and Xochicalco, as multi-ethnic, mercantile cities, may have been originators of Zuyuan ideology (López Austin and López Luján

2000:69). Routes used for commerce were also used to spread religious ideology across Mesoamerica (López Austin and López Luján 2000:68). For Ringle, Gallareta Negrón , and Bey, material correlates of a pan-Mesoamerican cult include ballgame architecture and paraphernalia, jade plaques, specialized ceramics, and obsidian. While López Austin and López Luján and Ringle, Gallareta Negrón, and Bey recognize the importance of shared religious and ideological beliefs, and the widespread mercantilism and militarism prevalent in the Late Classic, both models attribute the appearance of Quetzalcoatl as an anthropomorphic being and pan-regional deity to Late Classic Central Mexico and suggest that Quetzalcoatl veneration was a primary unifying factor in post-Teotihuacan Mesoamerica.

Epigraphy and Language

The writing system shared by Cacaxtla, Xochicalco, and Teotenango is perhaps the most distinct trait linking the three sites. Although a unique system, the script used in Central Mexico during the Late Classic is clearly derived from earlier writing of Teotihuacan and also shares many signs and conventions with Zapotec script. In addition to Cacaxtla, Xochicalco, and Teotenango, the Late Classic script was used on monuments at coeval sites including Tula, Maltrata (Veracruz), Chilpancingo and Texmelincan (Guerrero), and Xico, Cerro de la Estrella and Mixcoac (Valley of Mexico), as well as on some examples of unknown provenance (Helmke and Nielsen 2011:3). Other similar scripts include that of Cotzumalhuapa of southern Guatemala, and that of the Ñuiñe culture of the Mixteca Baja of Oaxaca and Puebla. Helmke and Nielsen (2011:1) estimate that the writing system consists of around 150 different signs. Of those signs, 20 are calendrical day signs, although several have yet to be firmly identified. Day signs are accompanied by numerical coefficients ranging from 1 to 13 in bar-dot notation, with a single dot carrying a value of 1, and a bar

representing the number 5. Known as the *tonalpohualli* for Nahua speakers and the *tzolk'in* for the Maya, a 260-day ceremonial calendar, also in place in Late Classic Central Mexico, is composed of twenty weeks, or *trecenas*, consisting of thirteen days each. Days cycle through permutations of thirteen numerical coefficients and the twenty day signs, and a specific number-day sign combination does not reappear for 260 days, when the calendar resets.

In Postclassic calendrical systems, a 365-day year was named after the day on which it began. One of four day signs, known as yearbearers, carried the name of the year. Reed, Flint, House, and Rabbit were the four yearbearers in the Postclassic calendrical systems of Central Mexico and Oaxaca. The same named year, denoted by a numerical coefficient and yearbearer, occurs only every 52 years. The typical method of denoting a yearbearer in the Late Classic Central Mexican system and the later Toltec system was through the attachment of a looped cord to a day sign's cartouche (Caso 1967:179-182; Nicholson 1966), which is a tumpline, relating the year to a burden (Nicholson 1966). Several examples of looped-cord yearbearers are known from Xochicalco and Teotenango. The same day sign and numerical coefficient for a yearbearer does not reappear for 52 years. Efforts to correlate the Late Classic calendrical system of Central Mexico to the Julian calendar have met with difficulties, as there is no known way to securely anchor the "floating" Classic period Central Mexican calendar to a fixed calendrical date.

Among Postclassic Nahua and Mixtec groups, people were typically named after the day on which they were born. Monument 3 of San José Mogote, Oaxaca, depicts a slain figure next to a numbered day sign, suggesting that it represents the name of the individual, and demonstrating that the 260-day calendar was already established by 500 BC (Marcus 1976:44-45). There are no known numerical coefficients over 13 in Late Classic Central Mexico, suggesting that the known dates belong to the 260-day calendar (Helmke and

Nielsen 2011:3). The practice of naming individuals, both human and supernatural, after dates in the 260-day calendar was clearly present in Late Classic highland Mexico, although it is often difficult to discern the name of a person or deity from a calendrical event. To date, relatively few studies have dealt with the epigraphy of Teotihuacan (e.g. Angulo 1972; Berlo 1989b; Browder 2005; Cabrera Castro 1996; Caso 1937, 1967; Cowgill 1992; Kubler 1967; Langley 1986, 1991, 1992, 1993, 2002; Millon 1973; C. Millon 1988b; Nielsen and Helmke 2008; Taube 2000c, 2011a; von Winning 1948, 1987), and recognition of Teotihuacan script as true writing, rather than as an inventory of emblems that could be clustered to convey approximate but imprecise meaning, has occurred only recently (Taube 2000c). Fewer studies have attempted in-depth description or interpretation of the writing system of Late Classic Central Mexico (e.g. Baus de Czitrom 1986; Berlo 1989b; Caso 1967; Helmke and Nielsen 2011; Taube 2000c, 2011a; Urcid 2011a).

While some authors believe that Nahuatl was spoken at Teotihuacan (e.g. Angulo 1972:45; Dakin and Wichmann 2000), others argue that the arrival of Nahuatl occurred at or near its collapse (e.g. Beekman and Christensen 2003; Berlo 1989b:33; Cowgill 1992:241-242; 2013). Detailed glottochronologies and continued epigraphic research may elucidate the time of arrival of Nahuatl into Central Mexico. Several authors have suggested or implied that Nahuatl was spoken at Cacaxtla or Xochicalco (e.g. Baddeley 1983:63; Berlo 1989b:33; Graulich 2001; Helmke and Nielsen 2011; Hirth 1989:73-75), and have proposed translations for glyphic elements or compounds.

The use of a common script may not imply that the same language was spoken at Late Classic polities in Central Mexico. “Open” writing systems have fluid boundaries and are used by diverse cultures and languages, whereas “closed” systems are used by a particular culture, language, or group of languages (Houston 2004:275). The use of a

common or similar writing system in Central Mexico during the Late Classic by several distinct cultures suggests that it was an "open" system. As a multi-ethnic center, Teotihuacan likely introduced "open" writing systems in Mesoamerica (Houston, et al. 2003:457). Teotihuacan writing was crafted to serve the city's polyglot population and facilitate its commercial and administrative goals while expanding into new territories. Rather than abandon the widespread script associated with Teotihuacan, Late Classic polities that developed in its wake made use of and adapted an established writing system in order to take advantage of new economic and political opportunities.

Geographical Scope of the Dissertation and Description of Sites

This study focuses primarily on three major sites, Cacaxtla, Xochicalco, and Teotenango, within Central Mexico. Central Mexico, as used in this text, encompasses the modern Mexican states of Estado de México, Distrito Federal, Morelos, Puebla, Tlaxcala, and Hidalgo (fig. 1.1). Other broader cultural regions discussed include the Gulf Coast, West Mexico, Oaxaca, Guerrero, southern coastal Guatemala, and the Maya Lowlands (fig. 1.2), which are further broken down into subregions and specific sites. I provide in-depth background on Cacaxtla, Xochicalco, and Teotenango below, and then discuss some of the major characteristics of the other regions and subregions discussed. These regional distinctions are, of course, over-simplifications of complex and fluctuating cultural territories for the purpose of presenting a more clear discussion, especially in instances in which modern political boundaries serve as proxies for ancient spatial and cultural designations.

Cacaxtla

Since the murals for which the site is famous came to the attention of researchers in 1975, Cacaxtla has been the focus of most of the scholarly attention directed toward Late

Classic Central Mexico. The site's location, in the modern state of Tlaxcala, is near what was likely an important trade route between the Gulf Coast and the Valley of Mexico. The main acropolis of Cacaxtla was built on a hill that consists primarily of artificial material accumulated over centuries of occupation (Brittenham 2015:12; López de Molina and Molina Feal 1986:33). Although only the top third of the acropolis has been excavated, there were at least eight phases of construction (Brittenham 2015:12; López de Molina and Molina Feal 1986:32-33). Toward the end of its occupation, a series of trenches, which likely served as fortification, were dug around the acropolis (Armillas 1946; López de Molina and Molina Feal 1986:19). Cacaxtla is situated between the nearby hills of Xochitécatl, Tepemberne, and Atlachino, upon which the modern town of San Miguel del Milagro is built (López de Molina and Molina Feal 1986:18). The hills were likely incorporated into a single site during the Late Classic as part of a habitation zone referred to as "Complejo Fortificado Xochitécatl-Cacaxtla-Atlachino" by Marta Foncerrada de Molina (1993:2). Estimates suggest a population of around 15,000 in the area during the Late Classic (Serra Puche and Lazcano Arce 2011:118). One season of excavation at the hilltop site of Santa Isabel Tetlatlahuca, to the east of Cacaxtla and near the town of Nativitas, yielded small mural fragments, suggesting that it had a painting tradition similar to that of Cacaxtla (Contreras Martínez 1992).

Xochitécatl had been a major ceremonial center at the end of the Formative period, between 400 BC and AD 100 (Serra Puche 2001:256; Spranz 1973:217), at which time a unique circular temple and large stone vats were constructed. The rise of Cholula, located just 15 km to the south, may have lead to the decline of the prominence of Xochitécatl toward the beginning of the Early Classic period (Brittenham 2008:9). Xochitécatl had a second major florescence between AD 650 and 850 (Serra Puche 2001:256), during

Cacaxtla's apogee, but likely had continuous occupation throughout the Early Classic. Early Classic ceramics found at Cacaxtla and Xochitécatl show affinities with Teotihuacan (Brittenham 2008:9-10; Spranz 1973:218). Areas of monumental and palatial architecture are located on hilltops in the Complejo Fortificado Xochitécatl –Cacaxtla-Atlachino, whereas areas of agriculture and habitation are placed in the lower terrain surrounding them (López de Molina and Molina Feal 1986:18). Smaller pyramidal structures have been located to the south and to the east of Cacaxtla's acropolis (López de Molina and Molina Feal 1986:19). To date, no ballcourts have been found in the area.

The 200 m long acropolis of Cacaxtla, the ritual and administrative center of the site, is aligned roughly along a north-south axis (fig. 1.3). Several structures on the acropolis are decorated with mural painting, including the Temple of Venus, the Red Temple, Structure A, and Structure B. The southeast portion of the acropolis is dominated by palatial architecture surrounding the Patio de los Altares. The Red Temple, which was in fact not a temple, but rather a passageway that connected the southern part of the acropolis to the Great Plaza (Brittenham 2008:83; 2009:142), is flanked on either side by murals, one of which depicts a figure carrying a merchant's pack who is readily identifiable as the Maya merchant god, God L (fig. 1.4; Taube 1992b:85). The Great Plaza is in the center of the acropolis and is bordered on the east and west by Structures E and D, and on the north by Structure B. The Battle Mural, consisting of two horizontal painted panels on the southern talud of Structure B, faces the Great Plaza. The porticoed Structure B is topped by a later construction, the Patio Hundido, which also covers part of Structure C and is elevated above the Great Plaza by nearly 6 meters (Brittenham 2008:65; López de Molina and Molina Feal 1986:35). Structure A, a two-chambered temple to the east of Structure B, is decorated with two figures that flank a doorway – a figure wearing a jaguar costume on the north portico (fig. 1.5a) and

another wearing a bird costume on the south portico (fig. 1.5b). The back wall of Structure A is also decorated with a long, heavily damaged mural scene. Structure C, opposite Structure A on the western side of Structure B and the Patio Hundido, may have also been a two-chambered temple (Brittenham 2008:18).

Much of the scholarship devoted to Cacaxtla has focused exclusively on its murals. The excellent preservation of the murals is due to the fact that they were buried in fine earth, which is a departure from the typical method of stone, earth, and ceramic fill (Brittenham 2009:135). Baird dates the murals between AD 655 and 835 on stylistic grounds (1989:105), although the murals were not all painted at the same time. Helmke and Nielsen (2013b) date the Battle Mural and Structure A murals to sometime after AD 700 based on iconographic comparison to motifs in the paintings found in Maya imagery. Based on reinterpretation of radiocarbon samples, Claudia Brittenham (2015:224) dates the site's murals, which were painted over several generations, to some time between AD 665 and 985. Cacaxtla was abandoned around the end of the Late Classic period (López de Molina and Molina Feal 1986:18).

The "narrative realism" of the Cacaxtla murals has no precedent in Central Mexico (Foncerrada de Molina 1980:184). The mural tradition of Teotihuacan favors abstracted or stylized representations, a lack of individualism in human characters, and apparently does not depict narrative events. The paintings of Cacaxtla share strong affinities with painting from the Maya Lowlands, located some 700 km to the southeast. The anomalous occurrence of Maya-style paintings in Central Mexico has sparked heated debate focusing on the ethnic identity of the artists, and the possible means artistic discourse between Cacaxtla and the Maya Lowlands. Several authors (e.g. Armillas 1946; Chadwick 2013; Foncerrada de Molina 1993; Jiménez Moreno 1966; Piña Chán 1998) argue that Cacaxtla was populated by the

Olmeca-Xicalanca, a group likely originating from the coastal lowlands of Tabasco and Veracruz, mentioned in ethnohistorical sources. Diego Muñoz Camargo's late sixteenth century *Historia de Tlaxcala* (1972 [1892]:19-24) attributes the construction of Cacaxtla's fortified acropolis to the Olmeca-Xicalanca. Other Colonial sources, such as the *Historia Tolteca-Chichimeca* (Liebsohn 2009:32) and the writings of Fernando Alva Ixtlilxóchitl (1952:19) also place the Olmeca-Xicalanca in the Puebla-Tlaxcala region.

Xochicalco

Xochicalco is southwest of the modern city of Cuernavaca in the state of Morelos. From the 18th through the late 19th centuries, Xochicalco was visited by several preeminent travel writers and scholars, including Eduard Seler (1991-1998:II:70-93). Formal excavations of Xochicalco began in 1910 with Leopoldo Batres' restoration of the Pyramid of the Plumed Serpents, the site's most recognizable feature (for a thorough history of modern investigations see Hirth 2000:28-47). The name Xochicalco ("Flower House") was designated by the Aztecs, who venerated the site during the Late Postclassic period (Jiménez Moreno 1959:1072; Umberger 1987a). Xochicalco is built on a series of hills including Cerro Coatzin, Loma Larga, Cerro Temascal, Cerro La Silla, Cerro La Fosa, and Cerro Xochicalco, upon which sits the civic and ceremonial core of the site (Hirth 2000:13). Small communities periodically occupied the area beginning in the Middle Formative period (Hirth 1984:580; 2000:61), but Xochicalco's major florescence and urban construction occurred during the site's Gobernador phase, which corresponds with the Late Classic, when it supported a population of roughly 10,000 to 15,000 (Hirth 2000:146-148). The city collapsed and was abandoned around AD 900.

The urban layout and chronology of Xochicalco suggests that it was constructed relatively quickly at the beginning of the Late Classic, rather than organically over a period

of time (Molina and Kowalski 1999:159). The most elaborate elite residences and ceremonial architecture are primarily clustered on the summit of Cerro Xochicalco, a three-lobed hill. Defense was clearly a concern for the builders of Xochicalco's monumental architecture, as passageways and stairs restrict movement between plazas. Additional defensive characteristics of Xochicalco include its hilltop location, concentric rings of residential terraces, and a series of dry moats and ramparts (Hirth 1995:239). The nearby communities of Tlacuatzingo and Cerro Jumil also had their own defense works, suggesting to Hirth (1989:72) that it reflects a system where individual communities maintained autonomy but were part of a mutually beneficial league under the rule of Xochicalco elite.

The Acropolis and the Plaza Ceremonial are the most prominent features of Cerro Xochicalco's artificially-leveled summit (fig. 1.6). Located on the western half of the summit, the Acropolis was likely a complex of palaces and administrative buildings (Hirth 2000:70). The Plaza Ceremonial, on the eastern half of the summit, contains some of the most important monumental structures at the site. Structure A contained the well-known stela triad (fig. 1.7), as well as the Cámara de las Ofrendas, in which César Sáenz (1962) unearthed two stone yokes and an *hacha*, objects associated with the ballgame similar to examples from the Gulf Coast, as well as figurines associated with Teotihuacan and Mezcala, Guerrero, and shells from the Pacific coast. The Pyramid of the Plumed Serpents (fig. 1.8) is in the center of the Plaza Ceremonial, and was mirrored by a largely destroyed pyramid or platform (X1-2) of roughly the same dimensions just to the north.

Structure E, built on the terrace below the Plaza Ceremonial just south of Structure A, is Xochicalco's largest pyramidal building. It likely served as the focal point of the Plaza Central, located to the south, which it overlooks. Structures D and E flank the Plaza Central, and the Stela of the Two Glyphs, a large white slab with two calendrical glyphs incised on its

surface, stood on an adoratio in the center of the plaza. The Plaza Central may have been accessible to a larger portion of the population (Hirth 1984:582). The West Ballcourt is located to the west and below the Plaza Central. Beyond the West Ballcourt, a causeway lined with twenty circular altars leads to the West Hill, also known as Cerro de la Malinche. Authors have hypothesized that the twenty altars may have served a calendrical purpose (Hirth 2000:76; Molina and Kowalski 1999:148). A sculpture of a female figure seated within a niche decorated with flowering plants and maize (fig. 1.9), now in theMuseo Cuauhnahuac in Cuernavaca, was purportedly found in Structure X10-5, a large platform mound on West Hill that may have supported several integrated structures (Hirth 2000:76).

Although Xochicalco's art reflects far-reaching influence (Litvak King 1972), the site's immediate socioeconomic sphere seems to have incorporated western Morelos and part of northern Guerrero, as suggested by the distribution of Xochicalco ceramics (Hirth 1984:585). Xochicalco procured most of its obsidian from Ucareo, Michoacan (Hirth 1989:79; Hirth, et al. 2006:124), which is farther away than Pachuca and Otumba, Teotihuacan controlled sources, leading Hirth (1989:79) to suggest that western Morelos and the Valley of Mexico were two competing political centers during the Late Classic. Furthermore, excavations have not yielded any significant traces of Coyotlatelco pottery (Cyphers 2000; Cyphers and Hirth 2000:126; Hirth 1989:78; Sugiura Yamamoto 1996:234), which is widely distributed in the Tula region, the Basin of Mexico, the Valley of Toluca, and areas in Tlaxcala, including Cacaxtla (Crider, et al. 2007:123; Mastache and Cobean 1989). As previously noted, objects recovered by Sáenz (1962) suggest trade connections with Guerrero and the Pacific Coast. Xochicalco also likely had strong commercial links with Oaxaca (Litvak King 1972; Nagao 1989:96). Hirth (2000:203-205) proposes three trade routes utilized by Xochicalco: a route through the Valley of Toluca toward the Ucareo

obsidian source, a route south through the Balsas Depression of Guerrero, and a route to the Mixteca Baja region of Puebla and Oaxaca that he believes allowed access to goods from the Gulf Coast. Despite apparent Maya influence in the art of Xochicalco, scholars note that little in terms of material remains from the Maya region has turned up at the site (Hirth 2000:202; Jordan 2008:116-118; Nagao 1989:96).

Teotenango

Teotenango is a fortified site built on Cerro Tetépetl, south of the modern city of Toluca in the state of México. Unlike Cacaxtla and Xochicalco, Teotenango was not abandoned until the arrival of the Spanish, when the population was relocated into the valley below. However, despite its proximity to major modern urban centers and lengthy occupation, relatively little is known about the site, and the only major excavations were carried out in the 1970s (Piña Chán 1972, 1973). According to historical sources, Matlatzincas invaded and occupied Teotenango in AD 1162 (Piña Chán 1975:544), and the region was conquered by the Mexica under the ruler Axayácatl in 1476 (Piña Chán 2000:41-43). Initial habitation, dated by researchers between AD 600 to 750, was localized at a spring just to the north of Cerro Tetépetl called Ojo de Agua (Piña Chán 2000:40). Ojo de Agua was a small site active during the Classic period (Vargas Pacheco 1980). Pottery assemblages from Ojo de Agua include a local variety of Teotihuacan Thin Orange (Piña Chán 1972:34). Figurines recovered are also similar to those from Teotihuacan (Velázquez V. 1975:322-324), and structures are reminiscent of Teotihuacan architecture (Reyes V. 1975:130). More recent Late Classic finds include elaborate braziers deposited in the spring, discussed further in Chapter 3. Major construction of monumental architecture at Teotenango on Cerro Tetépetl took place between AD 750 and 900, during which time the city supported a population of around 3000 (Piña Chán 2000:40).

The excavated portion of Teotenango stretches roughly east to west on the summit of Cerro Tetépetl (fig. 1.10). Walls on the slopes of the hill served for defense and restricted access. Five groupings of major structures on the hill were designated Conjuntos A through E (Reyes V. 1975:119). The basic units of spatial organization and the basis for designation of the *conjuntos* are a series of platforms and plazas. The topography of the summit slopes upward from east to west, and open spaces between structures become gradually diminished and access more restricted, suggesting that the western portion of the summit was less public and may have been an elite or administrative center. The two largest plazas are located on the lower, eastern end of the summit. Each has a large pyramid in the east end. Access between *conjuntos* is generally limited to a single staircase, restricting view and access as at Xochicalco, and adding a sense of grandeur as vistas open up as one ascends staircases. The talud-tablero architecture incorporates cornices similar to those at Xochicalco (Álvarez A. 1983:234). A ballcourt on an east-west axis lies in the center of the excavated site. The dimensions of the ballcourt are similar to the West Ballcourt at Xochicalco and Ballcourt 1 at Tula (Hirth 2000:76; Reyes V. 1975:122). A *temazcal* was discovered at the east end of the ballcourt, but it was partially buried by the court, which proves that it is an earlier construction (Reyes V. 1975:131). In addition to the ballcourt, Conjuntos A, B, C, E, and part of D were expanded during the Roxu Hupi phase (Reyes V. 1975:139).

Although the investigators date most of the sculpture and glyphic inscriptions of Teotenango to the Early Postclassic (Álvarez A. 1983:353; Piña Chán 2000:40-41), the dates need to be adjusted to the latter half of the Late Classic based on updated chronologies at Teotihuacan and other sites. Comparison between the art and writing of Teotenango and other Late Classic sites renders this observation apparent. Carved monuments from

Teotenango are similar to examples from Cacaxtla and especially Xochicalco in terms of form, style, iconographic content, and glyphic writing. Dating for the site was based on ceramic seriation and the Late Classic phase of Teotenango (named phase Tenowi Hani, or Periodo 2 Tierra) is associated with Coyotlatelco pottery (Vargas Pacheco 1975:212). Radiocarbon dating has set the dates of the introduction of Coyotlatelco pottery to between AD 600 and 650 for most sites within the Coyotlatelco ceramic sphere (see Fournier and Bolaños 2007:483-484), and it is quite probable that the dates of the Tenowi Hani phase should be readjusted to an earlier date, which would accordingly move the dates of the previous phase (Rawi Tawi, or Periodo 1 Agua) back. The introduction of Coyotlatelco pottery into other sites in the Valley of Toluca corresponds with the fall of Teotihuacan (Sugiura Yamamoto 1996), dated around AD 600 to 650. Coyotlatelco pottery continues into the Roxu Hupi phase (Periodo 3 Viento) at Teotenango, dated to the Early Postclassic period (Piña Chán 2000:40-41; Vargas Pacheco 1975:220), but these dates will also likely require adjustment.

In terms of style and content, the artwork of Teotenango is similar to that of other sites in Late Classic Central Mexico, although may not reflect as much influence from the Maya region as Cacaxtla or Xochicalco. Although no complete examples of mural painting survive at Teotenango, fragments of red, yellow, orange, green, blue, and black painted stucco were found near the Estructura de la Serpiente (Reyes V. 1975:139-140), suggesting the possible presence of a mural painting tradition. Relief-carved stone monuments show stylistic affinities with Xochicalco, and several, such as the Trapezoidal Stone (fig. 1.11a) and the Teotenango Stela (fig. 1.11b), incorporate Late Classic glyphic inscriptions.

Teotenango is situated to the east of Nevado de Toluca, the fourth highest peak in Mexico. A fragmentary monument, known as the Nevado de Toluca Stela (fig. 1.12),

purported to have been found on the peak, shows strong stylistic affinities with the art of Teotenango. The presence of the Teotenango-style monument on top of Nevado de Toluca suggests that it was considered a sacred location and perhaps a site of veneration for certain deities, as it was during the Late Postclassic period (Luna Erreguerena 2000), and it may have been politically controlled by Teotenango. Sites located to the west of Nevado de Toluca, around Valle de Bravo, including La Peña and Ixtapan del Oro, have yielded stone sculptures similar in style to Teotenango, although it is unclear whether these sites were within Teotenango's direct sphere of influence. Located near the headwaters of the Rio Lerma, the most extensive river system in Mexico, Teotenango and Valle de Bravo likely took advantage of exchange routes linking Central and West Mexico.

The discovery of ceramics associated with the Xoo phase (AD 500-800) of the Valley of Oaxaca at Calixtlahuaca suggests that the Zapotecs continued to be an economic presence in the Valley of Toluca after the fall of Teotihuacan (Smith and Lind 2005) and may have influenced or had economic or political ties with Teotenango. Of the sites considered, Xochicalco was Teotenango's closest neighbor, although the nature of the interaction between the two sites is unclear. Despite obvious similarities in the art and writing of the two sites, Coyotlatelco pottery has not turned up at Xochicalco (Hirth 1989:78; Sugiura Yamamoto 1996:234), although curiously it is present at Cacaxtla, suggesting that both Teotenango and Cacaxtla were involved in an exchange network with the Basin of Mexico from which Xochicalco was excluded. However, Tembembe Crusty Orange and Tembembe Plain were imported in Xochicalco and may be from the Valley of Toluca (Cyphers and Hirth 2000:120-121). As Hirth (2000:203) suggests, the trade route through which Xochicalco obtained obsidian from the Ucareo source in Michoacán may have passed through Valley of Toluca.

Basin of Mexico

After the collapse of Teotihuacan, sites located around Lake Texcoco in the Basin of Mexico rose in prominence. Unfortunately little is known of these sites, due to modern urban encroachment of Mexico City. Important sites in the Basin of Mexico include Azcapotzalco, located on the northwestern shore, and sites along the southeastern shore, including Cerro Portezuelo, Chalco, the island of Xico, and Cerro de la Estrella. Coyotlatelco pottery is widely distributed around the Basin of Mexico during the Late Classic period, and it may have been a major center of production (Crider 2011). Azcapotzalco, Chalco, Xico, and Cerro de la Estrella continued to be important cities through the Late Postclassic period, were subsumed under the Aztec Empire. As the site of the New Fire ceremony, Cerro de la Estrella was important in Aztec ceremonialism. During the Late Classic, exchange among these sites appears to have been limited (Crider, et al. 2007; Nichols 2015:33). As previously discussed, Teotihuacan continued to support a relatively large population, although its influence seems to have been much diminished.

Mezquital Valley

Although the Mezquital Valley, located in the modern state of Hidalgo and parts of Queretaro and Estado de México, rose to greater prominence during the Early Postclassic with the florescence of Tula, its important role during the Late Classic period is becoming more evident. Two large Classic-period sites in the Tula region, Villagran and Chingu, show strong ties to Teotihuacan (Mastache and Cobean 1989:51). Located on a hill just north of Tula Grande, the Late Classic Tula Chico is similar in layout to its Early Postclassic counterpart, and several stone panels recovered at the site bear imagery similar to that of Tula Grande (Mastache, et al. 2009). Several other Late Classic hilltop sites are located in the vicinity of Tula Chico, including Cerro Magoni, Batha, and La Mesa (Mastache and Cobean

1989; Mastache, et al. 2002). Tula Grande shows signs of Late Classic occupation as well, and for reasons unknown, Tula Chico was destroyed and abandoned by the end of the Late Classic, and was left as empty space as Tula Grande's structures were enlarged (Diehl 1983:45; Mastache, et al. 2009). Other Late Classic sites located farther from Tula in the Mezquital Valley include Chapantongo, El Aguila, San Gabriel-Vinolas, and El Xithi (Fournier and Bolaños 2007:391). Several authors (e.g. Beekman and Christensen 2011; Braniff and Hers 1998; Diehl 1983:49-50; Hers 1989; Kristan-Graham 2011; Mastache and Cobean 1989) have noted strong similarities between pottery styles, architectural features, and ritual practices of the Bajío and Chalchihuites regions of West Mexico and the Mezquital Valley, suggesting close interaction and possible Late Classic migrations.

West Mexico

The important role of sites within West Mexico in Late Classic spheres of interaction has gained more scholarly attention in recent years, although the topic remains poorly understood. The site of Ucareo, Michoacán was an important source of obsidian for Late Classic polities of Central Mexico (Healan 1997). Farther north, there were several important Late Classic sites in the Bajío region, which encompasses parts of the modern states of Michoacán, Guanajuato, Jalisco, Aguascalientes, and Queretaro, including Ranas and Toluquilla in Queretaro, and El Cóporo, Guanajuato. Plazuelas, Guanajuato has been the subject of several recent studies (e.g. Aramoni Burguete 2004, 2014; Castañeda López 2007, 2008; Castañeda López and Quiroz Rosales 2004; Juárez Cossio 1999), although nearby Zaragoza, Michoacán has received much less attention (e.g. Fernández-Villanueva Medina 2004). Sunken patios containing central altars or pyramids are a hallmark of Late Classic Bajío ceremonial architecture (Brambila and Castañeda 1993), linking sites under a common tradition. Significantly, turquoise objects have been found at Plazuelas (Castañeda

López 2007:35; 2008:44), indicating that it was an early importer of what would become a major commodity in Postclassic Mesoamerica. Located to the north in modern Zacatecas state, architectural features and ceramics of the Chalchihuites culture sites of Alta Vista and La Quemada are similar to those of the Bajío (Braniff C. 2000:39; Jiménez Betts and Darling 2000:163; Nelson 2004:69). Although it is poorly documented, some authors argue that the largest known Late Classic turquoise workshop was located in Alta Vista (Kelley 1980; Weigand and Harbottle 1993:173), which procured turquoise from as far away as the American Southwest (Weigand 1968).

Puebla-Tlaxcala

The Puebla-Tlaxcala region links the Basin of Mexico, the Gulf Coast, and Oaxaca. In addition to Cacaxtla, two other major sites, Cholula and Cantona, were located in Puebla-Tlaxcala. Cholula, Puebla, located 20 kilometers south of Cacaxtla, was a major city and possible rival of Teotihuacan during the Classic period, supporting a population of between 30,000 and 60,000 (McCafferty 1996b; Uruñuela and Plunket 2005:307). During the Late Postclassic period, Cholula was a major pilgrimage and mercantile center focused on the cult of Quetzalcoatl (Durán 1971:139; Lind 2012; Pohl 2003b; Pohl, et al. 2012:25-26; Rojas 1927). The role of Cholula during the Late Classic period is a subject of debate. Several scholars argue that Cholula was abandoned or in decline during the Late Classic period (e.g. Dumond and Muller 1972; Mountjoy 1987; Uruñuela and Plunket 2005, 2012), whereas Geoffrey McCafferty (1996a, b, 2007) sees no major disruption between the Classic and Early Postclassic periods. The *Historia Tolteca-Chichimeca* (Leibsohn 2009:32) states that the Olmeca-Xicalanca controlled Cholula, before being expelled by the Tolteca, which may account for the possible hiatus at the site. Another explanation for the possible abandonment of Cholula during the Late Classic was an eruption of Popocatepetl in which a

layer of ash covered Classic-period structures (Uruñuela and Plunket 2005:318; 2012:86). Cholulans may have relocated to nearby Cerro Zapotecas (Mountjoy 1987). Recent excavations at the massive fortified site of Cantona, in northeastern Puebla, demonstrate that it served as a major center of exchange with the Gulf Coast to the Central Mexico, Guerrero, and Oaxaca (García Cook 2004; García Cook and Merino Carrión 1996). There are at least 24 ballcourts at Cantona, the most known for any Mesoamerican site (García Cook and Merino Carrión 1998:200-203). Cantona may have supported a population as large as 70,000 to 90,000 people during the Late Classic period (García Cook 2003:339).

Oaxaca

The modern state of Oaxaca, south of Puebla, is an exceptionally diverse region. The Late Classic Ñuiñe culture, first described by John Paddock (1965; 1966:176-200), occupied the mountainous and semi-arid Mixteca Baja in northwestern Oaxaca and southeastern Puebla. The Ñuiñe have received relatively little scholarly attention, with the exception of site of Cerro de las Minas, which was excavated for several seasons (Winter 2007:18-19). Although distinct, the Ñuiñe writing system shares similarities with that of the Zapotec culture (Moser 1977; Rodríguez Cano, et al. 1996; Urcid 2001). The Late Classic period in the Valley of Oaxaca, designated as Monte Albán phase IIIB-IV by Caso and colleagues (1967), has been poorly understood and a source of much scholarly confusion (Martínez López, et al. 2000:253; Winter 1989), and has since been renamed the Xoo phase. It was long supposed that Monte Albán was in decline during the Late Classic due to the ascension of Lambityeco, although thorough revision of the ceramic chronology by Martínez López and colleagues (2000) demonstrates that both sites were contemporary and Monte Albán flourished until around AD 800. Late Classic monuments from Rio Viejo, Nopala, and other

locations along the Pacific coast resemble those of the Costa Chica of Guerrero (Urcid 1993; Urcid and Joyce 2001).

Guerrero

Relatively little work has been done in Guerrero, although its important role in Late Classic Mesoamerica is becoming more clear. The Costa Chica, which extends roughly from Acapulco to the Oaxaca border, shows strong cultural affiliations with coastal Oaxaca, as previously noted. Although it has not been excavated, several stone monuments bearing calendrical inscriptions style of Late Classic Central Mexico come from Piedra Labrada, near the modern city of Ometepec (see Gutiérrez Mendoza 2007:333-353). Pye and Gutiérrez (2007) argue that a major trade route ran through this area, connecting Central Mexico to the Pacific coast, and extending to coastal Guatemala. Several significant sites, including Soledad de Maciel, Tecpan, and Acapulco, were located on the Costa Grande, which extends from Acapulco to the western border of Guerrero (Manzanilla López 2008:110-133). The Mezcala region extends along the Rio Balsas and its tributaries through an area known as the Tierra Caliente. Long recognized as the source of distinctive greenstone sculptures dating as early as the Late Formative, the role of the region during the Late Classic is becoming clearer with the excavation of major sites like La Organera-Xochipala. Excavations by Rosa María Reyna Robles (2006:185) have demonstrated that production of Mezcala-style sculptures continued in the region to at least the Late Classic. The appearance of Maya-like traits at Late Classic sites in the Mezcala region, such as the *boveda falsa* (corbeled vault), Fine Orange pottery, and stelae and other monuments with bar-dot numeration, led Paul Schmidt Schoenberg (1977) to argue for exchange between Guerrero and the Maya region, likely via Chontal Maya. Reyna Robles (1992:25) believes that the Fine Orange is a locally made imitation. During the Late Classic, the Mezcala-style traits, including portable

sculpture, ceramics, and architecture extended into portions of Morelos and Estado de México (Reyna Robles 2006). San Miguel Ixtapan, Estado de México, a major salt-producing site located south of Valle de Bravo (Limón Boyce 2008:252), belongs to the Late Classic Mezcala tradition, and is situated at its northern border (Reyna Robles 2006). The site shares a number of characteristics with La Organera-Xochipala, including the *boveda falsa* (Reyna Robles 2006:129).

Cotzumalhuapa

The site of Cotzumalhuapa is situated in Escuintla, in the southern piedmont of Guatemala, and encompasses an area of about 10 km^2 and includes architectural clusters at El Baúl, El Castillo, and Bilbao, integrated by a series of bridges and causeways (Chinchilla Mazariegos 2012:13). The nearby site of Montana shows strong affiliation with Teotihuacan during the Early Classic period, but objects associated with Teotihuacan have not been found at Cotzumalhuapa (Chinchilla Mazariegos 2012:19). The rise of Cotzumalhuapa may have occurred in tandem with the decline of Montana (Chinchilla Mazariegos, et al. 2009). Cotzumalhuapa imported ceramics, including Plumbate and Chama pottery, from the southwestern coast, southern highlands, and Alta Verapaz regions of Guatemala (Chinchilla, et al. 2005). The art of Cotzumalhuapa has been primarily compared with that of Teotihuacan and Chichén Itzá (Parsons 1969), and the writing system, though unique, incorporates symbols found within Late Classic Central Mexican systems (Chinchilla Mazariegos 2011; Parsons 1969:144-145).

Gulf Coast

Mesoamerica's Gulf Coast, the core of which includes coastal regions of the modern states of Veracruz and Tabasco, was a dynamic and economically important region beginning during the Early Formative period with the rise of the Olmec culture. During the

Early Classic period, there is some evidence of Teotihuacan presence at Matacapan, in south-central Veracruz (e.g. Arnold and Santley 2008; Santley 1989). During the Late Classic period, El Tajín emerged as a regional power in northern Veracruz. El Tajín's monuments are decorated with elaborate relief carving and mural painting, with the latter trait shared by the site of Las Higueras located to the southeast near the coast. El Tajín has palace compounds built on hills, with pyramids and ballcourts, of which at least twenty have been identified at the site, occupying lower ground in the site's core. Like Cantona, the ballgame was of central importance at El Tajín, and stone yokes, *hachas*, and *palmas* (see Chapter 4) in the "Classic Veracruz" style, with diagnostic interlacing scrollwork (Proskouriakoff 1954), are widely distributed and resemble similar objects found in Late Classic southern Guatemala. Cerro de las Mesas was an important site in the Mixtequilla region of south-central Veracruz, and may have been overtaken by El Zapotal, a site known for producing large hollow ceramic sculptures, during the Late Classic (Stark and Heller 1991:23). Monuments bearing inscriptions in the Late Classic Central Mexican writing system are known from Piedra Labrada, Veracruz, and Maltrata, Veracruz. Relatively little is known of Late Classic southern Veracruz and western Tabasco, which was an important cacao- and rubber-producing region and the purported homeland of the Olmeca-Xicalanca. During the Late Postclassic region, this area was a commercially important and multicultural region, which included Nahua, Zoque, and Chontal Maya settlements (Scholes and Roys 1968).

Maya Lowlands

The Maya Lowlands encompasses a culturally and geographically diverse area that includes thousands of archaeological sites in the Mexican states of Quintana Roo, Yucatán, and Campeche, as well as parts of Tabasco and Chiapas, Guatemala, Belize, and Honduras. During the Early Classic period, the two most powerful Maya cities were Calakmul,

Campeche, and Tikal, located in Guatemala's Petén region. The two cities, along with a series of smaller allied polities, were engaged in a lengthy series of battles that culminated with the defeat of Tikal near the end of the Early Classic period. The ensuing disbursal of power that followed Tikal's defeat likely contributed to the rise of several powerful Late Classic centers that were likewise politically and economically intermeshed, and often engaged in protracted rivalries. Palenque and Toniná, two sites in modern Chiapas toward the western periphery of the Maya Lowlands, were in direct competition. Piedras Negras, Guatemala, and Yaxchilan, Chiapas, competed for control of trade along the Rio Usumacinta. Quirigua, Guatemala, was under the control of Copán, Honduras, until capturing and executing a ruler of the Copán dynasty. New art styles and regional cultural developments appeared during the Late Classic, such as the Rio Bec, Chenes, and Puuc styles of Campeche and Yucatán. Most major Late Classic Lowland Maya cities did not survive Terminal Classic collapse, with a notable exception being Chichén Itzá, Yucatán that, aligned with Tula, became one of the most powerful cities in Early Postclassic Mesoamerica.

Late Classic Exchange Goods

The exchange of valued prestige goods was a driving force behind Late Classic interregional interaction. Despite the fact that most goods had to be carried by porters, Mesoamerica had a thriving interregional exchange system (Hirth 2013). While on trading expeditions, the *pochteca*, the merchant class of the Late Postclassic Aztecs, gathered information on behalf of the Empire, and may have served as foreign emissaries (Berdan 1986:284). Merchants may have even at times been responsible for encouraging the production of certain goods they wished to sell (Nichols 2013). In some instances during the Late Postclassic period, members of royal dynasties were directly involved in long-distance exchange. Landa's *Relación de las Cosas de Yucatan* mentions that while Mayapan was

destroyed, a son of one of its lords was away on a trading expedition in Honduras (Tozzer 1941:39). Although it is unclear whether Late Classic rulers traveled in such expeditions, depictions of the Maya God L, an Underworld ruler, as a merchant, suggests that interregional exchange was indeed carried out by elites (see Taube 1992b:81-88). Control over the import of exotic luxury goods serves to reinforce elite status through alliance building with foreign powers, displays of wealth, and gift giving to subordinates (Schortman 1989; Schortman and Nakamura 1991:328-329). It is important to note, however, that exchange networks operated at various overlapping scales, and both luxury goods and more quotidian items move across regions (Hirth 2013). Portable high-status goods that were exchanged widely across Late Classic Mesoamerica and served to forge and reinforce elite status include ceramics, precious stones, and perishable goods, such as cacao and feathers.

Several distinct ceramic types were widely exchanged during the Late Classic period, of which I give a few relevant examples. Red-on-buff Coyotlatelco pottery appears at a number of sites in Late Classic Central Mexico, including Tula Chico, Teotenango, Teotihuacan and various other sites in the Basin of Mexico, and Cacaxtla (Crider 2011; Crider, et al. 2007:123; López de Molina and Molina Feal 1986; Mastache and Cobean 1989; Sugiura Yamamoto 1996; Vargas Pacheco 1975). Several scholars concur that the style originated in the Bajío or elsewhere in West Mexico (Beekman and Christensen 2003; Brambila and Crespo 2005; Braniff C. 2005; Crider, et al. 2007; Manzanilla, et al. 1996; Mastache and Cobean 1989; Nelson and Crider 2005; Rattray 1996). Red-on-buff ceramics with less decoration that appear at Cacaxtla and Xochicalco may not be true Coyotlatelco (Cyphers 2000:13; Cyphers and Hirth 2000:126), but could be local imitations or perhaps a

chronological distinction.[1] Fine Orange pottery, consisting of a smooth orange paste and lack of temper, but varying in form and decoration, was widely distributed across Mesoamerica and was produced over the course of 700 years (Smith 1958). In Late Classic Central Mexico, Fine Orange appears at Cacaxtla and Xochicalco (Cyphers and Hirth 2000:122-123; López de Molina and Molina Feal 1986:69-70; Noguera 1947:281). Balankán Fine Orange appears at Xoo-phase Monté Albán (Martínez López, et al. 2000:209, 218-220). Fine Orange is generally considered to originate from the southern Gulf Coast. Robert Smith (1958:157) suggests that many of the well-known Jaina-style figurines may have been made in Fine Orange. Molded-carved varieties, often bearing complex iconography and glyphic expressions, spread throughout the Maya Lowlands during the Terminal Classic (e.g. Helmke and Reents-Budet 2008; Ting, et al. 2015; Werness 2003). Thompson (1970:38-39)(38-39) believed that molded-carved ceramics were distributed by Mexicanized Putun Maya living along the Gulf Coast, although varieties were produced in the eastern Maya Lowlands (Helmke and Reents-Budet 2008; Ting, et al. 2015). Plumbate pottery, which was distributed throughout Mesoamerica during the Early Postclassic, is easily recognizable due to its diagnostic lustrous gray appearance due to high iron content in its inconsistently vitrified "slip glaze" (Lyall 2012). San Juan Plumbate, the Late Classic counterpart of the Early Postclassic Tohil Plumbate (Neff and Bishop 1988), appears in particularly large quantities at Cotzumalhuapa (Chinchilla, et al. 2005), and Izapa (Lee 1978). Plumbate pottery was produced in the eastern Soconusco region of coastal Chiapas and Guatemala (Neff and Bishop 1988).

[1] Ann Cyphers (2000:13, 15) considers the distribution of Coyotlatelco pottery to reflect the reduced extent of Teotihuacan's influence and economic reach during the Late Classic period.

Precious minerals, either in the form of finished objects or raw material, were exchanged widely during the Late Classic. Jadeite, serpentine, and other varieties of greenstone were highly valued and widely exchanged, beginning with the Olmec culture. The Motagua Valley, in Guatemala, was an important source of jadeite. Small greenstone pendants, often referred to as "Maya" or "Nebaj-style" plaques after a site in Guatemala in which they were found (Digby 1972; Smith and Kidder 1951), typically display seated or frontally standing lords. Such plaques have been found not only at major Maya sites such as Palenque, Caracol, and Chichén Itzá, but also at several non-Maya sites including Cacaxtla, Xochicalco, Tula, Teotihuacan, and Monté Albán, and span a geographical distance from Queretaro to El Salvador (Digby 1972; McVicker and Palka 2001; Nagao 1989:95-96; 2014:250-261; Proskouriakoff 1974; Ringle, et al. 1998:203-208; Solar Valverde 2002). As previously discussed, turquoise from the American Southwest was not widely imported into Mesoamerica until the Early Postclassic period, but appears in substantial amounts at Plazuelas, Guanajuato and Alta Vista, Zacatecas. However, small quantities of turquoise have been found at Early Xolalpan phase (AD 350-450) Teotihuacan (Spence 1992:64), and Late Classic Cacaxtla (López de Molina and Molina Feal 1986:74) and Xochicalco (Hirth 2000:202). Marine shells, technically consisting of the mineral calcite, were circulated from the Pacific and Atlantic coasts. Widely exchanged shells included *Spondylus*, *Olivia*, and conch. Certain mineral-based pigments, such as cinnabar and palygorskite clay used to make the pigment Maya Blue also traveled far from their sources.

Types of stone that could be made into utilitarian and ceremonial objects were also exchanged over considerable distances. *Tecali*, white translucent alabaster from the state of Puebla, was used to make luxury objects, especially vessels that appear at Xochicalco, Cacaxtla, and the Maya region (Nagao 2014:261-263). Several sources in Central and West

Mexico supplied obsidian throughout Mesoamerica, including Pachuca, in Hidalgo, Otumba, in Estado de México, Oyamales-Zaragoza, in Puebla, and Ucareo, in Michoacán. Distinctive green obsidian from the Pachuca source appears throughout Mesoamerica, and its distribution was a likely a key component of Teotihuacan's economic power during the Early Classic period (Santley 1983, 1989). Pachuca obsidian has been found as far away as Honduras and the Southeastern United States (Barker, et al. 2002). Ucareo obsidian was the most widely distributed type during the Late Classic, appearing at Xochicalco, Tula, the Valley of Oaxaca, and the northern Yucatan Peninsula (Healan 1997). Oyamales-Zaragoza obsidian, the distribution of which was controlled by Cantona, has appeared as far away as Tabasco, Veracruz, and Oaxaca (García Cook 2004:101-104). Despite its proximity to nearer sources, the vast majority of Xochicalco's obsidian came from Ucareo, and while Xochicalco imported Pachuca and Otumba obsidian in the Early Gobernador phase, importation from these two sources virtually stopped by AD 750 (Hirth 2000:194-198). Teotenango appears to have obtained most of its obsidian from Ucareo, after it could no longer rely on Pachuca as a consistent source with the collapse of Teotihuacan (Villa Benitez 2006). Xochicalco may have obtained Ucareo obsidian through Teotenango (Hirth 2000:198). Little is known about Cacaxtla's favored obsidian sources, but a significant amount appears to have come from Pachuca (Hirth 2005).

Many important trade goods were perishable, leaving little or no trace in the archaeological record. Cacao beans were highly prized for consumption and even served as a form of currency during the Late Postclassic period. Primary cultivation areas are located in western Tabasco, and in the Soconusco region of Chiapas and neighboring coastal Guatemala and El Salvador, with secondary cultivation areas located in coastal Guerrero and Veracruz (Bergmann 1969). Despite the restricted geographical area in which cacao can

be grown, it was widely distributed, and exported as far as the American Southwest by AD 1100 (Crown and Hurst 2009). Other ceremonially important plant products with wide distribution include aromatic resins and rubber, and likely carved wooden objects. Tail feathers of the Resplendent Quetzal (*Pharomachrus mocinno*) were highly prized for their iridescent green hues. In Mesoamerica, the quetzal's native habitat is restricted to the highlands of southern Chiapas and Guatemala (see Taube 2000a:311). The wide distribution of quetzal plumes can be gauged by the frequency in which they appear in art as costume elements and adornments for ceremonial objects and supernatural beings across Mesoamerica. Beginning in Middle Formative Olmec art, they are easily recognizable by their length and pliancy (Taube 2000a:303-304). Other types of feathers and animal pelts were also exchanged widely, as can be inferred from surviving Aztec tribute lists. Cotton, *amate* paper, and other plant fibers were likely exchange goods, as were finished textiles, and painted manuscripts.

Methodology

In the interpretation of Late Classic imagery, this study primarily employs the direct historical approach. Also referred to as 'upstreaming' (Fenton 1949:236), the process involves projecting meaning from ethnohistoric or ethnographic sources onto earlier archaeological data, if cultural continuity can be demonstrated. The direct historical approach was devised as a means of integrating archaeological and ethnological data, and understanding the cultural context of archaeological remains (Steward 1942). Although scholars from the first half of the twentieth century primarily used the direct historical approach as a means to correlate ethnicity with archaeological remains, establish relative chronologies, and identify human behaviors that were manifest in the archaeological record (Lyman and O'Brien 2001), it has been applied to studies of Mesoamerican religion and

symbolism with considerable success (Taube 1988a:4-6). George Kubler, who was reticent to acknowledge continuity of symbolism between the pre- and post-Conquest New World, was the most vocal opponent of the direct historical approach. Building on theoretical work by Erwin Panofsky (1960), who noted the constancy of forms used in the art of Classical Antiquity and Medieval Europe but frequent divergence in meaning, Kubler (1985b) applied the concept of 'disjunction' to Mesoamerican art. In Kubler's (1985a:72-73) view, elite symbolic systems such as art and religion were quickly displaced during the Colonial period, whereas quotidian and utilitarian traits of the indigenous proletariat proved to be more conservative. Jeffrey Quilter (1996:313) critiques the distinction between high and low culture propounded by Kubler, and notes that there is a more discursive interaction between classes. According to Houston and Taube (2008:134), historically linked regions will more likely demonstrate shared meaning in systems of imagery. Quilter (1996:304) suggests that Kubler's use of disjunction stems from the desire to project a similar perceived cultural rift that divided Classical Antiquity from Christian Europe onto the pre- and post-Conquest New World.

Houston and Taube (2008:132) provide a detailed scheme for the use of the direct historical approach for the extrapolation of meaning from iconography that is not supported by clarifying texts. A necessary first step is the systematic identification of 'graphs,' small, secure iconic referents. Graphs compose 'scenes,' and several sequential scenes compose a 'narrative.' A graphic 'system' is "a pattern in which narratives coexist in (more or less) orderly relation, which supposes that a single scene implies a narrative" (Houston and Taube 2008:132). Systems are often used over extended periods of time, and difficulty lies in determining how they change historically. The authors refine Kubler's definition of disjunction by adding five subsets: 1) 'accretion,' in which new graphs, scenes,

or narratives are added to preexisting examples; 2) 'replacement,' in which new elements replace older examples; 3) 'spall,' in which a graphic inventory is lost; 4) 'shift,' which is akin to Kubler's 'disjunction' in which new meanings are grafted onto older ones; and 5) 'flow,' in which there is continuity and gradual change, as has often been the case with native languages (Houston and Taube 2008:133). Proponents of the direct historical approach caution that its potential for use should be evaluated judiciously on a case-by-case basis (Houston and Taube 2008:139; Quilter 1996:314).

The direct historical approach has proven to be a useful aid to interpretation in the study of ancient Mesoamerican iconography. For example, Taube (1995) has demonstrated continuous flow stretching back to the Formative period in representations of Mesoamerican rain gods, based on earlier work by Covarrubias (1946), as well as continuity with Mesoamerican maize gods extending to the Middle Formative period (Taube 1996). As the study of Mesoamerican iconography is now well established as a means of interpretation and supported by a large corpus of research spanning more than a century, it is often possible to make parallel comparisons between well-known visual systems, such as that of the Classic Maya, and lesser known systems used by cultures with whom they interacted. In order to understand how concepts are translated across different visual systems, it is necessary to understand the stylistic conventions that govern individual systems.

Organization of the Dissertation

This dissertation presents a more humanistic approach that encompasses the study of art, religion, and ritual, to complement more traditional material-based analyses of interregional and cross-cultural interaction. The analysis of the ideological statements embedded in artwork, religion, and public ritual is fertile, though often neglected, grounds

for understanding the motives that underlie long-distance exchange. I do not consider the process of incorporation of foreign traits into local systems to be one of cultural diffusion or passive absorption, but rather I consider agents of change to be knowledgeable actors who actively and selectively engage in the construction of desired realities. Thus, what appears to the modern viewer as "eclecticism" was not haphazard, but reflects the ideologically motivated integration of novel forms into pre-existing systems. I attempt to move beyond generalized conceptions of eclecticism and influence by tracing shared elements to their specific sources in effort to understand what were undoubtedly complex and dialectical networks of interaction. This study does not aim at creating a comprehensive corpus of traits that are shared throughout Late Classic Mesoamerica, but rather looks for salient patterns, both regional and cross-regional, that allude to such networks of interaction. I attempt to interpret the underlying meanings imbedded in artwork and ritual in order to better understand shared traits and the reasons for their spread, or to find significant slippages or modifications in meaning, which may point to important ideological shifts.

The second chapter of this dissertation presents a compilation that identifies and categorizes deities that appear in the artwork of Late Classic Central Mexico and adjacent regions into an orderly scheme. Although it is the first of its kind for this time period and region, it is in the spirit of previous efforts to systematically categorize Mesoamerican deities. I follow Nicholson's (1971b) basic classification system of Late Postclassic Central Mexican deity complexes (although with minor adjustments), which includes creator deities, rain and agricultural fertility deities, solar and other celestial deities, death deities, wind deities, and deities of mercantilism, as well as other supernatural beings that are not as readily classifiable. However, like Taube's (1992b) reassessment of Paul Schellhas' (1904) inventory of deities that appear in Late Postclassic Maya codices, I add a

genealogical component in effort to trace the development of specific deities, and thus trace significant patterns in cult veneration and spread. Some Central Mexican deities show remarkable continuity with prior time periods, whereas others appear to have arrived into Central Mexico during the Late Classic period, and begin to adopt forms that are recognizable as precursors to Late Postclassic deities. Other deities that appear in Late Postclassic Central Mexico are notably absent during the Late Classic period.

In Chapter 3, I discuss cosmology and religion in Late Classic Central Mexico. I begin with a general discussion of spatial organization and the closely related topic of calendrics in Central Mexico, before addressing how these organizing cosmological principles are manifest in Late Classic iconography and symbolism. I evaluate current theories of Late Classic pan-Mesoamerican religious movements (e.g. López Austin and López Luján 2000; Ringle, et al. 1998), and offer an alternative model. Based on pioneering work by Jane Hill (1992), Taube (e.g. 2004b, 2006, 2010a), and others, I argue that the Flower World complex was a major politico-religious movement that was very much present in Central Mexico and other regions during the Late Classic. Conceptions of the east as a cosmological realm associated with wealth, verdancy, and the dawning sun are central to the Late Classic Flower World complex, as are beliefs that deceased rulers and warriors inhabited an eastern floral paradise as nectar-sipping birds and butterflies. The Flower World complex provided a model for elite identity, and ideological justification for warfare and long-distance exchange of luxury items from the Maya Lowlands.

In the fourth chapter, I discuss shared ritual practices in Late Classic Mesoamerica. I consider both the symbolism inherent in ritual that gave form to religious beliefs, and examples in which evidence of ritual practices are manifest in archaeological remains. Public ritual provided a venue for social cohesion, while serving as a means for ritual

practitioners to display power and proximity to divine forces and to reinforce class distinctions. Although not intended to be an exhaustive catalog of rituals, I consider several different types of practices that are loosely clustered around salient themes. Water-related ritual, likely used to petition rains, were widespread in Late Classic Mesoamerica. Architectural models known as *maquetas* were widespread features during the Late Classic period, and were likely used in water-related rituals. The ballgame also appears to become more prominent during the Late Classic, and I discuss its possible meanings and social functions. I also explore various forms of human sacrifice, and in the process, I evaluate claims that certain sacrificial practices were introduced by waves of invaders or migrants from the northern periphery of Mesoamerica. An additional class of rituals that is seldom considered in discussions of pre-Aztec ritual practices concerns the ceremonial creation of fire. I conclude by discussing regional and cross-regional patterns in ritual practices.

Chapter 5 addresses cross-culturally shared art styles and icongraphic themes, with the aim of clarifying questions of influence and tracing possible patterns of interaction. I adopt a network theory approach and point to interactions between actors interlinked in social webs that overlap on multiple spatial scales to explain the selective incorporation of specific artistic conventions and establishment of shared elite identities. I first discuss Maya-style traits in the art of Cacaxtla. My contention is that Cacaxtla's art does not show generalized Maya conventions, but rather it shows distinct traits similar to examples from specific sites within the Maya Lowlands. I identify several distinct Late Classic Maya characteristics and attempt to trace them to their specific sources of origin. I then turn to the art of Xochicalco, which shows a series of relationships with different regions of Mesoamerica based on traits that appear in its artwork, and I discuss two major trends in Late Classic figural sculpture, both of which are present at Xochicalco. I discuss the art of

Teotenango, and possible relationships that the site maintained with other polities. I conclude by evaluating whether Cacaxtla, Xochicalco, and Teotenango shared a common art style and the role these sites played in giving rise to Postclassic international styles. The concluding chapter synthesizes the arguments presented in the first five chapters to create a more holistic impression of the patterns and nature of interaction apparent in shared religious beliefs, ritual practices, and artistic trends at Cacaxtla, Xochicalco, and Teotenango, and other regions in Late Classic Mesoamerica.

Significance of the Dissertation

The goal of this dissertation is to provide a meaningful contribution not only to understandings of the individual sites under investigation, but also to parallel phenomena in other contemporaneous sites and regions. This work sheds light on a pivotal, yet poorly understood period in ancient Mesoamerica. A clearer view of the Late Classic period in Central Mexico adds to a greater overall understanding of the events preceding and following the florescence of Cacaxtla, Xochicalco, and Teotenango. Specifically, the present work details the role that these sites played in the development of major deities in ancient Central Mexico, and the spread of the Flower World complex, ritual practices, and art styles, and their incorporation and ideological use by social agents participating in networks of interaction occurring at multiple scales. A byproduct of modern archaeological inquiry is the fragmentation of broader culture regions into research areas, which often consist of subregions, or in many cases, individual sites or areas within sites. By examining local manifestations of broader trends in art, religion, and ritual, this study attempts to integrate regional study areas and present a larger view of processes that impacted Mesoamerica as a whole. This study addresses how art, ritual, and religion are used to forge corporate identities that, perhaps, transcend ethnicity. It directly engages models put forth to explain

Late Classic multiregional interaction through analysis of 'foreign' traits in Central Mexico and comparison to their counterparts in other regions. Finally, this project contributes to broader anthropological discussions by exploring the complementary roles of art, religion, and ritual in cross-cultural interactions, demonstrating possible strategies that emergent states use to assert power, and by investigating the types of inter-polity relationships that develop during the process of balkanization.

Chapter 2: Deities of Late Classic Central Mexico

Although no previous systematic study of their deities has been made, Late Classic sites of Central Mexico recognized a common group of gods. Many Late Classic supernatural beings are part of continued traditions in Mesoamerica, and can be traced to previous eras such the Classic and Formative periods. Deities such as Tlaloc and Huehueteotl that occupied paramount positions at Teotihuacan continued to be of central importance, while others that had been more obscure gained greater importance. However, the supernatural pantheon of Late Classic Central Mexico is not simply a continuation of that of Teotihuacan, but it rather draws on numerous traditions, both local and foreign, such as those of the Gulf Coast and Maya regions. This syncretism of regional pantheons was an ongoing process that continued into later periods, but the origins of the Late Postclassic Central Mexican pantheon, shared by Highland cultures and to an extent, the Gulf Coast, and Oaxaca, can largely be found in the Late Classic period.

In a foundational work, H.B. Nicholson (1971b) arranged the large and complex pantheon of Late Postclassic deities of Central Mexico into a series of basic groupings based on general similarities in cult themes. Subthemes, or "deity complexes," further subdivide the cult themes into clusters of deities that share more specific attributes. In attempt to arrange the deities of the Late Classic Central Mexico into a logical scheme, I follow Nicholson's basic groupings of cult themes and deity complexes. Since Nicholson's study was grounded in Early Colonial writings, and given the lack of historical sources for the Late Classic period, this analysis is based primarily on physical similarities and iconographic contexts. Thus Nicholson's organizational scheme requires some minor modifications in

order to be implemented in a meaningful way, and many deities first require identification. I focus primarily on anthropomorphic deities, and other zoomorphic entities that display clear supernatural traits but may not have been the direct subject of religious veneration shall be considered elsewhere. Based on current understandings, some these may not readily fit into a defined category, or may only be hypothetically attributed. The following taxonomic classification of deities is not intended to be exhaustive or to minimize the importance of regional variation or local phenomena, but rather is heuristic in nature with the aim of demonstrating shared supernatural beliefs in Late Classic Central Mexico and their relationships to other regions, while highlighting the historic role played by Late Classic sites in perpetuating and disseminating previous traditions and passing this legacy subsequent Mesoamerican belief systems.

Celestial Creativity-Divine Paternalism

The first group of deities discussed by Nicholson (1971b:410-414) pertains to creator deities of the Late Postclassic period. Nicholson subdivides this group into the Ometeotl Complex, which includes the sexually dualistic creator deity Ometeotl and its manifestations as the primordial couple represented by the male, which goes by various names including Ometecuhtli and Tonacatecuhtli, and the female, known as Omecihuatl, Tonacacihuatl, and others. Nicholson also includes the Tezcatlipoca Complex under the general heading of "Celestial Creativity-Divine Paternalism," given Tezcatlipoca's apparent omnipotence during the Late Postclassic, but notes that he is a late arrival to the Central Mexican pantheon. The Xiuhtecuhtli Complex, the final subdivision of this category, includes deities related to life-giving warmth, including New Fire ceremonies and the domestic hearth. While there are few Late Classic beings that could unequivocally fall under this

rubric, the most likely deity that pertains to this group and may be ancestral to Late Postclassic creator gods is Huehueteotl.

Huehueteotl

Huehueteotl ("Old God") is one of the oldest and most ubiquitous deities in the Central Mexican pantheon. Commonly referred to as the Old Fire God, this being is invariably depicted as an elderly man with deep wrinkles in his face and a chapfallen mouth, and he is typically seated clutching his knees or sitting cross-legged and balancing a large cylindrical basin or brazier on top of his head. Aztec Huehueteotl sculptures differ from those of previous cultures in that they consistently display fangs and rings around the eyes, and the Aztecs appear to have merged Huehueteotl with the fire deity Xiuhtecuhtli. A prayer recorded by Sahagún (1950-1982:6:88-89; Taube 2004c:104) describes Aztec conceptions of Huehueteotl-Xiuhtecuhtli:

> The mother of the gods, the father of the gods, who resideth in the navel of the earth, who is set in the turquoise enclosure, [enclosed] with the waters of the lovely cotinga, enclosed with clouds – Ueueteotl, he of Ayamictlan, Xiuhtecuhtli.

Aztec sculptures of Huehueteotl-Xiuhtecuhtli are rendered in an archaizing style (Umberger 1987a:88-89), likely referencing the great antiquity of this being. It is probable that prior to the Late Postclassic period, Huehueteotl was also considered a god of centrality and fire, and was viewed as an ancestral figure and creator, given his extreme aged appearance and the probable use of Huehueteotl effigies as ceremonial braziers.

By the Late Preclassic period in Central Mexico, Huehueteotl effigy braziers were widespread throughout Central Mexico. The earliest representations of this deity may originate in the Middle Formative Olmec heartland in the form of jadeite statuettes (Taube 2004:103-104), and a probable basalt example from central or southern Veracruz (fig. 2.1a). Although the details are effaced, like later Huehueteotl effigies, the example in Figure 2.1a

crouches and holds a cylindrical object on top of his head, which may be analogous to the braziers held by later examples. In the Central Mexican Highlands, particularly the Oriental Valley in the Puebla-Tlaxcala region, the Old Fire God is recognizable in the form of effigy braziers as early as 600 BC (Carballo 2007:53). The Oriental Valley seems the most probable conduit for the spread of religious practices pertaining to Huehueteotl from the Gulf Coast into the Central Mexican highlands. By the Late Preclassic period, Huehueteotl effigies are found as far west as Colima (Taube 2004:104), and examples from sites such as Cuicuilco appear more similar to later examples from Teotihuacan. A Late Preclassic stone Huehueteotl from Tlalancaleca, Puebla is likely the largest in existence at nearly one meter in height (fig. 2.1b), and displays the triangular face and large ear ornaments that appear in later Teotihuacano examples.

During the Classic period, Huehueteotl continued to be an important deity, especially at Teotihuacan. Cowgill (1997:141) suggests that Teotihuacan Huehueteotl braziers were more a part of Teotihuacano domestic religion than of state religious ideology. Carballo (2007) likewise argues that Teotihuacano Huehueteotl braziers are a continuation of Middle to Terminal Formative domestic religious practices. Teotihuacan examples differ from previous renderings of the Old Fire God in that the brazier set upon the deity's head is typically carved with a series of diamond-shaped forms alternating with four vertical bars (fig. 2.1c).

Huehueteotl sculptures appear throughout Central Mexico during the Late Classic period, and constituted an important part of ritual and religion. By and large, Late Classic examples resemble those from Teotihuacan, and are found as far away from Central Mexico as the Gulf Coast (fig. 2.2a), and Queretaro's Sierra Gorda to the north (fig. 2.2b). Huehueteotl does not have an apparent analogous deity in the Maya region, although it is

conceivable that he could be related to God N or Itzamna, both aged deities. At Cacaxtla, with murals display strong Maya characteristics, a painted unfired clay head likely represents the wrinkled and sunken visage of Huehueteotl (fig. 2.2c). The probable example from Cacaxtla more closely resembles the more naturalistically rendered Huehueteotl from Cerro de las Mesas, Veracruz (fig. 2.2a) than those of Teotihuacan.

Finds from Xochicalco and Cantona indicate that rituals involving Huehueteotl effigy braziers extended beyond the burning of offerings. One of the several Huehueteotl sculptures from Cantona was found with an elongated skull wedged between its legs (fig. 2.2d). The find was likely part of an offering, but the presence of the skull in relation to the Huehueteotl defies simple explanation. The face of the Huehueteotl effigy is slightly contorted, raising the possibility that it may be a "portrait" of the person whose skull accompanied it. At Xochicalco, a Huehueteotl effigy, which is otherwise very similar to examples from Early Classic Teotihuacan, was found with a removable "facemask" made of copal resin (fig. 2.2e).

Several ceramic effigy braziers which may represent the Old Fire God were unearthed at the Ñuiñe site of Cerro de las Minas, in northern Oaxaca (figs. 2.3a-b; Winter 2007:44-46). Like other examples from Highland Mexico, they represent seated, aged men with cylindrical braziers on top of their heads, however they differ in that several have buccal masks. The buccal masks may be related to the removable masks of the Xochicalco Huehueteotl. The eyes of the Ñuiñe figures are typically closed, possibly denoting death, and the buccal masks may have been funerary in nature, possibly indicating that this deity was conceived as an ancient, deceased ancestor.

A Ñuiñe Old Fire God effigy from Cerro de las Minas and a probable Zapotec example hold round objects covered with circular bumps in their hands (figs. 2.3a & 2.3c). These

objects may represent warty gourds, which were known to have been part of a shamans' kit during the Late Postclassic, and were used to hold powdered tobacco. Huichol shamans similarly used warty gourds as tobacco flasks. On page 21 of the Codex Borbonicus (fig. 2.4a), Ometecuhtli/Tonacatecuhtli, the aged creator god, wears a warty gourd on his back, as do the four skeletal deities carved on the Aztec Teocalli of Sacred Warfare. The form of the gourd in the Codex Borbonicus is similar to that of the object held by the Old Fire God from Cerro de las Minas (fig. 2.3a). However, Karl Taube (pers. comm. 2015) notes that the objects also resemble balls of copal that were recovered from the Sacred Cenote of Chichén Itzá. Indeed, extant balls of copal were covered with smaller round copal pellets (Coggins and Ladd 1992:346-347), giving them a strikingly similar appearance to the objects held by the Old Fire Gods (figs. 2.4b-c). The probable use of these effigies as incense burners is germane to this interpretation. While Huehueteotl is typically considered to be a manifestation of the central terrestrial fire of the cosmos or the domestic hearth, the Maya-style serpent wings on some examples from Cerro de las Minas suggest a celestial origin for the Ñuiñe version of the deity, much like the Late Postclassic Ometeotl, who occupied the highest level of the heavens.

Rain-Moisture-Agricultural Fertility

The second and most extensive category described by Nicholson includes deities directly related to agricultural fertility and production. While Nicholson (1971b:414) notes that most are feminine, there are relatively few female agricultural deities that can be securely identified in Late Classic Central Mexico. Deity complexes within Nicholson's cult theme include the Tlaloc Complex, which encompasses the rain god and his counterparts and consorts, the Cinteotl-Xochipilli Complex, which includes maize deities of either sex and closely related deities, the Ometochtli Complex, populated by deities related to maguey and

intoxicating beverages, the Teteoinnan Complex, consisting of "earth mother" deities, and relating to both beneficial and harmful aspects of female fertility, and the Xipe Totec Complex, a highly ritualized complex that shares themes with the Teteoinnan Complex, but with the addition of martial symbolism. Nicholson acknowledges that the wind god would be most appropriately placed within this theme, but excludes it due to its complexity during the Late Postclassic period. I shall also treat it separately because of the special importance placed on the Late Classic wind god cult by modern researchers (e.g. López Austin and López Luján 2000; Ringle, et al. 1998), to be discussed in the conclusion. I also exclude Xochipilli from this section, placing him instead with solar deities. As current understandings of Late Classic Central Mexican deity complexes are not as nuanced as those of the Late Postclassic, and many of the more negative or harmful aspects of feminine Late Postclassic deities may have been the product of Aztec imperial ideology (Brumfiel 1996, 2008; Gillespie 1989; Nash 1978), I also collapse gods of maize and agricultural fertility into one category, while retaining distinctive categories for rain deities and the Xipe Totec Complex.

Rain Deities

Cults revolving around rain gods are arguably the most widespread across Mesoamerica. The masked rain god Tlaloc was of central importance during the Late Postclassic period, even sharing the Templo Mayor of Tenochtitlan, at the heart of the Aztec Empire, with Huitzilopochtli, the Aztec tutelary god. Tlaloc's appearance is distinctive, having a mask consisting of circular goggles around his eyes, and a prominent, curling upper lip (or *bigote*) from which large fangs protrude (fig. 2.5). Evidence of Postclassic Tlaloc veneration is found as far south as El Salvador (Ruiz Gallut 2014), and arguably the katsina cult of the American Southwest derives from that of the Central Mexican rain deity

(Schaafsma 1999; Schaafsma and Taube 2006). The Late Postclassic Tlaloc is complementary with Chalchiuhtlicue, his female counterpart and goddess of standing water, and with the Tlaloque, often conceptualized as diminutive assistants to the rain god (Nicholson 1971b:414-416). Tlaloc, in his Late Postclassic form is recognizable at Teotihuacan, and the earliest evidence of Tlaloc veneration is traceable to the Late Formative period.

In a seminal work, Covarrubias (1957:60-63) demonstrated that the rain gods Tlaloc of Central Mexico, Chahk of the Maya, and Cocijo of the Zapotec derived their traits and features from an Olmec prototype. Tlaloc likely inherited his curling upper lip from the Olmec rain god's jaguar-like snarling mouth (fig. 2.6a). A series of Late Formative vessels from Amecameca, Ayapango, San Juan Tehuixtlan, and Tlapacoya in Central Mexico are among the earliest known recognizable representations of Tlaloc (Barba de Piña Chán 1956; Schaafsma and Taube 2006:256-257). These early versions of Tlaloc were apparently not masked, and features such as his goggled eyes and curling lip were developed later at Teotihuacan. A jar from Tlapacoya (fig. 2.6b) in the form of an ancestral version of Tlaloc has bulging eyes, and large, protruding lips that prefigure the goggles and fanged maw. The figure holds what is surely an undulating bolt of lightning, denoting this being as a rain deity. The earliest excavated example of a rain god with a "bigote" is on a Tzacualli phase (AD 50-150) Tlaloc effigy jar found in a deposit beneath the Pyramid of the Sun at Teotihuacan (Carballo 2007:62; Millon and Drewitt 1961:14, fig. 15; von Winning 1976:150). This early example lacks goggles, which generally do not appear on Tlaloc jars at Teotihuacan (Bracamontes Quintana 2002:104, cited in Carballo 2007).

Most of the features and traits that characterize the Late Postclassic Tlaloc appear with the rain deity at Teotihuacan, where he was one of, if not the most, important deities.

Like the Late Postclassic Tlaloc, the Teotihuacan Tlaloc (fig. 2.7) is identifiable through the combined traits of eye goggles, a prominent upper lip, and large fangs (Wrem Anderson and Helmke 2013:166).[2] The Teotihuacan deity's fangs differ in that they typically take the form of two large canines that curve outwardly, rather than the straight fangs of the Late Postclassic deity.[3] In some instances, the Teotihuacan Tlaloc has lips that curl upwardly at the corners, reminiscent of the Late Postclassic Tlaloc's bigote (fig. 2.7b). A water lily often protrudes from the fanged mouth of the Teotihuacan Tlaloc (figs. 2.7a-c), but the Late Postclassic Tlaloc lacks this feature. The Teotihuacan Tlaloc is often depicted carrying an undulating lightning bolt (figs. 2.7a-c), a stalk of maize, or one or two Tlaloc jars that bear his visage (fig. 2.7a & 2.7c).

Mesoamerican rain deities, including the Late Postclassic Tlaloc, are beings of the earth and mountains, and the caves within them that are held to be sources of rain. For the Middle Formative Olmec, Monument 1 of Chalcatzingo (fig. 2.6c), a petroglyph which portrays three tri-lobed rainclouds above a cave with a zoomorphic maw which exhales vapor (Grove 1984:110-111), demonstrates the relationship between rain and mountain caves. The figure seated within the cave, who may be a ruler or ancestor, wears a headdress and skirt decorated with raindrops similar to those that fall from the clouds outside, and sits on a "lazy S," which was a symbol later used by the Maya to denote clouds in writing and iconography. The monument itself is located in on a mountain that was probably considered

[2] Many scholars prefer the term "Storm god" rather than "Tlaloc" to describe the rain deity at Teotihuacan. I refer to this deity as the Teotihuacan Tlaloc. While acknowledging that there were undoubtedly considerable differences in how the Classic and Late Postclassic deities were viewed, I focus instead on the remarkable continuity and numerous shared specific traits displayed by iterations of this deity over time, which extend well beyond a mutual association with storms.

[3] The traits described here refer specifically to the being characterized by Esther Pasztory's (1974) "Tlaloc A" designation. The "Tlaloc B" category is not as clearly defined, and in actuality may encompass several distinct entities that share some common physical traits such as goggles and straight fangs.

an important source of water and a focus of rain-related ritual. Teotihuacan imagery, which depicts mountains, rather than clouds or rivers as sources of water (Trobriner 1972:107-110), also depicts the rain god as a being associated with mountains. In murals, the rain gods appear in the interiors of mountains and in the watery underworld. In addition to the Olmec petroglyphs, there are Teotihuacan-style paintings on Cerro Delgado (Apostolides 1987:191-193), one of the two peaks of the site of Chalcatzingo, which suggest that, Teotihuacanos may have also viewed the site as an important location for rain-bringing rituals. On top of Cerro Xoconoch, to the south of Teotihuacan, rain god petroglyphs have also been found (Helmke, et al. 2013), indicating the veneration of the Teotihuacan Tlaloc on top of mountains. There is also evidence of Teotihuacan presence on Mt. Tlaloc (Townsend 1999:29), long predating the veneration of Tlaloc on the peak by the Aztecs.

A quality that Mesoamerican rain deities tend to share, including Chahk, Cocijo, and Tlaloc, is that they are quadripartite beings of the world directions and colors (Schaafsma and Taube 2006:234; Wrem Anderson and Helmke 2013:169-172). On pages 27 and 28 of the Codex Borgia, for example, four directional Tlalocs and a fifth central Tlaloc, making a quincunx pattern, are each associated with different meteorological phenomena and their effects on crops, both harmful and beneficial. Kasper Wrem Anderson and Christophe Helmke (2013) argue that the Teotihuacan Tlaloc was also multi-part deity with color-directional associations linked to different phases of the annual cycle of planting maize. Support for this argument comes in the form of a mural in the Anteroom of the Gods in the Techinantitla compound, which portrays a procession of different-colored rain gods (R. Millon 1988:100-103). A Teotihuacan-style tripod from the Tiquisate region of Guatemala shows a central Tlaloc armed with a pair of lightning bolts and surrounded by four directional tlaloque (Hellmuth 1975:55). A dedicatory offering in Burial 2 of the Pyramid of

the Moon at Teotihuacan included five Tlaloc effigy placed in the corners and the center of the chamber as a quincunx, much like the directional arrangement of Tlalocs on pages 27 and 28 of the Borgia made more than a millennium later (Sugiyama and López Luján 2007:129-130). As the Pyramid of the Moon was also likely a symbolic mountain, the offering links the Teotihuacan Tlaloc to widely held conceptions or rain god directionality and the subterranean origins of celestial water.

The purview of Central Mexican rain deities was by no means limited to the fertilization and destruction of crops. Tlaloc and his Central Mexican predecessors were strongly linked to militarism at least as early as the Classic period at Teotihuacan. Thunder and lightning may have been potent metaphors for war. The Teotihuacan Tlaloc's serpent-like lightning bolt could be considered a powerful projectile weapon (Paulinyi 1997), as illustrated in a mural fragment from Teotihuacan's Tetitla compound, which portrays an image of Tlaloc holding a spear thrower armed with a long, undulating dart (Headrick 2007:126-127, fig. 7.2). In some examples, the Teotihuacan Tlaloc holds a circular shield in addition to his bolt of lightning (fig. 2.7b). The same style of circular goggles worn by Tlaloc are also part of the costume of Teotihuacan warriors, which also denotes him as a war god (Taube 2000b:274). For the Aztecs, Tlaloc's enshrinement alongside the Mexica war god, Huitzilopochtli, on top of the Templo Mayor alludes to a continued recognition of his bellicose nature in the Late Postclassic.

In consideration of Tlaloc's prominence and the notable continuity in the manner of representation and associated symbolism of Central Mexican rain gods from Teotihuacan to the Late Postclassic, it is of no surprise that Tlaloc is well represented in the art of Late Classic Central Mexico. By and large, the decline in power of Teotihuacan brought few changes to the manner in which Tlaloc was represented. The water lily that frequently

protrudes from the mouth of the Teotihuacan Tlaloc largely disappears, but is still visible on Stela 2 of the Xochicalco stela triad (fig. 2.8a). The trapeze and ray headdress, worn by Tlaloc on Stela 2, is common on Late Classic representations of the deity, whereas it is seen on few examples from Teotihuacan. The headdress consists of two interwoven strips that intersect at the top, giving the impression of an inverted trapezoid that is interlaced with an acute triangle, when viewed frontally. Interestingly, the headdress appears more prominently on Teotihuacan-style renderings of Tlaloc outside of the city itself, as seen on Stela 3 from Classic-period Los Horcones, Chiapas (fig. 7c). The headdress is commonly worn by Late Classic Maya rulers, and appears on representations of Tlaloc through the Late Postclassic period.

There are several representations of Tlaloc in Late Classic monumental art. An unprovenanced block in the form of the deity's head on display in the Teotenango site museum (fig. 2.8b). The sculpture is stylistically more geometric than stone sculpture from Teotenango, and is more similar to sculpture from Late Classic Valle de Bravo or Ixtapan del Oro. Wavy lines on the sides of his head allude to water, as also visible on Los Horcones Stela 3 (fig. 2.7c; Karl Taube, pers. comm. 2015). A cylindrical sculpture bearing the fangs and bulging eyes of Tlaloc (fig. 2.9a) was reported by Pedro Armillas (1995 [1941]). Tlaloc also appears twice in the murals of Cacaxtla. On the north jamb mural of Structure A, a human figure wearing a jaguar costume tips a Tlaloc jar bearing the deity's face from the crook of his right arm, while he holds a lightning bolt in the form of a serpent with curls of smoke coming off of its body with his left (fig. 2.9b). On the Battle Mural, Tlaloc emerges from behind a warrior's shield, and is perhaps part of the name of one of the victorious jaguar-clad warriors (fig. 2.9c).

Small-scale ceramic depictions of Tlaloc are common throughout Late Classic Central Mexico. Tlaloc jars, first seen in the Late Formative period, continued to be manufactured through the Late Postclassic, and are seen in the Late Classic (fig. 2.10a & 2.11a). Tlaloc also appears in the form of figurines throughout Late Classic Central Mexican sites. Small-scale depictions of Tlaloc share some traits in common (figs. 2.10b-d). The eyes of Tlaloc tend to be bulbous, and project through the goggles. The lips are often large and fleshy, rather than formed as the *bigote* as seen on some Teotihuacano examples and the Late Postclassic Tlaloc. The mouth has two large fangs that curve outwardly at the corners of the mouth. Several ceramic appliqués from Xochicalco that were attached to what were probably small Tlaloc jars for ceremonies, burials, or offerings depict the rain god holding a lightning bolt while he emerges through an inverted U-shaped portal (fig. 2.11a-b). The portals are decorated with a series of volutes that are recognizable other media as smoke, clouds, or cross-sectioned conch shells (see Chapter 5). The portal is reminiscent of a series of depictions from the Classic-period murals of Zacuala, Teotihuacan (fig. 2.11c) in which the Teotihuacan Tlaloc passes through a similar portal, pouring seeds from his hand. The image could be interpreted as Tlaloc emerging from a raincloud.

Two of the Los Once Señores de Cacaxtla ceramic sculptures, excavated at nearby San Miguel del Milagro (see Morales Gómez 1999), represent Tlaloc surrounded by volutes in similar fashion to the examples from Xochicalco and Teotihuacan (figs. 2.12a-b). While the volutes that frame these figures could represent clouds, it is important to note that the nine other "Señores" represent different beings, including three readily identifiable as Late Classic representations of Xipe Totec (see discussion of the Xipe Totec Complex below). It is not inconceivable that all of these beings could collectively be associated with clouds, but the volutes could likewise represent smoke, wind, or the aroma of incense, or perhaps

denote sacrality or otherworldliness. The facial features of the two Cacaxtla examples are similar to ceramic representations of the Late Classic Tlaloc from Xochicalco and Teotenango, however they wear large zoomorphic headdresses identifiable as the War Serpent, based on their large feline maws and forelimbs, serpent-like protruding tongues, and feathery projections over the eyes and snouts. The War Serpent headdress is typically worn by Teotihuacano warriors and Maya rulers (Taube 1992c), and surely marks Tlaloc as a bellicose deity in this context. His dual nature as a god of war and agricultural fertility is underscored by the lightning bolts that he carries in his right hand in both examples, and the maize ear and squash that the two figures hold in their left hands (Morales Gómez 1999:157).

A sculpture similar to the Tlalocs from San Miguel Milagro was excavated along with an offering of four skulls and a stone Tlaloc mask on the edge of the acropolis of Cacaxtla (Jiménez Ovando 1995:125-128). The figure similarly places an anthropomorphic figure against a background of volutes, but they differ stylistically, and curiously the anthropomorphic figure has a Tlaloc mask that is split down the center and divided, revealing a human face beneath (fig. 2.13a). The figure also holds a bolt of lightning and a triangular copal bag. Another of the "Señores" sculptures holds a lightning bolt and ear of corn, and wears a War Serpent headdress, similar to the examples that represent Tlaloc, but it has a human face with closed, puffy eyes that may imply death (fig. 2.13b). The meaning of these two and their relationship to other representations of Tlaloc at Cacaxtla remain elusive.

The distribution of Tlaloc-related imagery extends well beyond Central Mexico during the Late Classic period. Tlaloc plays a central role in mythological scenes on the South Ballcourt panels of Late Classic El Tajín. Panels 5 and 6 depict scenes similar to

sequences in the *Leyenda de los Soles* in which Quetzalcoatl steals bones from the Underworld to create humankind and takes maize from the mountain of sustenance. However rather than Quetzalcoatl, Tlaloc is the central protagonist who, on Panel 5, appears to let penile blood onto primordial fish-men from an earlier creation episode (Taube 1986:55-56). Near the Pacific coast of Guerrero, Monument 12 of Piedra Labrada portrays a curious rendering of Tlaloc with what appears to be a descending eagle above his headdress (fig. 2.14a). The rain god is also present at Plazuelas, Guanajuato, in the Bajío region, in the form of a small Tlaloc jar (fig. 2.14b). A unique damaged, and perhaps unfinished, sculpture found at Tepozan, Querétaro likely portrays Tlaloc, with two goggle eyes visible as well as traces of a large, fanged mouth (fig. 2.14c). Tlaloc is perhaps the most widely distributed deity of the Late Classic period, reflecting broad-scale patterns of interaction and holding an important role in areas outside of the Maya region where maize agriculture was practiced.

Deities of Maize and Agricultural Fertility

In Late Postclassic Central Mexico, there were a number of deities related to the growth of maize and other important crops. In Maya region the masculine Maize god was the paramount deity of crop growth. While Cinteotl was an important male maize deity in the Valley of Mexico, maize goddesses were arguably of greater importance, represented by several such as Chicomecoatl (possibly the most frequently represented deity in Late Postclassic Central Mexico), and Xilonen, the goddess of young maize (Nicholson 1971b:417). Xochiquetzal was a goddess of flowers whose domain also extended to sexual desire, pregnancy and childbirth, and weaving (Nicholson 1971b:421). There is significant thematic overlap with "earth mother goddesses" (Nicholson's Teteoinnan Complex) such as Tlazolteotl, a goddess of midwives and purification, the Cihuateteo, spirits of women who

died in childbirth (discussed below), and with pulque gods and goddesses such as Ometochtli and Mayahuel.

Given the high level of interaction between Central Mexico and the Maya during the Classic period, it is not entirely surprising that the Maya Maize god should appear in the art of Teotihuacan. The Classic Maya Maize God is easily recognizable by his pointed cranium, which resembles a mature ear of corn. A number of figurines, both male and female, have pointed crania, several furrows in their hair, and single tassels on top of top of their heads, and are likely maize deities based on their resemblance to ears of corn and the Maya Maize God (fig. 2.15a; Rose 2007:69-79; Taube 2009a:157; 2011b:4). Maya-style maize deities are also painted in the Realistic Paintings murals and others in Teotihuacan's Tetitla compound (Taube 2003c:278; 2011b:5). Karl Taube (2011b:6) has recently identified an effigy vessel that represents a masculine Teotihuacan maize god, having both the forelock and tonsure similar to Maya examples, and scalloped furrows on his pointed cranium similar to smaller Teotihuacan figurines. After the decline of Teotihuacan, a Maya-style maize god appears on Cacaxtla's Red Temple mural in the form of ears that sprout from a plant and bear the deity's likeness (fig. 2.15b; Taube 1992b:46). Another possible maize god, similar to the Tonsured Maize God of the Late Classic Maya, appears on urns from Cacaxtla, which I discuss in greater depth below (see fig. 2.48a). It seems probable that the Classic Maya Maize God is ancestral to the Central Mexican Cinteotl.

Despite the ubiquity of deities related to maize and vegetal fertility in Late Postclassic Mesoamerica, there has been little discussion of their presence in Classic and Late Classic Central Mexico. Bodo Spranz (1973) argues that Late Classic female figurines from Xochitecatl were precursors to the deities Xochiquetzal, Xilonen, and Tlazolteotl as they appear in the Late Postclassic Borgia Group codices. Mari Carmen Serra Puche

(2001:268) disagrees, and believing instead that the figures represent mortal women, and iconographic similarities between the figurines and Late Postclassic representations of deities are due to the use of dress of mortal women in the depiction of deities. Given that other deities such as Tlaloc are represented as figurines during the Late Classic, it seems likely that many of the Xochitecatl figurines represent deities, and some of the comparisons made by Spranz are striking. For example, several Xochitecatl figurines wear a headdress with three rosettes (fig. 2.16a), a convention seen in Borgia Group depictions of Xochiquetzal (fig. 2.16b; Spranz 1973:219-224). A headdress that includes a central disk placed against a wavy panel (fig. 2.17a) strongly resembles the cotton headdress worn by the Tlazolteotl in the Codex Borgia (fig. 2.17b; Spranz 1973:225). Laurette Séjourné (2002 [1959]:76) suggested that some similar figurines with elaborate headdresses with rosettes from Teotihuacan could represent Xochiquetzal. The headdress of the Teotihuacano figurine shown in Figure 2.18a features the long tailfeathers and body of a quetzal on its right side. Such figurines that include a headdress with one or more quetzal birds and flowers or rosettes are widespread during the Classic period in places within Teotihuacan's sphere of influence (fig. 2.18b), and phonetically in Nahuatl, the headdress elements may reasonably be read *Xochi-quetzal* ("Flower Quetzal").

A sculpture in the Museo Cuauhnahuac in Cuernavaca, Morelos features a woman (as denoted by the triangular *quechquemitl*) enshrined within a scaffold- or temple-like structure (fig. 2.19). Eduard Seler (1991-1998:2:85-86), who gave an early description of the piece, stated that it came from Cerro Malinche, near Xochicalco, and compared the seated figure to the Late Postclassic maize goddesses Xilonen and Chicomecoatl, and the fertility goddess Xochiquetzal. The identification of the figure from Cerro Malinche as a deity related to agricultural fertility, or a maize goddess, seems apt, as the platform that she

sits on is decorated with alternating maize ears and floral rosettes, and the sides of the "temple" feature plants that resemble stalks of maize, but produce flowers. The rectangular headdress of the deity seems to be incorporated into the structure, in much the same way that the headdresses on certain depictions of Late Classic Maya rulers and the figures in Teotihuacan theater-style incensarios appear to morph into temples (Taube 1998:464-466). As noted by Seler (1991-1998:2:86), the squared headdress of the Cerro Malinche sculpture is reminiscent of that of the Late Postclassic maize goddess Chicomecoatl (fig. 2.20). Like the Cerro Malinche sculpture, the elaborate headdress seen on Late Postclassic representations of Chicomecoatl also seems to engulf the goddess and appears to represent a temple decorated with rosettes.[4] Interestingly, there are seven perforated circular disks (jades) that resemble those used in Xochicalco calendrical numeration above the Cerro Malinche figure's head, which could possibly refer to Chicomecoatl's calendrical name, translated "7 Serpent." However there is an additional disk on each side of the register, but they are not within the same frame as the seven disks on the front.[5]

Above the seven disks on the Cerro Malinche figure's headdress, five anthropomorphic figures stand frontally holding hands, and are likely dancing. It may be significant that there are five dancers and five maize cobs (alternating with four flowers) on the lower frontal register of the monument, as maize deities can appear as multiples and tend to be related to the five world directions, east, north, west, south, and center. The

[4] The upper portion of the headdress worn by Chicomecoatl is usually decorated with a series of looped knotted cords, very similar to the tassels on Teotihuacano tassel headdresses worn by warriors. This is probably an archaizing feature, and as previously noted, the arrangement of the deity within the temple-like structure is reminiscent of Teotihuacan theater-style incensarios. Maize deities are often considered beings of great antiquity in Mesoamerica, and this may represent an attempt on behalf of the Aztecs to relate Chicomecoatl to Teotihuacan.

[5] The upper portions of the sides of the monument bear calendrical dates of 6 "Foot" on the right and the year (denoted by a looped cord) 2 Rabbit on the left.

Classic Maya Maize God was a directional being, as illustrated in Stela H from Copán, which depicts two small Maize gods on the right and left side, framing the ruler Waxaklajun U'baah K'awiil, and implying that he is an embodiment of the central Maize God. Each world direction is associated with a color in Mesoamerican cosmology (see Wrem Anderson and Helmke 2013:177-179), and among the ancient Maya, colors related to world directions (red, white, black, yellow, and green) are also colors of maize (Berlin and Kelley 1961). On pages 30 and 31 of the Codex Borbonicus, an impersonator of Chicomecoatl wears a vividly colored costume, with rosettes that are divided into four colored quarters of red, green, yellow, and blue, colors that also appear on the four panels at the hem of her skirt and on the streamers that hang from her outfit. In artwork, Chicomecoatl almost invariably holds a pair of maize cobs in each hand, and the fifth central cob may be her own head, which is symbolically harvested when a Chicomecoatl impersonator is decapitated in Aztec ceremony. In Mesoamerican cosmologies, the world was often conceptualized as a four-sided maize field (Taube 2003a:461-465). Seler (1991-1998:2:86) described the lower register beneath the seated Cerro Malinche goddess as "a field of flowers and *xilotes* – young ears of maize with long pendant stigma tassels." His analogy seems apt, as the register may refer to the four-sided cosmic maize field, perhaps with flowers marking intercardinal points.

The five small figures above the seated Cerro Malinche goddess are reminiscent of examples in Mesoamerican art. The arrangement of figures, with arms elevated and touching, is reminiscent of page 39 of the Codex Borgia, which shows a series of twelve female deities dancing in a circle and touching hands. While positing similar meaning might be speculative, the composition is strikingly similar and may likewise imply dance. The figures each wear a V-shaped *quechquemitl*, and with hands raised, they recall numerous

examples of female figurines with similar poses and dress recovered from Xochitecatl (fig. 2.21). Figurines from Xochitecatl that have their hands raised can be portrayed standing or sitting, and wear a distinctive headdress that appears to consist of a thick pad that is doubled over and sits horizontally on the head. Serra Puche (2001:263-264) considers their raised hands an attitude of prayer or worship, but this interpretation implies that the figurines do not represent supernatural beings. This subset of Xochitecatl figurines is undoubtedly related to Nopiloa-style figurines from South-Central Veracruz, which represent finely-dressed women with arms raised and a large padded headdresses nearly identical to those worn by the figurines from Xochitecatl (fig. 2.22). One of the most distinct style of figurines in Mesoamerica, the so-called Remojadas-style "Caritas Sonrientes," also portrays finely dressed female, but also male, figures with arms raised (fig. 2.23). Finally, among Jaina-style figurines of Late to Terminal Classic coastal Tabasco and Campeche, several portray women with both arms raised (fig. 2.24). Even more surprising, some have the large padded headdress seen on the examples from Xochitecatl (fig. 2.21) and the Nopiloa region (fig. 2.22). These bulky mold-made figurines differ in appearance from other Jaina-style figurines, and wear quechquemitls, which is not a standard article of Maya dress. While some scholars have noted the similarities of these Nopiloa and Jaina-style figurines (Corson 1976; Gallegos Gómora 2011), the full extent is as yet unrecognized, and it extends at least to Xochitecatl, if not to Xochicalco. It is still unresolved whether these figurines represent deities, and if so which deity or deities. Beyond their appearance, costume elements, and gesture, these figurines from Xochitecatl, South-Central Veracruz, and Coastal Campeche and Tabasco are found in burials. In consideration of Mesoamerican conceptions of mortality, the placement of figurines related to fertility and regeneration with the dead would be fitting.

Xipe Totec Complex

Xipe Totec ("Our Lord the Flayed One") was one of the most distinctive deities in the Late Postclassic pantheon, easily recognizable as garbed in a flayed human skin. Veneration of this deity was widespread, and expressed through rituals that involved impersonation by priests wearing flayed skins. Xipe Totec was a patron deity of goldsmiths (Sahagún 1950-1982:X:69-71) and was associated with spring fertility rites and warfare. In addition to the flayed skin, diagnostic features of the deity include red stripes on either side of the face that pass through the eyes, a unique pointed nose ornament with two elements that point upward on either side of the nose, and a *chicahuaztli* rattle staff (fig. 2.25). The flayed skin is generally corrugated or bumpy in appearance (possibly implying putrefaction) with hands that hang loosely, a sewn incision in the chest, and knotting at the back where it is tied onto the wearer. The face has crescent-shaped or closed eyes and a slack mouth, and often the mouth of the actual deity or impersonator can be seen beneath the flayed skin.

It is commonly believed that Xipe Totec veneration originated in the Gulf Coast, Guerrero, or Oaxaca (Caso and Bernal 1952:249-260; Nicholson 1971b:424). According the *Florentine Codex*, he was a god of the Zapotecs (Sahagún 1950-1982:I:39). Caso and Bernal (1952:249-257) note several Classic Zapotec urns representing an early form of Xipe Totec, replete with the red line through the eyes, diagnostic of later examples of the deity. However, one of the earliest representations of the deity in Central Mexico is a mural fragment from the Zacuala compound of Early Classic Teotihuacan (fig. 2.26; Séjourné 2002 [1959]:26; Taube 1992b:107). The Zacuala Xipe, which is represented only by the face, features stripes that run through the closed eyes and a slack mouth, indicating flayed skin and lifelessness. Figurines that appear frequently at Teotihuacan and wear plain padded masks that only expose the eyes and mouth of the wearer are often misidentified as Xipe

Totec (von Winning 1987:1:147-149), and more accurately portray ritual boxers (Taube and Zender 2009:171-173). A form of Xipe Totec may have been present among the Classic Maya as the god of the number zero (Taube 1992b:107).

In Late Classic (Metepec phase) Teotihuacan, Sigvald Linné (2003 [1934]:83-86) uncovered a large ceramic sculpture of the deity in Xolalpan (fig. 2.27a). The Xolalpan Xipe Totec wears a large triple-knotted headdress, a bowtie-shaped nosepiece similar to that worn by the deity in Late Postclassic representations, and a small square shield, and has the bumpy skin, closed eyes, and mouth visible beneath slack lips characteristic of the deity. What is particularly noteworthy is that it carries a Zapotec "bat-claw" vessel in its right hand.[6] A yet larger hollow fragmentary ceramic Xipe Totec sculpture was found in Late Classic deposits at San Mateo Tezoquipan, midway between Chalco and Amecameca in the southern Basin of Mexico (fig. 2.27b). The sculpture, which is curiously now on display in the Museo Templo Mayor, bears strong resemblance to the Xolalpan example, including the same bowtie-shaped nosepiece, but was found together with a colossal ceramic bat sculpture. A sculpture of unknown provenience illustrated by Sue Scott (1998:fig. 3) portrays a similar Xipe Totec wearing a headdress that is nearly identical to the head of the colossal bat sculpture. Scott (1998) notes the strong similarities between the aforementioned Xipe Totec sculptures and Zapotec Xoo-phase examples, and suggests that they indicate extreme conservatism on behalf of former residents of Teotihuacan's Oaxaca Barrio, or perhaps sustained contact between the Basin of Mexico and the Valley of Oaxaca, even after the collapse of Teotihuacan.

[6] It is worth mentioning that the Zapotec version of the deity was called Yopi. The temple dedicated to Xipe Totec in Aztec Tenochtitlan was called Yopico, perhaps in acknowledgement of a strong ancestral association between the deity and Oaxaca.

At Cacaxtla, the flayed god is represented by three of the Once Señores sculptures. One is nearly complete (fig. 2.28a), one is missing its forearms (fig. 2.28b), and the third is covered with a thick layer of stucco, obscuring the details (fig. 2.28c). The visible faces of the first two examples have the crescent-shaped eye slits and circular mouths found in other representations of the deity. All three wear a headdress consisting of two stacked rectangular forms with two large flaps on either side that do not find ready parallels elsewhere in Mesoamerican art, with the possible exception of turbans that appear on Late Classic Maya rulers. The headdress is surmounted by a conical element decorated with crossed bands, which may be ancestral to the conical headdress often worn by Xipe Totec in Late Postclassic representations. The first example (fig. 2.28a) holds a staff with similarly crossed bands, and while the top of the staff is missing, it may be an early form of the *chicahuaztli* rattle staff carried by the Late Postclassic Xipe Totec (Morales Gómez 1999:159-160). The same figure's headdress differs from the others in that it has three trilobed elements on the front, which are present on the skirt worn by the other example (fig. 2.28b). The trilobed element appears widely in the art of Teotihuacan, Oaxaca, Guerrero, and Late Classic Central Mexico, including Cacaxtla's Battle Mural, and represents blood or a bloody heart (Urcid 1993:146). In this context, the trilobed blood element perhaps further links the deity to human sacrifice. The first example (fig. 2.28a) carries a "copal bag" and has a descending jaguar wearing a knotted scarf on his left arm, a being that appears widely in Mesoamerica during the Late Classic period (Brittenham and Nagao 2014:78). The first example also differs in that it wears a loincloth rather than a skirt, and it has a tubular nosepiece. The tip of the nosepiece of the second example (fig. 2.28b) is broken, although the upturned sides are reminiscent of the Late Postclassic deity's nosepiece.

Deities of War and Sacrifice Related to the Sun and Earth

Nicholson's third major category, "War-Sacrifice-Sanguinary Nourishment of the Sun and the Earth" includes deities related to the sun, Venus, war, death and the underworld, and earth deities. The grouping created by Nicholson is based on that notion that the universe, especially the sun, required nourishment in the form of human hearts and blood in order to maintain proper order (Nicholson 1971b:424). The justification for this grouping is heavily steeped in Aztec imperial ideology and while Late Classic cultures did not likely impose the necessity for human sacrifice to the extent that the Aztec empire did, it is probable that they also practiced human sacrifice on behalf of the deities in these groupings, as was apparently the case with the Late Classic Maya (see Taube 2009b). However, currently there is little direct evidence to justify retaining this category for Late Classic cultures on the basis of human sacrifice and warfare. Certain deities like Huitzilopochtli, the Aztec patron god, and Tlaltecuhtli, the earth goddess, were not present in Late Classic pantheons, but several precursors to Late Postclassic deities in this category can be identified. In fact, a number of iconographic traits that characterize later deities from this category appear to first take recognizable form during the Late Classic. Despite the physical similarities of the Late Postclassic deities to their Late Classic precursors, solar deities, other celestial deities, and death deities shall be discussed separately.

Solar Deities

Tonatiuh was the most widely recognized solar deity of Late Postclassic Central Mexico. He was generally depicted as a warrior, and for the Aztecs, he required nourishment in the form of blood and hearts in order to make his daily journey across the sky. He was associated with the east, the place of the dawning sun, and certain of his costume elements, including jade and feathers, were likely based ultimately on the dress of

Maya divine rulers (Taube 1992b:142; 1994b:225; 2010a:147, 149; 2011b:10; 2015:108-109). In addition to often displaying features such as golden hair and red skin or yellow skin with a single red ring around the eyes, Tonatiuh's most diagnostic trait is the solar disk that is worn at his back or encircles his body, consisting of a series of concentric rings with projecting solar rays (fig. 2.29a). In examples that depict the Warrior Sun God from Early Postclassic Chichén Itzá, the direct precursor to Tonatiuh, and some Late Postclassic examples of the sun god, the solar disk envelopes his entire body (fig. 2.29b).[7] Although Tonatiuh is not expressly recognizable in the art of Late Classic Central Mexico, features such as the solar disk and possibly the association with Maya lords are present in Late Classic representations. Several types of solar deities are recognizable in Late Classic art, often with avian features and other traits derived from Teotihuacan and Maya prototypes.

The solar deity does not appear frequently in the art of Teotihuacan, but he is identifiable as a descending anthropomorphic being in a macaw costume with a stepped pattern on his face (fig. 2.30a; Taube 2005a; 2006:164-165). Paulinyi (2014) notes that this solar deity can also display butterfly attributes, such as a curling proboscis. At Copán, a representation of K'inich Yax K'uk' Mo', the dynastic founder who claimed ties to the Central Mexican metropolis, is based on the Teotihuacan solar macaw (Taube 2005a:41). Like the being from Teotihuacan, the solar macaw at Copán has smaller macaw heads on its wings, as is clearly exemplified on the stucco façade of the Early Classic ballcourt (fig. 2.30b). He is also present on a relief-carved column from Late Classic El Tajín (Taube 2005a:41), which

[7] The being seated within a sun disk in imagery from Chichén Itzá has frequently been referred to as "Captain Sun Disk," based on interpretation of this figure as a mortal military ruler. As he is demonstrably a supernatural being and a precursor to Tonatiuh of Late Postclassic Central Mexico, I refer to him as the "Warrior Sun God" (see Schwartz and Taube 2010), and do not use the Nahuatl name because he appears most frequently in Early Postclassic Maya imagery. He does, however, make a notable appearance in Central Mexico in the Toltec-style murals of Ixtapantongo, Estado de Mexico (fig. 2.52c).

displays a similarly garbed anthropomorphic figure dressed as a macaw, with smaller heads on the wings (fig. 2.30c). Oswaldo Chinchilla Mazariegos (2010) observes that the bird typically identified as the Principal Bird Deity represented on Izapa Stela 25 also bears smaller avian heads on its wings, demonstrating that this being was present on the Late Preclassic southern Pacific Coast of Mesoamerica. The Late Classic Bilbao Monument 3 (fig. 2.31a) depicts a solar deity descending from the maw of a giant serpent (Seler 1892, cited in Chinchilla Mazariegos 2013:84). The descending figure, who is clawed and winged and wears what is likely a solar pectoral, may be a variant of the Teotihuacan solar deity.[8] A human figure dressed as a ballplayer holds a probable offering aloft to the deity, suggesting that prior to the Postclassic period, non-Maya solar deities may have required sacrificial offerings. A winged sun god is present in Maya imagery as well. A Maya-style vessel from Otumba (fig. 2.31b), near Teotihuacan, portrays a Maya sun god with spots on his chin and feathers on his arms transported in the maw of a plumed serpent (Taube 2010b:215-217; 2011b:8-10; 2015:105-106), quite similar to the example on Bilbao Monument 3. The Warrior Sun God at Chichén Itzá and the Late Postclassic Tonatiuh may also retain some avian features, as they often bear black-tipped eagle feathers in their headdresses (Taube 1992b:142).

The Teotihuacan-style macaw solar deity is represented in Late Classic Central Mexico, although it is by no means common. An unfired clay head from Cacaxtla (fig. 2.32a) may represent a Teotihuacan-style solar deity, as feint traces of pigment, incisions, and clay that remain denote that he had a similar stepped design around his mouth to the Teotihuacan entity. The Cacaxtla stucco head also has red-painted hair, which could allude

[8] Alternatively, the "wings" of the figure on Bilbao Monument 3 could be flames.

to fiery brilliance. The filed incisors forming an *ik'* (wind or breath) or "T" shape also relate this sculpture to solar deities, as Maya sun gods typically displays similar dentition (Taube 1992b:52). Although less explicit, the well-known large hacha-shaped macaw "ballcourt marker" from Xochicalco may also refer to the solar deity (fig. 2.32b). Like the solar macaw on the stucco façade of the ballcourt at Copán (fig. 2.30b), the Xochicalco is a monumental representation of a macaw associated with the ballgame.

The earliest known appearance of the solar disk in a form that most closely resembles the Late Postclassic solar disk associated with Tonatiuh can be traced to the Gulf Coast. The Building of the Paintings at Las Higueras features probable solar disks with red and green feathers around the rim painted on the floor of its eastern doorway (see Morante López 2005:191; Taube 2010a:163). Taube (2010a:165; 2015:103) also notes that figures in the jambs of the eastern doorway have probable early versions of the Late Postclassic solar disk on their torsos, with four rays, strikingly similar to portrayals of dart points in Teotihuacan representations, alternating with jade beads, and they are identifiable as sun gods (fig. 2.33a; Morante López 2005:98). Farther south, in the Mixtequilla region of Veracruz, Mound 2 of El Zapotal, which consists of a shrine containing a life-sized skeletal being (see discussion of skeletal death deities below) rendered in unfired clay has two probable solar disks on its sides (fig. 2.33b; Wyllie 2010, see figs. 24 & 25). The disks have what appear to be blossoms on their corners, and the east-west orientation of the structure, emulating the path of the sun, lends further support to the suggestion that they are in fact solar disks. The glyphic sign that accompanies the Maya-style feathered sun god on the aforementioned vessel from Otumba (fig. 2.31b) bears jades and crenellations on its border, and may also be a precursor to the solar disk of the Late Postclassic International Style (Taube 2015:105-106).

Feathered shields and mirrors may serve as the ultimate basis for the solar disk. El Castillo Monument 1 from Cotzumalhuapa (fig. 2.33c) shows a human figure climbing up a serpent maw toward a figure that is undoubtedly the same solar deity represented on Bilbao Monument 3 (fig. 2.31a), who is similarly depicted in the jaws of a reptilian creature (Chinchilla Mazariegos 2013:84). The solar figure wears the same tripartite headdress made of woven material, but on El Castillo Stela 1, he is inside a feathered disk, which could be a precursor to the solar disk at Chichén Itzá and in Late Postclassic Central Mexico (Taube 1994b:224). Another Cotzumalhuapa-style monument likely portrays the same being within a feathered or flaming solar disk (fig. 2.33d), which appears more like the pectoral worn by the solar deity on Bilbao Monument 3. On Structure 10L-16 at Copán, an elaborate sculptural program on Stair Block II features the deceased ruler Yax K'uk' Mo' transfigured as the sun god and dancing within a square feather-rimmed shield (fig. 2.34a; Taube 2004d:286-288). The skeletal heads of centipedes, identifiable by their long, bony snouts, prominent U-shaped nostrils, and pairs of protruding "fangs," emerge from the four corners of the shield, a motif that is commonly seen on Maya solar cartouches and sun god imagery (Grube and Nahm 1994:702; Taube 2003b:410-413; 2004d:286-287). The shield serves as a solar portal, similar to conceptions of mirrors (Taube 2004d:288). At House A of the Palace of Palenque, a series of thirteen cartouches shaped as the four-lobed *k'in* ("sun") sign lines the outer eastern façade. Although now defaced, the cartouches likely once held images of ancestors, as if emerging out of a four-petaled flower (fig. 2.34b). Many of the cartouches have centipede heads emerging from the four corners, much like the square feathered shield at Copán. Taube (2004d:286) notes that in some instances, solar cartouches are worn at the small of the back in Classic Maya representations, similar in concept to Early Postclassic Toltec back mirrors, which analogously feature four fire

serpents in a turquoise rim encircling a pyrite mirror (Taube 1992a:172). An example of the Early Postclassic Toltec sun god from the Upper Temple of the Jaguars at Chichén Itzá has a solar disk with four fret-nosed fire serpents (fig. 2.34c), and it is suggestively similar to Classic Maya solar cartouches with centipedes emerging from the corners. Mirrors, flowers, and the sun are symbolically related across Mesoamerica (Taube 1992a), and the solar disk worn by Tonatiuh may likewise be related to back mirrors and solar portals. The Aztec Calendar Stone, which depicts the head of Tonatiuh emerging through a solar disk, conceptually represents sun passing up through a turquoise-rimmed mirror (Taube 1992a:194).

The Late Classic Nevado de Toluca Stela (fig. 2.35), a monument in clear Teotenango style, may also represent a deity that wears or carries a solar disk.[9] As the name implies, it was found in the crater of the volcano, Nevado de Toluca (Álvarez A. 1983:248), a sacred place in which offerings were deposited to rain deities in two high-altitude lakes (Luna Erreguerena 2000) located to the west of Teotenango. The stela bears a numerical coefficient and the day sign House between its legs (Álvarez A. 1983:248), although it is unclear whether this is the name of the entity depicted or a date of creation for the monument. Although the top of the monument is missing, it portrays a figure standing frontally from the shoulders down with a spoked disk that is highly reminiscent of that worn by the probable solar deity from the contemporaneous Las Higueras (fig. 2.33a) and the Postclassic solar disk. However, the figure on the Nevado de Toluca Stela has feline paws

[9] The stylistic similarity between the Nevado de Toluca Stela and monumental works from Teotenango is apparent when comparing the feline paws to those on the Trapezoidal Stone and the feline petroglyph (see fig. 3.55).

and a tail, rather than the typically avian traits of the Central Mexican solar deities previously discussed.

For the Classic Maya, iconographic and epigraphic evidence indicates that there were multiple solar deities, likely representing different aspects of the sun. The diurnal sun god, referred to in Colonial texts as K'inich Ahau, was closely associated with rulership. The so-called Jaguar God of the Underworld (JGU) is widely regarded as a nocturnal aspect of the sun as it makes its journey through the underworld.[10] The JGU is depicted with spotted feline ears, a central pointed fang, and a thin line that forms beneath the squared eyes and twists to form a "cruller" on the bridge of the nose or the brow (fig. 2.38e). Bearing a solar disk, the being represented on the Nevado de Toluca stela may also represent a feline nocturnal or underworld aspect of the sun (Montero García 2009:72). From the perspective of Teotenango, Nevado de Toluca is due west, and aligned with the setting sun. The mountain itself may have been associated with the being that is represented on the Nevado de Toluca stela.

Basing his argument largely on analogous comparison to Aztec beliefs, Michel Graulich (1998, 2001) posits that the two opposed costumed figures on Cacaxtla's Structure A murals represent rulers dressed as embodiments of the nocturnal, telluric sun (the jaguar-clad figure on the structure's north portico shown in Figure 2.36) and the diurnal sun (the eagle-clad figure on painted on the south portico shown in Figure 2.37). Jaguars and eagles are frequently juxtaposed in Mesoamerica and may carry nocturnal/diurnal

[10] In Late Postclassic Central Mexico, there were also solar deities representing different aspects of the sun, including Tlalchitonatiuh (the sun as it descends in the east), which is depicted as a fanged and goggled mortuary bundle on page 16 of the Codex Borbonicus and page 16 of the Tonalamatl Aubin, a deity referred to as Yohualtecuhtli, which appears in an underworld sequence of the Codex Borgia on page 35 as a black being with similar facial markings to Tonatiuh, and an elderly man with Tonatiuh's facial markings and wearing a crocodile skin with a large red sphere at the belly on the same page of the Borgia.

oppositional connotations. In the *Leyenda de los Soles*, both animals are associated with the creation of the sun (Bierhorst 1992:148). The jaguar-clad north portico figure stands astride a jaguar serpent, whereas the eagle-clad south portico figure stands on a plumed serpent, reiterating the dynamic opposition between the two sides.

Graulich (2001:14-15) observes that the jaguar figure carries a bundle of obsidian-tipped spears, whereas the eagle figure carries a bar with a protruding flint blade, and the two stones are cosmologically related to north and south, respectively. The distinction between flint and obsidian was not arbitrary in Mesoamerican thought. For the Aztecs, obsidian was used for the decapitation and dismemberment of sacrificial victims, whereas flint was used for heart extraction (Henderson 2007:36; Sahagún 1950-1982:III:47), and in second construction phase of Templo Mayor, archaeologists uncovered five obsidian knives beneath the chacmool sculpture on the northern "Tlaloc" shrine of the temple, and five flint knives beneath the sacrificial stone on the southern "Huitzilopochtli" shrine (Graulich 2001:12). Graulich (1997:108) notes that for the Aztecs, obsidian was considered cold and black, whereas flint is warm and white. Taube (2011b:9), also noting the geological opposition in the Structure A murals, argues that the obsidian is black, which corresponds to the west in Mesoamerican color symbolism, and the red flint corresponds to east, and they probably refer to geographical and economical distinctions between Central Mexico and the Maya region (relationally west and east) as the respective places of origin of the two materials.

Although the identification of the figures on the Structure A murals as solar beings has not gained wide acceptance, consideration of the Maya iconographic conventions present in the murals may lend further support Graulich's argument. The flint blade on the south portico mural of Cacaxtla's Structure A serves as the tongue of a centipede that

emerges from the end of the "ceremonial bar" (Taube 2011b:9). The round notch in the blade, as well as the undulating line down the center, is consistent with Classic Maya conventions for portraying flint (see Stone and Zender 2011:82-83).[11] Outside of Cacaxtla, the flint-tipped centipede lance does not appear in Central Mexican, however, it is quite common in Late Classic Maya artwork (fig. 2.38). Examples from sites including Yaxchilan, Bonampak, Naranjo, and Ek' Balam, show rulers wielding flint-tongued bicephalic centipede lances. Centipedes with blades protruding from their mouths also appear as costume elements at Toniná, Piedras Negras, Quirigua, and Copán (Looper 2003:107). Notably, the centipede lance is a weapon wielded by the sun god. On Stela 1 of Yaxchilan (fig. 2.38f), the sun god, marked with k'in signs on his body, sits holding a bar with flint-tongued centipedes emerging from either end. The bar is nearly identical to the example shown on the north portico of Cacaxtla's Structure A.

As previously discussed, centipedes are frequently associated with the Maya sun god, and they appear at the corners of solar cartouches (Taube 2003b:410-413). Taube (2003b:411-413; 2004d:286-287) suggests that centipedes are more specifically associated with the newly born sun as it emerges daily out of the Underworld. Of possible relation, flint comes out of the earth, whereas obsidian may have been considered as celestial in origin (Graulich 2001:12). As a weapon of the sun, the sharp and often jagged flint protruding from the centipede's mouth may be akin to the creature's searing venomous bite. It is noteworthy that in Late Postclassic imagery, the Maya sun god continued to be portrayed with a flint-tipped spear (fig. 2.39), suggesting that the material itself was closely associated

[11] Other methods for portraying flint include a pair of crossed wavy lines (fig. 2.39b), and straight black bands lined on either side by rows of dots (fig. 2.38a).

with the sun god.[12] The fire serpent spearthrower wielded by Huitzilopochtli, the Aztec solar war god, may ultimately derive from the centipede lance as well. Fret-nosed fire serpents at the corners of the sun god's solar disk on the Upper Temple of the Jaguars mural at Chichén Itzá (fig. 2.34) mirror the placement of centipede heads at the corners of Late Classic Maya solar cartouches.

It follows that Late Classic Maya rulers also wield the centipede lance, as they were the earthly manifestation of the solar deity. The most common royal title among Maya kings was the very name of the Classic Maya sun god, *K'inich Ahau* ("sun-faced ruler"). Furthermore, like Yax K'uk' Mo' of Copán, apotheosis as the sun god seems to have been the ultimate fate of some Maya rulers. Ek' Balam Stela 1 shows ruler Ukit K'an Leek Tok' in a solar k'in disk bearing a centipede lance, likely apotheosized as the sun god (Taube 2010a:161; 2015:109). However, the centipede lance also appears to have been associated with another solar being in some instances. On the Tablet of the Sun from Palenque, two crossed centipede lances are shown behind a shield bearing the face of the JGU, and on Naranjo Stela 8, the ruler wears a "cruller," suggesting that he is impersonating the Underworld sun god. What is significant for the purposes of this discussion is that the eagle-clad figure on the Structure A mural of Cacaxtla bears a weapon that is strongly associated with Maya solar deities or with rulers who are closely identified with them.

A significant, yet seldom-discussed detail in the north portico mural of Cacaxtla's Structure A is that the jaguar-clad figure has wings with stylized serpent heads, following Maya conventions. In Maya artwork, serpent wings appear on solar beings. On Early Classic Maya temples, monumental sun god masks are often flanked by a pair of serpent wings, and

[12] Interestingly, a flint knife also protrudes from the mouth of Tonatiuh on the Aztec Calendar Stone, suggesting a similar association between the Late Postclassic Central Mexican sun god and flint.

Late Classic Palenque-style censers continue the tradition of portraying the faces of solar deities with serpent wings. The Principal Bird Deity (PBD), which is a probable precursor to Vucub Caquix, the false sun whose defeat at the hands of the Hero Twins is recounted in the *Popol Vuh* (Tedlock 1996:77-81) is also typically portrayed with serpent wings (Bardawil 1976). Early examples of the solar PBD with serpent wings appear on the Preclassic West Wall mural of San Bartolo, Guatemala, where they exhale breath, likely referring to currents of air formed by the flapping of the bird's wings (Taube, et al. 2010:43). The occurrence of serpent wings on the feline-clad figure at Cacaxtla adds further evidence that it is a Maya-style solar being.

The plumed serpent and jaguar serpent that appear to carry the eagle and jaguar figures on the Cacaxtla Structure A further associate the murals with the sun. As previously noted, the Maya-style vessel from Otumba (fig. 2.31b) shows a Maya avian sun god emerging from the maw of a plumed serpent. This convention is also likely shown on Bilbao Monument 3 (fig. 2.31a), which shows a solar deity emerging from the jaws of a serpent. Likewise, El Castillo Monument 1 may portray a reptilian maw as a vehicle for a solar deity (Schwartz and Taube 2010). The portrayal of plumed serpents as vehicles for the sun and other celestial entities is widespread in Mesoamerica and the American Southwest and can be traced back at least as early as the Mesoamerican Late Preclassic period (Mathiowetz 2011; Schwartz and Taube 2010; Taube 2010a:175-176; 2010b:217; 2011b:9-10; 2015:111-115). A Late Postclassic Mixtec carved bone from Tomb 7 of Monte Albán (fig. 2.40a) exemplifies this convention, as it depicts a pair of entwined feather-crested serpents bearing a solar disk out of what is likely the maw of the earth monster (Taube 2010b:217; 2015:103-104). A jade found in the Cenote of Sacrifice at Chichén Itzá (fig. 2.40b) depicts a sun god with a solar disk holding darts at the ready and sitting upon a serpent with a

feathered tail (Schwartz and Taube 2010). The image on the jade provides a striking parallel to the weapon-wielding Cacaxtla figures, and it is highly probable that the plumed serpent in the Cacaxtla mural transports the solar eagle deity across the diurnal sky while the jaguar serpent carries the feline figure, perhaps along a nocturnal route through the Underworld.

Solar deities are among the most important and widely recognized supernatural beings in Mesoamerican pantheons. They are broadly associated with birds such as the macaw and eagle, and perhaps in the Late Classic period, they became more strongly associated with militarism. The solar disk, a widely recognized solar symbol in Postclassic Mesoamerica, likely took shape in the Late Classic as well. The portico murals of Cacaxtla's Structure A make use of Maya solar imagery to depict what is likely two rulers or perhaps deified ancestors who represent personifications of the nocturnal and diurnal sun. The eagle-clad figure of the southern mural represents a diurnal avian sun god, whereas the northern mural's jaguar-clad figure may be more closely aligned with the Maya Jaguar God of the Underworld. The nocturnal jaguar sun is also likely represented on the Nevado de Toluca stela. The use of conventions such as serpent wings and the centipede lance align the Cacaxtla beings more closely with Maya symbolism, whereas the appearance of serpents that serve as celestial vehicles and oppositions between jaguar and eagle and obsidian and flint make use of more broadly held conceptions in Mesoamerica. Late Postclassic sun gods are by and large display an amalgamation of Maya and Central Mexican traits that converged in the Late Classic and Early Postclassic periods.

Xochipilli

Noting that the cult of the youthful solar-fertility deity Xochipilli was closely aligned with that of the young maize deity Cinteotl in the Late Postclassic, Nicholson places him in his "Rain-Moisture-Agricultural Fertility" category while acknowledging that he could

justifiably be discussed with solar deities (Nicholson 1971b:417-418). As this discussion relies more on visual and symbolic similarities than cult practices in tracing the Late Classic precursors of Late Postclassic deities, I discuss Xochipilli along with other celestial deities, given the strong solar associations of the Late Postclassic iteration of this being. While little can be said about most of the nuanced associations of deities related to Xochipilli during the Late Classic period, it may be possible to identify a precursor to the Late Postclassic Xochipilli based on visual likeness and shared symbolism.

During the Late Postclassic, Xochipilli ("Flower Prince") and closely related deities such as Piltzintecuhtli, Macuilxochitl, and the Macuiltonaleque were associated with the youthful sun and fertility, music, dance, excess, sexual lust and disease, gaming, and hallucinogens (Aguilera 2004; Mathiowetz 2011; Miller and Taube 1993:190; Nicholson 1971b:417-418). The closely linked gods of excess, the Macuiltonaleque and their female consorts the Cihuateteo, embodied undesirable characteristics such chaos, drunkenness, infirmity, and lasciviousness, but were dual-natured and were likewise gods of elite feasting, divination, and curing (Pohl 1998:195-197; 2007). Nanahuatzin, the diseased god who bravely threw himself into the fire at Teotihuacan to become the sun, as described in the *Leyenda de los Soles* (Bierhorst 1992:147-148), is closely related to the Macuiltonaleque. Xochipilli may also be a personification of the human soul, closely aligned with the floral paradisiacal solar afterlife (Séjourné 1976 [1956]:146-147; Taube 2005a:35). The Late Postclassic Xochipilli is strongly associated with the sun in the Codex Borgia, where he often shares attributes with the sun god Tonatiuh (Seler 1991-1998:I:56; Taube 2004a:175). As such, he is probably a manifestation of the young, newly arisen sun at dawn (Mathiowetz 2011). As a god of music, Xochipilli appears on Aztec drums (figs. 2.41a-b). The Borgia also associates Xochipilli with the advent of music on page 37, where he is portrayed seated

within a temple with flowers on the roof while he plays a flute and drum (Taube 2004a:175). The temple is likely set in the eastern solar paradise where the sun rises in the morning. In the Codex Vienna, 7 Flower, the Mixtec counterpart of Xochipilli, holds a psilocybin mushroom and sits opposite the wind god 9 Wind, who plays a bone rasp (fig. 2.41c). Xochipilli's association with music and altered consciousness is also exemplified on an Aztec ceramic drum (fig. 2.41b), in which the deity is depicted as if flying, and is probably in an ecstatic state (Taube 2004a:175).

For the Aztecs and Mixtecs, the Late Postclassic Xochipilli could be represented as a scarlet macaw or a young man in a macaw costume (fig. 2.42a; Aguilera 2004; Pohl 2001:97). A well-known Aztec wooden drum from Malinalco (fig. 2.41a) portrays Xochipilli dressed as the solar macaw, and he is juxtaposed with a date of 4 Motion (Nahui Ollin) on the opposite side, the name of the fifth sun. The drum also portrays jaguars and eagles, which are emblematic of Aztec warrior orders, and vividly illustrates the deity's close association to the sun and music, two themes closely associated with the solar flowery paradise reserved for deceased warriors and rulers. The souls of deceased warriors were manifest as butterflies and nectar-drinking birds, and Flower World was accessed ritually through feasting and music (see Chapter 3). Laurette Séjourné (2002 [1959]) believed that much of the flower, bird, and butterfly imagery on the ceramics and murals of Teotihuacan was related to Xochipilli. Likewise, Taube (2005a) notes the strong visual and conceptual similarities between the macaw-costumed solar deity from Teotihuacan (see above) and the Late Postclassic Xochipilli.

In addition to his macaw form, the Late Postclassic Xochipilli also appeared as an anthropomorphic figure, often with distinctive facial markings and adornments on his head. Xochipilli may be portrayed with a red face and a white butterfly painted around his mouth

(fig. 2.41b), or as a young man without facial paint. Two long tassels or braids may emerge from rosettes on either side of his otherwise bald head, along with a central crest running laterally down the center (fig. 2.42b). The crest, consisting of several vertical bars topped with spherical beads, is an avian feature, derived from the feather crest of the great curassow (*coxcoxtli*) (Pohl 2007:20; Seler 1991-1998:2:168; 264). It is noteworthy that the rosette and tassel also occasionally appear on monkeys (fig. 2.84a), and the beaked wind god (figs. 2.70c, 2.72b-c), suggesting that Xochipilli may share other attributes with these beings. In some instances, Xochipilli's two forms are combined as a macaw with a central crest and lateral tassels emerging from rosettes or disks (fig. 2.42c). The existence of two different forms of this deity suggests the syncretism of two separate traditions, or that two similar deities may have been subsumed under the same title and thus came to share common characteristics.

While the Teotihuacan solar macaw is likely ancestral to the Late Postclassic Xochipilli's avian form, a figure with a crest and lateral tassels that shares attributes with Xochipilli may be an Late Classic precursor to his anthropomorphic form. A Late Classic hollow ceramic head from central Veracruz has the remains of a central crest and lateral disks on either side (fig. 2.43), much like the Late Postclassic Xochipilli. Spots arranged in rosettes on the nose, cheeks, and eyelids may be floral, relating to the flowery solar realm, or perhaps more likely represent disease-ridden pustules or boils, recalling the Late Postclassic Maquiltonaleque and Nanahuatzin. Furthermore, the figure appears bloated or pudgy, with swollen eyelids. A Late-Classic Maya figurine from Jonuta portrays what is likely the same being, with long tassels on either side of his head, swollen eyelids, and face that is covered in bumps (fig. 2.44a). Another Jaina-style figurine has lateral tassels and pursed lips, as if whistling, similar to the Jonuta example, but carries a dance fan (fig. 2.44b),

thus associating him with music and dance like the Late Postclassic Xochipilli. The pursed lips are also present on a Gulf Coast *palma*, which portrays the head of the being with a clearly visible side-tassel and crest, but with a probable floral rosette around the mouth (fig. 2.45a), quite similar in concept to the butterfly design around the mouth on some representations of the Late Postclassic Xochipilli. This being is also represented on figurines from Veracruz, wearing only a loincloth, ear ornaments, and a knotted cord around the neck (fig. 2.45b), and a particularly interesting example bears his likeness and that of perhaps a more sinister being on either side (fig. 2.46). This Janus-like figure perhaps illustrates the dual nature of the Maquiltonaleque as bringers of disease and as healers, and embodiments of both chaos and fate.

Two urns from Cacaxtla portray the probable Late Classic Xochipilli/Macuiltonal. On an example in the Museo Regional de Tlaxcala, two figures with crests and tassels flank a larger central figure that wears a butterfly costume (fig. 2.47). Both of the smaller figures wear only loincloths and necklaces like the aforementioned figurines from the Gulf Coast, but they hold conch-shell trumpets. Decorated with flower blossoms, circular jades, and cacao plants, this vessel probably portrays the flowery solar afterlife and place of the dawning sun, or in other words, the realm of Xochipilli. A very similar example in the Cacaxtla site museum portrays two diminutive figures, differentiated by their coiffures, flanking a figure in a quetzal costume (fig. 2.48). Again, the scene is set within the flowery paradise, and the central figures probably represent deceased rulers or warriors whose souls are transfigured as butterflies and birds.[13] The smaller figures have red-painted bodies, and one holds a probable rattle staff (fig. 2.48a), while the other, with a crest and

[13] A third example in the Cacaxtla site museum portrays a similar scene with a central figure in a butterfly costume, but is damaged and the heads of the smaller figures are missing.

tassel, blows a conch (fig. 2.48b). The flanking figures may be dwarves or hunchbacks, but much like the Macuiltonal Nanahuatzin, whose soul was apotheosized as the sun after an act of bravery and self-sacrifice, they may illustrate that the nobility of the soul may transcend physical appearance or condition. Like Xochipilli, the diminutive figures are linked to the human soul, music, and the floral paradise. The figure on the left side of the vessel from the Cacaxtla site museum (fig. 2.48a) may be a maize god (Karl Taube pers. comm. 2015). With a forelock and tuft of hair on the back of the head, the figure resembles the Classic Maya Tonsured Maize god (see Taube 1985), as well as an example from Teotihuacan recently identified by Taube (2011b:6). The Late Postclassic Central Mexican maize god Cinteotl is closely aligned with Xochipilli (Nicholson 1971b:416-418), and the Maya Maize god is also a being of the solar floral paradise (Saturno, et al. 2005:14-21; Taube 2004b).

The Late Classic precursor to Xochipilli and the Macuiltonaleque may be present in Xochicalco and the southern Basin of Mexico on musical instruments. An applique on a flute from Xochicalco (fig. 2.49a) represents a youthful face with a large conical headdress capped by a rosette and tassel, reminiscent of the tassels on the Late Postclassic Xochipilli. It should be recalled that on page 37 of the Codex Borgia, Xochipilli plays a flute, and that he is represented on musical instruments, analogous to his appearance on Aztec drums of the Late Postclassic. The body of the Xochicalco flute is decorated with S-shaped double spirals, and it is perhaps noteworthy that two types of tortillas, shaped like butterflies and shaped like the letter S, were made as offerings to Xochipilli, according to the *Florentine Codex* (Sahagún 1950-1982:II:32). The association of butterfly-shaped tortillas is apparent, as the butterfly is closely related to the human soul and appears as facial decoration on the Late Postclassic Xochipilli. The S-shape is also clearly emblematic of Xochipilli in this instance, and the shape designated breath and wind in Central Mexico, at least as early as Middle

Formative at Chalcatzingo (Taube 2001:107), not far from Xochicalco.[14] A similar being with T-shaped incisors and an upswept coiffure is represented on a whistle that likely comes from the southern Basin of Mexico (fig. 2.49b). Although they differ slightly in appearance from the examples from Cacaxtla and the Gulf Coast, the examples from Xochicalco and the Basin of Mexico likewise represent youthful, tasseled beings that are associated with music.

Stellar Deities

In Late Postclassic Central Mexico, there were several stellar deities, most of them malevolent or bellicose in nature. The fearsome Tzitzimime were star demons who would inevitably descend and destroy the fifth sun at the end of the current age. Among the Tzitzimime were the Cihuateteo, who were the female counterparts of the Macuiltonaleque. The Cihuateteo and Macuiltonaleque were linked to western and southern cosmological regions, respectively. Like the Macuiltonaleque, the Cihuateteo embodied harmful and negative qualities such as chaos, drunkenness, infirmity, and discord, but could also be petitioned to cure. In Aztec ideology, the Cihuateteo were women who died while giving birth, and as labor was likened to warfare, they were equivalent to the souls of male warriors who fell in battle and rose with the sun each day. At midday, the Cihuateteo accompanied the sun on its westward journey as it descended into the earth at Cihuatlampa, "the place of women." Tlahuizcalpantecuhtli, probably the most significant stellar deity in Late Postclassic Central Mexico, was a malevolent and fearsome warrior god linked to the planet Venus. The appearance of Venus in the sky at certain times was often considered gravely portentous across Mesoamerica. According to some traditions, after the death and cremation of the Toltec ruler Ce Acatl Topiltzin Quetzalcoatl, he was reborn in the east as

[14] In Maya writing, an S-shaped glyph is read *muyal* ("cloud").

Venus the morning star. The rays of the morning star are likened to destructive atlatl darts, and like the Tzitzimime, he may have had an antagonistic relationship with the sun. According to the *Leyenda de los Soles*, a belligerent Tlahuizcalpantecuhtli fires darts at the sun after it is born at Teotihuacan (Bierhorst 1992:149). John Pohl (1998:197) aptly describes Tlahuizcalpantecuhtli as "the arch-Tzitzimitl."

Tlahuizcalpantecuhtli became prominent in Toltec art of the Early Postclassic period. In Late Postclassic art, he appears as a warrior armed with an atlatl, typically with a red and white striped body, flints protruding from his headdress, and either a skeletal or fleshy face often painted black with white dots on the nose, cheeks, forehead, and chin making a quincunx pattern (fig. 2.50). It is possible that the fleshy Tlahuizcalpantecuhtli may represent Venus as the morning star, whereas depictions of the skeletalized deity represent the evening star, or vice versa. A Toltec incised shell portrays a probable representation of the skeletal Tlahuizcalpantecuhtli (fig. 2.51). He has a flint protruding from his nasal cavity, and is dressed as a Toltec warrior, replete with a spearthrower and curved club or "fending stick." At Tula and Chichén Itzá, Tlahuizcalpantecuhtli or figures associated with him typically wear a four-lobed star symbol at their waists (Miller 1989), similar in concept to the solar disk of the sun god (fig. 2.52). The four-lobed star symbol was incorporated into the Late Postclassic international style visual system, and was used to denote stars in nocturnal skybands. The Toltec murals of Ixtapantongo, Estado de Mexico, show an eroded, but distinguishable representation of Tlahuizcalpantecuhtli with lobed star signs at his waist (fig. 2.52c). He stands behind the Warrior Sun God, and is in front of a feathered serpent, which likely serves as his transport. As previously noted, plumed serpents were vehicles for the sun, and they also frequently carry figures associated with stars. A spoked or lobed star that resembles a cross-sectioned conch shell is widespread in

Central Mexico, beginning in the later art of Teotihuacan (Baird 1989; Carlson 1991; Milbrath 1999:186). The Late Classic Maltrata Monument from western Veracruz, for example, clearly depicts a spoked stellar form on the back of a plumed serpent (fig. 2.53). Although anthropomorphic figures associated with stars or the planet Venus appear prior to the Early Postclassic, they tend to lack the overt militarism associated with Tlahuizcalpantecuhtli. Without obvious direct antecedents in the Late Classic, Tlahuizcalpantecuhtli, properly speaking, is probably a phenomenon of the Postclassic period introduced by the Toltecs.

A pair of beings that appears on the east-facing painted pilasters of Cacaxtla's Temple of Venus, both of which wear lobed star symbols at their waists (fig. 2.54), have generally been considered deities related to the planet Venus. Although damaged, the southern painted figure's right breast is visible, and her jaguar-skin skirt also indicates female sex (fig. 2.54a). The male figure on the northern pilaster wears a jaguar skin hip-cloth, and a large segmented scorpion tail hangs between his legs (fig. 2.54b). The scorpion tail may be an additional marker of sex, as it carries phallic connotations in an early Colonial Nahua myth (see Pohl 1998:192; Sigal 2011:7-8) and in Late Classic Maya art (Carlson 1991:23). The male figure stands with arms raised, and holds a spoked object that is typically considered a cross-sectioned conch shell or a star (similar in appearance to the aforementioned star on the Maltrata Monument) in the hand, or more accurately jaguar paw, that remains. He wears a large beaded necklace, an ear ornament, and a ring that is visible around his circular eye. Six white rays that resemble stingray spines project from his head, and his hair is replaced by what appears to be feathers. Both figures are painted blue, wear white, knotted cloth anklets, and have feather-lined arms, suggesting that they are winged and perhaps celestial in nature. Citing personal communication from Diana

Magaloni Kerpel, Claudia Brittenham (2015:94) states that the female figure once held "a white crescent-shaped object with red, blue, and yellow lines hanging down from it" (see also Moreno Juárez 2006:32; Uriarte Castañeda and Velázquez García 2013:682). They stand on top of water bands against red-painted backgrounds, and are framed by a blue borders with cross-sectioned conches.

Aside from the moon, the planet Venus is the brightest celestial body in the night sky. Although this very fact along with its cyclical appearance undoubtedly made it an object of great fascination to Mesoamerican peoples, there is reason to suspect that scholars have embellished its significance among the Classic Maya. The Lamat sign, or glyph T510 according to Thompson's (1991 [1962]) system, has often been assumed to represent Venus. The "Earth-Star" glyphic compound, which includes a T510 sign above a T526 "earth" sign with streams of dots on either side, denotes warfare between polities in Classic Maya texts. The reading of the T510 glyph as "Venus" spawned a body of scholarship that was based on the hypothesis that Maya polities conducted warfare during specific stations of the Venus cycle.[15] However, the more accurate reading of the glyph as *ek'* ("star"), rather than specifically as Venus, renders the Venus warfare hypothesis less plausible (Chinchilla Mazariegos 2005:107, 109-111), and the "Earth-Star" glyph may instead metaphorically relate warfare to a meteor shower (Stuart 1998b:10; Taube 2000b:296). While this is not to imply that Venus was not an important celestial body to the Classic Maya, it does suggest that bellicose associations with planet may be more specifically tied to Tlahuizcalpantecuhtli of the Postclassic period. Furthermore, the lobed symbol that appears on the belts of certain beings (including the Temple of Venus figures at Cacaxtla) and on

[15] For an excellent overview of the history of scholarship devoted to Maya Venus warfare, see Chinchilla Mazariegos 2005:108-111.

nocturnal skybands in Late Postclassic imagery may refer more generally stars, *including* Venus. However, like the *ek'* sign in Maya writing, the lobed star symbol may carry martial symbolism. Claudia Brittenham (2015:106) observes that in addition to the use of the symbol on the belts of the Temple of Venus figures, it also appears on a round shield in the Battle Mural (fig. 2.55).

Other figures appear in with star signs and scorpion tails in Maya art. A Late Classic plate depicts a splayed being with a scorpion tail and a body consisting of the star glyph (fig. 2.56a). The pointed cranium of the being suggests that he may be the Classic Maya Maize God (Brittenham 2015:103; Carlson 1991:24-25).[16] The same being is portrayed on the Skyband Bench from the Sepulturas Group at Copán (Brittenham 2015:103; Šprajc 1996:96; Uriarte Castañeda and Velázquez García 2013:679), with a pointed cranium, scorpion tail, and arm looped through a star glyph (fig. 2.56b). Some authors have suggested that the scorpion-tailed being that resembles the Maize god is associated with agricultural fertility (Milbrath 1999:211; Šprajc 1996:97-98), but there are in fact a number of different Maya deities that are portrayed with scorpion tails in both Classic Maya art and Late Postclassic Maya codices (see Baus de Czitrom 1995:341-343; Chinchilla Mazariegos 2005:116), and the Maya lunar deity also appears with a pointed cranium like the Maize God (Taube 1992b:64-68). Both the Aztecs and the Maya recognized a scorpion constellation (Freidel, et al. 1993:102; Sahagún 1950-1982:VIII:13), but this explanation too seems inadequate, given the variety of deities that can appear with scorpion tails (Chinchilla Mazariegos

[16] Exercising greater caution in interpretation, Oswaldo Chinchilla Mazariegos (2005:116) refers to the figures that appear on the aforementioned plate (fig. 2.56a) and relief from Copán (fig. 2.56b) as a "handsome young man," rather than as the Maize god.

2005:116).[17] The Skyband Bench from Copán shows a series of four celestial deities, which the excavators link to world directions – a diurnal sun god with the east, a lunar deity with the north, a nocturnal sun god with the west, and the scorpion-tailed stellar deity with the south (Webster, et al. 1998:332-333; see also Carlson 1991:24). In other words, the diurnal and nocturnal suns are opposed, and the star is opposed to the Moon.[18] The images on the Copán bench are similar to directional glyphs on the walls of Tomb 12 from the Maya site Río Azul, which opposes a moon glyph and star glyph, and relates them to north and south, respectively (see Adams 1999:56). It should be recalled that the female counterpart of the scorpion-tailed pilaster figure at Cacaxtla once held a crescent-shaped object. Although the pilasters are not correlated to the same directions (the male figure is northern in relation to the southern female figure), the Cacaxtla figures could represent a Maya-style moon/star oppositional pairing. It is, of course, possible that the star that the scorpion-tailed being represents is Venus. In some contemporary Maya traditions, Venus is equated to a scorpion or stinging insect (Milbrath 1999:34).

The Cihuateteo may be traced as early as the Late Classic period. An alternative suggestion for the identities of the Temple of Venus pilaster figures from Cacaxtla is that they could be precursors to the Tzitzimime, malevolent star demons. The Tzitzimime were often represented as spiders that descend from the sky, and in this regard, it does not seem out of place to view the nocturnal scorpion as a demon associated with the night. The female of the sexually differentiated pair could prefigure the Cihuateteo, stellar spirits of

[17] Although in some traditions the scorpion is equivalent to Scorpius of the European zodiac, the association is by no means universal and ethnographically, the animal is linked to different constellations in different traditions (see Milbrath 1999:39, 264).

[18] Interestingly, two aspects of the sun god are opposed on a north-south axis, whereas the deities that personify the star and moon on the east-west axis both resemble the Maize god.

women who died during childbirth and inhabit Cihuatlampa, the western region associated with death. Her sagging breast suggests that she is not a young woman at the peak of sexual fertility.[19] However, in a sense, the Cihuateteo are the antithesis of sexual fertility.

The nineteen life-sized or nearly life-sized sculptures found in Mound 2 of the Late Classic site of El Zapotal, in the Mixtequilla region of Veracruz (fig. 2.57a), were identified as Cihuateteo (Torres Guzmán, et al. 1975). The sculptures were arranged as if in a procession around an elaborate tableau of an enthroned skeletal death god made of unfired clay (see below). The El Zapotal figures have closed eyes and slack mouths, implying death, and are bare-breasted, but wear long skirts with serpent belts, jewelry, and elaborate headdresses. While these features alone do not justify identification of the figures as star goddesses, two probable solar disks painted on either side of the death god's adoratorio suggest that the figures arranged around the scene might be associated with the rising and setting of the sun, and additional paintings on the tableau apparently portray a pregnant woman and a woman dressed similarly to the standing sculptures but armed with a spear (Wyllie 2010:218-219). A seated figure from El Zapotal (fig. 2.57b) has been identified as Tlazolteotl (Ladrón de Guevara 2012:93), but is perhaps more closely related to the Cihuateteo. The bare-breasted figure wears a long skirt, jewelry, and a serpent belt, like the figures from the death god tableau, but does not have closed eyes. She is, however, associated with a large five-spoked object, quite similar in form to the star carried by the plumed serpent on the Maltrata Monument (fig. 2.53). A small fanged creature that is most likely a bat serves as her headdress, which itself has nocturnal and perhaps deathly and celestial connotations and probably denotes her as a goddess of the night sky. Although it is

[19] The aged Maya Goddess O may also be related to the Tzitzimime (Taube 1992b:101).

by no means certain that these beings carried the same connotations as the dangerous Cihuateteo of the Late Postclassic, they are possible antecedents to the star deities of the Postclassic period.

Skeletal Deities

During the Late Postclassic period, there were well-developed cults related to death deities in Central Mexico. Among the foremost was that of Mictlantecuhtli, who presided over the underworld, Mictlan, with his female counterpart, Mictecacihuatl (or Mictlancihuatl). Deities of this classification typically take the form of articulated, animate fleshless human skeletons in visual representations. The skeletal Mictlantecuhtli is typically shown with a ruff of hair that is festooned with "death eyes," a heart and lungs or a liver that hangs down beneath the ribcage, paper costume elements, and a flint that protrudes from the nasal cavity (fig. 2.58a). The nasal flint is also present in a skeletal being that is most likely an Early Postclassic version of Tlahuizcalpantecuhtli, but could conceivably be a precursor to the Late Postclassic Mictlantecuhtli depicted as a Toltec-style warrior (fig. 2.51). A Classic and Postclassic Maya counterpart to Mictlantecuhtli, refered to as God A, also has the ruff of hair with eyeballs, as well as a "death collar" of the same material (fig. 2.58b), which frequently appears on Maya death deities (Taube 1992b:13). Unlike Mictlantecuhtli, God A was not the paramount lord of the Underworld.

Identification of a death god or deities specifically related to death is difficult in Central Mexico prior to the Postclassic, owing to the relative scarcity of skeletal imagery and difficulties inherent in distinguishing supernatural skeletal beings from deceased individuals and bones as display or decoration. One of at least two cylindrical sculptures from Teotihuacan representing a skull with a feathered headdress and ear ornaments, and a conical ribcage (fig. 2.59; see Solís 2009:Fig. 181 for another example) may be

representations of a death deity, or could likewise represent mortuary bundles, given their form.[20] Two large skulls from Teotihuacan were found on a platform facing the Temple of the Sun (Estrada Reynoso 2009). Attached to the backs of the skulls are knotted cloths with feathery projections that have been interpreted as flames (fig. 2.60a; Estrada Reynoso 2009). The same skull-and-knot arrangement appears on the base of one of the aforementioned cylindrical sculptures from Teotihuacan (see Umberger 1987a:Fig. 25). The knots may relate the skulls to trophy heads (Taube pers. comm. 2015). The large skull reliefs have lolling tongues projecting from their mouths and large non-naturalistic pointed noses that could be precursors to the pointed flints jutting out of the noses of representations of Mictlantecuhtli during the Postclassic.

A plaque from Late Classic Cantona portrays a skull in profile with large, curving nose and a looped and knotted cloth on the back (fig. 2.60b), much like the skulls from Teotihuacan, upon which the plaque from Cantona is undoubtedly based. The projections behind the knot are petal-shaped, and could represent feathers rather than flames. A relief sculpture fragment from the Classic-period site of Vista Hermosa, Veracruz (fig. 2.61) shows a fleshless ribcage and bent arm holding a severed head (Pascual Soto 2009:85). The back or arm of the skeletal being has similar feathery projections to the large skulls from Teotihuacan, and it may represent the same entity. The association of decapitation with this figure suggests that the skeletal being at Teotihuacan may have likewise been a deity associated with human sacrifice.

[20] Aztec sculptors apparently copied this sculpture type, but used the form to represent a skeletalized Coyolxauhqui and several cihuateteo found near the corner of 16 de Septiembre and Isabel la Católica in downtown Mexico City (Umberger 1987:86-87).

On the Gulf Coast during the Late Classic, skeletal beings are particularly prominent in artwork. A striking example of a probable Gulf Coast skeletal death deity was found at Mound 2 of El Zapotal, in the Mixtequilla region of south-central Veracruz, which features an enthroned life-sized skeletal figure with an elaborate headdress, made of unfired clay (fig. 2.62a). The figure was the focal point of a tableau, which included more than 20 life-sized terracotta female sculptures in a procession around him, several human burials, and ceramic artifacts including *caritas sonrientes* figures (Wyllie 2010:210-212). The excavators relate the enthroned skeleton to Mictlantecuhtli (Torres Guzmán, et al. 1975), and Cherra Wyllie (2008:236-237; 2010) interprets the tableau as a recreation of an underworld royal court with the death god seated as ruler. Farther north, at El Tajín, supernatural skeletal beings appear in conjunction with the ballgame. Tajín Sculpture 1, a polygonal monument found in Structure 5's fill, represents a being with ear ornaments, a headdres, and a fleshless face (fig. 2.62b). Michael Kampen (1972:7) notes that the style of the monument's carving is reminiscent of that found on ballgame equipment. The monument's form, triangular in cross-section, also resembles the shape of some Classic Veracruz palmas. Four of the six relief-carved panels of the South Ballcourt depict a skeletal being rising out of a vessel. On Panel 4 (fig. 2.62c), the skeletal being rises out of a vessel on the left, while another (perhaps the same being) descends upon a victim as he is decapitated as if to receive the sacrifice.

Skeletal beings are also prevalent in the Late Classic Cotzumalhuapa-style art and writing of the southern coastal piedmont of Guatemala. The Cotzumalhuapa Death God is depicted with such features as a headdress with crossed bands, hair decorated with circular objects which may be the equivalent of extruded eyeballs on other Mesoamerican death deities, and striped triangular hornlike elements that project laterally from the sides of the

head (figs. 2.31a, 2.63a, & 2.63c). The head of the death god appears as the calendrical day sign Death on a series of carved paving stones that lined Cotzumalhuapa's causeways, including El Baúl Monument 67 (fig. 2.63a; Chinchilla Mazariegos 2011:56-57). Frontal and glyphic representations show the being with a protruding tongue (fig. 2.63a), reminiscent of the death god from Teotihuacan. Like the death deity from El Tajín, the Cotzumalhuapa Death God attends ballgame-related sacrifices, as exemplified in Bilbao Monument 3, in which he is dressed as a ballplayer and standing next to another player who is presumably raising an offering to the sun god (fig. 2.31a; Chinchilla Mazariegos 2009:151).

A curious skeletal being with avian characteristics also appears as both a calendrical day sign and in figural form, visible in the upper left corner of Bilbao Monument 1 (fig. 2.63b). The figure, shown carrying a severed head, has a fleshless human face with a hooked beak in place of the nose, a feathery ruff on the backs of its arms, and probable tail feathers. Oswaldo Chinchilla Mazariegos (2011:53-54) suggests as a day sign, the "Skull Bird" may occupy the 16th position, equivalent to the Late Postclassic Central Mexican day sign Vulture. This interpretation seems highly probable, given the vulture's association with death as a carrion eater, and its featherless head, which perhaps gives it a "defleshed" appearance. The Cotzumalhuapa Death God is also portrayed as a winged being on Bilbao Monument 13 (fig. 2.63c) (Houston, et al. 2006:238-241). The triangular hornlike projections on the death god's head may be an additional avian trait, as they resemble the ear tufts of owls. Owls are widely associated with death, darkness, fright, and the underworld in Mesoamerica (Miller and Taube 1993:128; Stone and Zender 2011:213). The avian features of the death gods of Cotzumalhuapa may also explain the feathery projections on the death gods from Teotihuacan, Vista Hermosa, and Cantona (figs. 2.60a-b & 2.61).

Mesoamerican skeletal death gods are strongly associated with human sacrifice, especially the act of decapitation. As previously noted, the death deity represented on the Vista Hermosa relief fragment carries a severed head (fig. 2.61), and the nearby but later South Ballcourt panels from El Tajín (fig. 2.62c) place the skeletal deity into a narrative scene in which he oversees the sacrifice of a ballplayer and appears to descend upon the victim during the act of decapitation. The Cotzumalguapa Death God attends sacrificial acts involving figures dressed in ballgame gear (fig. 2.31a), and on Bilbao Monument 1, the beaked Skull Bird, another skeletal being, and two other figures carry away severed heads as another victim is decapitated by an anthropomorphic character wearing ballgame equipment (fig. 2.63a).

God A also appears in Classic and Postclassic Maya sacrifice scenes (Taube 1992b:13), and on a stucco façade at Toniná, the death deity holds a severed head (fig. 2.58b). The flint blades protruding from the nasal cavities of Postclassic Central Mexican death deities also associate them with sacrifice. In the Codex Borgia, Mictlantecuhtli is generally portrayed with a circular hole in the side of his skull (fig. 2.58a), which likely associates him with the tzompantli, upon which skulls of sacrificial victims were displayed side-by-side, pierced through by wooden rods (see Chapter 4). The skeletal Tlahuizcalpantecuhtli may also be a head-taker, and is shown kneeling on top of a tzompantli laden with skulls on page 19 of the Codex Borgia (fig.2.50). This aspect of the Venus god may also derive from the skeletal death deities of prior cultures. The strong sacrificial associations with Late Classic skeletal deities suggest that these deities are direct precursors to death gods of the Postclassic.

Including the example from Cantona discussed above (fig. 2.60b), there are few representations of skeletal death deities in Late Classic Central Mexico. The relative lack of

such imagery is surprising, especially given the prominent roles of death deities in the art of El Tajín and the Gulf Coast. A notable exception is the site of San Miguel Ixtapan, Estado de México, situated strategically between Guerrero and Valle de Bravo, two regions that were important during the Late Classic period, although remain poorly understood. Several stylized ceramic skulls were found that share common headdresses consisting of two horizontal bands and a central conical element, similar to the paper headdress worn by Mictlantecuhtli, and a cord wrapped around the perimiter of the face and chin (fig. 2.64). While the relationship of this being to other Mesoamerican death deities is unclear, it suggests that a death deity was an important figure in the local pantheon at San Miguel Ixtapan.

Stela 1 from the site of Cohimbre in Guerrero's Costa Chica region (see Gutiérrez and Forde 2015; Gutiérrez Mendoza 2007:364) portrays a skeletal figure that has a similar "eye mask" appearance to the examples from San Miguel Ixtapan (fig. 2.65). Pye and Gutiérrez (2007:242) suggest that the Cohimbre Stela may be related to death deities that appear in the art of Cotzumalhuapa, although Gutiérrez and Forde (2015) believe that the stela postdates the art of nearby Late Classic Piedra Labrada.[21] Given the probable existence of a trade route that extended along the southern Pacific coast from Guerrero (Pye and Gutiérrez 2007), it is quite possible that artwork of the Costa Chica of Guerrero is related to that of Cotzumalhuapa. The prominence of death deities at San Miguel Ixtapan appears to be more closely related to the cultural traditions of the Costa Chica than to Teotenango or

[21] Curiously, the skeletal figure represented in Cohimbre Stela 1 appears to be standing above a jar filled with water, which recalls the death deity which seems to emerge from a water vessel on four of the six South Ballcourt panels from El Tajín (fig. 2.62c).

other Late Classic sites in Estado de Mexico, and it may be a northern extension of Late Classic Guerrero's coastal tradition.

Wind Gods

During the Late Postclassic period, wind deities were among the most important supernatural beings. The Central Mexican wind deity, Ehecatl, became fused in with the historic Toltec ruler-priest Topiltzin Quetzalcoatl (Nicholson 2001), and cult veneration of this deity and his various manifestations was widespread throughout Mesoamerica. Beyond his role as a wind deity, he was considered a world-creator, arch-priest, and "divine culture hero" (Nicholson 1971b:428-430). Due to the complexity of this deity, Nicholson discusses Ehecatl-Quetzalcoatl in a separate category, rather than placing him along with deities of agricultural fertility. In artwork, the Central Mexican Ehecatl-Quetzalcoatl and his Mixtec counterpart 9 Wind are readily identifiable by a long, red buccal mask that resembles the beak of a bird, topped by a squared nose-like projection, and he wears a priestly conical hat. The Late Postclassic manifestation of the deity is also often bearded and has a protruding fang (fig. 2.66). Ehecatl-Quetzalcoatl wears a cross-sectioned conch shell at his chest, emblematic of wind and breath (Taube 2001:111-112). An early example of this trait appears on a Late Classic Gulf Coast *palma*, on a being that may be an early anthropomorphic representation of this deity (Taube 1986:59). Although Ehecatl-Quetzalcoatl was particularly prominent in the Late Postclassic period, the veneration of wind deities is widespread and of great antiquity in Mesoamerica.

A duckbilled anthropomorphic being that is likely ancestral to the Late Postclassic Ehecatl-Quetzalcoatl is among the oldest recognizable deities in Mesoamerica (Taube 2004c:169-173; n.d.:22; Taube, et al. 2010:49), and demonstrates remarkable continuity in the Gulf Coast and Maya Lowlands. Predating the Olmec horizon, an effigy vessel fragment

from the Locona phase (1400-1250 BC) of Cuauhtémoc, Chiapas takes the form of an otherwise human face with a long duckbill beneath the nose (fig. 2.67a), and is the earliest known example of this being (Rosenswig 2003; Taube, et al. 2010:49). Taube (2004c:169-173) describes a Middle Formative Olmec jade pendant that is similar in appearance to the older vessel fragment (fig. 2.67b). The duckbilled being is represented in monumental form on the Middle Formative Altar 7 of La Venta (fig. 2.67c), in which an anthropomorphic head with ear ornaments and a beak emerges from a central niche (Taube 2004c:172). The duckbilled deity continued to be an important figure during the Late Preclassic and Early Classic periods. Examples appear on Stela 5 of Izapa (fig. 2.68a; Clark 1999:27), the North Wall mural of San Bartolo (fig. 2.68b; Taube, et al. 2010:48-52), and the well-known greenstone Tuxtla Statuette (fig. 2.68c) from the Gulf Coast, bearing a long-count date correlated to AD 162. The Tuxtla Statuette displays a combination of human and avian features, with a human face, the buccal mask in the form of a beak, bird feet, and wings that enfold the body. The association of the duckbilled deity with wind for the Late Classic Maya is supported by iconographic and textual evidence. A seated figure with a long bill on a Late Classic vessel is decorated with T-shaped *ik'* ("wind" or "breath") symbols on its arm and lower back (fig. 2.69a; Taube, et al. 2010:49). A ballplayer depicted on a carved step from Yaxchilan's Structure 33 (fig. 2.69b) wears a long-billed mask, and David Stuart notes that the accompanying text describes the being as **IK' K'UH** ("wind god") (Taube 2004c:173; Taube, et al. 2010:49).

Wind deities are strongly linked to music in Mesoamerican symbolism (Taube 2001:102-103; 2004b:74; n.d.:22-23). Taube (Taube, et al. 2010:48) notes that on the Preclassic example from the San Bartolo North Wall mural (fig. 2.68b), an undulating line that extends from above the beak suggests that he is singing, relating this being to music

from an early date. Stela 19 of Seibal depicts a figure wearing a buccal mask similar to that of the Late Postclassic Ehecatl (fig. 2.70a). The figure performs hand-scattering, and a curling speech scroll issuing from the figure's mouth may indicate song. Late Postclassic wind gods were also associated with music, as a variant of Ehecatl referred to as "Stripe Eye" retrieves and opens a bundle filled with musical instruments in the middle pages of the Codex Borgia, probably demonstrating the mythical birth of music (Taube 2001:114-115; 2004a:175; n.d.:17-19). On page 24 of the Codex Vienna (fig. 2.41c), 9 Wind is portrayed singing and playing a bone rasp opposite 7 Flower, the Mixtec equivalent of Xochipilli (Taube n.d.:23). In the lower register of Seibal Stela 3 (fig. 2.70b), a duckbilled being readily identifiable as the Maya wind god holds a rattle and sits next to a drum (Taube n.d.:22-23). A Jaina-style figurine in the Museo Nacional de Antropología (fig. 2.70c) has a feather ruff or beard beneath his bill and human nose, quite similar to Ehecatl and 9 Wind, and it may be a direct precursor to the Late Postclassic wind god. The figure holds a turtle shell drum in one hand and an antler in the other, perhaps considered primordial musical instruments and linking the Maya wind god to the origin of music. Furthermore, the turtle shell drum may have been played in rainmaking ceremonies (Taube, et al. 2010:76), thus linking the Maya wind god and music to the act of ceremonially summoning the rain.

Prior to the Postclassic, representations of the beaked wind god are scarce in Central Mexico. A slate mirror back, found in recent excavations in a tunnel under the Temple of Quetzalcoatl portrays a rare early example of this being (fig. 2.71a). The volutes on the object suggest that it originates from South-Central Veracruz (see Proskouriakoff 1971; Stark 1998), and it features an anthropomorphic figure with a beak and arms outstretched as if flying. Although it may have been manufactured on the Gulf Coast, the example from Teotihuacan is the earliest known appearance of the duckbilled deity in

Central Mexico. A jadeite object found at Cacaxtla (fig. 2.71b) may represent the Maya wind god. Roughly conical in shape, the object represents a bird in a resting posture with wings folded around the chest and roughly carved feet pointing out from beneath its body. The details of the head are difficult to discern, but a large bill rests upon the chest, and a pair of eyes and a possible anthropomorphic nose on the upper portion of the face suggest that the bill is actually a buccal mask. The composition of the piece is remarkably similar to the Tuxtla Statuette (fig. 2.68c), although it is probably of a much later date. Alternatively, the conical element on the top of the piece could be a beak, denoting the pendent as a bird, although possibly not the wind god. The mottled grey and "apple-green" color of the stone suggests that it is not of local manufacture or from the Gulf Coast, but more likely was an import from the Maya region.

Representations of the duckbilled deity appear in the Late Classic period of the Gulf Coast and Oaxaca, and it is perhaps not surprising that the being appears on wind instruments. As the musician produces sound by blowing, wind instruments unite music, breath, and wind, all concepts associated with the wind god. A small ceramic whistle with lateral holes for suspension on display in the Museo Regional de San Andrés Tuxtla, Veracruz (fig. 2.72a), represents the head of the duckbilled wind god. Curling volutes on either side of the bill, which sits beneath an anthropomorphic nose suggest wind or breath, and are perhaps a visual representation of the sound emitted from the whistle when played. A unique triple flute from the Museo Arqueológico de Xalapa features a centrally placed head wearing a buccal mask (fig. 2.72b). The mask is strikingly similar to that of the Late Postclassic Ehecatl. The face differs in that it has a braid or feather on one side of the head, a central crest, three horizontal elements that extend from the right side. The crest and braid on the head are similar to the Late Classic Xochipilli, and as both figures are related to

music, the hairstyle may have been associated with musicians. As Gonzalo Sánchez Santiago (2009:63-69) notes, several mold-made heads of a being wearing a buccal mask that decorated transverse ocarinas undoubtedly represent a Ñuiñe version of the wind god (fig. 2.72c). The buccal masks are more geometric and as such are more similar to that of Ehecatl/9 Wind of the Late Postclassic, and as these Ñuiñe representations come from northern Oaxaca, it is possible that they are direct precursors to the Late Postclassic wind deity as he is represented in Mixteca-Puebla Style codices such as the Borgia and Vienna from the region of Oaxaca, Puebla, and Tlaxcala. They also have coiffures similar to the aforementioned triple flute in the Museo Arqueológico de Xalapa, suggesting influence between the Ñuiñe and the Gulf Coast.

Aside from the aforementioned possible example in the form of a jade from Cacaxtla, there are few examples of the duckbilled wind god in Late Classic Central Mexico. One such example is in the collection of the Centro Regional de Cultura de Chalco "Chimalpahin," and likely comes from the southern Basin of Mexico (fig. 2.73a). Although fragmentary, the piece resembles Late Classic Maya examples of the wind god and is identifiable by its conical bill that resembles enlarged lips (compare to fig. 2.70b), and the presence of an anthropomorphic nose or boss above the bill. The concave back of the piece suggests hat it may have adorned the cylindrical sound chamber of a flute. A flute from the site of Ojo de Agua (fig. 2.73b), near Teotenango, is less readily identifiable as the wind god, but nonetheless shares characteristics with other examples. The avian figure represented wears a large headdress and ear ornaments, and the long beak terminating in a hooked premaxillary nail is reminiscent of certain aquatic birds. The inhabitants of Ojo de Agua and Teotenango may have envisioned a beaked wind god associated with wind and music as a bird readily visible in the lacustrine environment near the sites. Known as *ecatototl* ("wind

bird") in Nahuatl (O'Mack 1991:13; Taube 2001:112), the hooded merganser (*Lophodytes cucullatus*) is a likely candidate, sharing both the long, hooked bill and a crest of plumage similar to the headdress. In fact, Scott O'Mack (1991:13-15) argues that the Hooded Merganser is the bird from which Ehecatl derives his distinctive markings and avian traits. The production of wind instruments bearing the likeness of the wind god continued through the Late Postclassic period, as exemplified by an Aztec flute in the Museo Nacional de Antropología which bears the mask and headdress of Ehecatl on its distal aperture (fig. 2.74).

In addition to the duck-billed deity, the Classic Maya recognized a fully anthropomorphic wind god who embodied the soul as fragrant breath (fig. 2.75a)(Taube 2004b:73-78). Taube (2004b:73) describes Classic and Postclassic manifestations of this deity, which correlate to the Late Postclassic God H in the Schellhas system, as "handsome young men with long hair, a segmented, woven headband, and a prominent floral element on the brow," and often bearing *ik'* (wind) signs on the cheek and earspool. Like Ehecatl, the long-haired wind god is also a musician (Taube 2004b:74). As exemplified in Figure 2.75a, in which the wind god emerges from the mouth of a fish, a mythic episode involves the capture of the wind god by the rain god Chahk (Taube 2004b:74-78). Taube (pers. comm. 2015) suggests that the long-haired Maya wind god appears on the south jamb mural of Structure A at Cacaxtla (fig. 2.75b). In support of Taube's observation, features that may denote the Cacaxtla figure as the anthropomorphic Maya wind god include his youthful beauty, long red hair, and prominent jade ornaments, including a diadem, an ear spool that may represent an *ik'* sign, and jade breath beads. Furthermore, he emerges from a conch shell, a prevalent symbol of breath and wind in Mesoamerica (Taube 2001). In much the

same manner, the fish from which the Maya wind god emerges in Figure 2.75a passes through a cross-sectioned conch shell.

Merchant Gods

The Late Postclassic Yacatecuhtli, god of commerce and patron deity of merchants, does not appear to share obvious cult associations with other deities, and for this reason, Nicholson (1971b:430) places him in a distinct category. Yacatecuhtli ("nose lord," or "lord of the vanguard") is recognizable in Late Postclassic imagery by his long, protruding nose, staff, and merchant's pack (fig. 2.76). Durán (1971:129, 138-139) mentions the existence of a prominent merchants' cult devoted to Ehecatl-Quetzalcoatl at Cholula, and Nicholson (2001:107) notes that Durán gives Yacatl as a second name for the deity. Based on similarities to the merchants' cult at Cholula, Acosta Saignes (1945, cited in O'Mack 1991) argued that Yacatecuhtli, the patron deity of the merchants of Tenochtitlan-Tlatelolco, was an avatar of Quetzalcoatl. This association has been widely accepted, however others believe that Yacatecuhtli is more closely related to Tezcatlipoca than to the wind god (O'Mack 1991; Seler 1991-1998, III:300-301).[22] Several authors (Schellhas 1904:36; Seler 1991-1998, III:301; Taube 1992b:88; Thompson 1970) have also noted the similarity of Yacatecuhtli to the Maya merchant deity Ek' Chuah, venerated around the time of Spanish contact. Ek' Chuah has been identified with both God L and God M of the Schellhas classification system (Coe 1973:14; Gillespie and Joyce 1998; Taube 1992b:90-92).

[22] If veneration of Yacatecuhtli as a merchant deity was specific to Tenochtitlan-Tlatelolco, that does not explain his prominent appearance in the pre-Hispanic codices of the Borgia Group, which most likely originate from the Puebla-Tlaxcala region. Furthermore, the strong resemblance of Yacatecuhtli to an unmasked Ehecatl-Quetzalcoatl in examples such as Codex Fejérváry-Mayer p. 36 (fig. 2.76), including the beard and vertical stripe through the eye, suggest a strong affinity with the wind deity. However, it is entirely possible that the association of merchant deity cults with Tezcatlipoca and Ehecatl-Quetzalcoatl at the respective cities is an example of regional syncretism with locally prominent deities.

There are no known depictions of Yacatecuhtli, the long-nosed god of commerce, in the art of the Late Classic period. However, the Classic Maya merchant deity, God L, identified by Taube (1992b:85), appears prominently in the Red Temple mural of Cacaxtla (fig. 2.77).[23] The Cacaxtla manifestation of this being is nearly identical to representations of God L in Late Classic Maya imagery (see figs. 2.78a-b). Salient features shared between the Cacaxtla and Maya examples include an aged appearance with a chapfallen mouth, a large "Roman" nose, a squared eye with a curling pupil (typical of Maya Underworld deities), a topknot of hair, a patch of jaguar skin on his chin and other jaguar features (including jaguar mittens and boots in the Cacaxtla example) such as a jaguar ear, and displays of wealth including lavish jade jewelry, a fine woven shawl, and a jaguar-skin hipcloth. God L typically wears a broad, feathered sombrero topped with a "Moan bird." The sombrero rests on the back of the merchant's pack in the Cacaxtla mural, but lacks the feathers typical of Classic Maya representations. As a merchant, God L sometimes has a pack for carrying goods (fig. 2.78c) and he often smokes cigars (figs. 2.78a, c, & d). Like travelers, he sometimes wears a long loincloth (Gillespie and Joyce 1998:284-285).

The Classic Maya God L often sits enthroned in a royal palace or holds court over other Underworld deities. He is considered to be a god of wealth and the lord of the Underworld (Coe 1973:14; 1978:16). Taube (1992b:84-85) notes that during the Late Classic, God L appears more frequently in the economically wealthy and fertile western Maya Lowlands. Patricia McAnany (2010:256-257) argues that a shift toward representations of God L as a traveling merchant may reflect a shift toward a more mercantile-based economy, and escalating tension between a burgeoning merchant class

[23] John Carlson (1991:44) identified the figure on the Red Temple mural as an impersonator of God L.

and Maya elites. In addition to the Cacaxtla example, Taube (1992b:85, fig. 42c) notes that God L that appears outside of the Maya region as an aged figure with a staff wearing his avian hat on a Rio Blanco vessel from southern Veracruz. As a patron of commerce, it is fitting that representations of God L would appear outside of the Maya region in areas visited by traveling Maya merchants.

While the God L shown in the Red Temple mural of Cacaxtla is depicted in a manner entirely consistent with Late Classic Maya examples, he bears a name of 4 Dog, in the Central Mexican Late Classic script and tradition of bestowing names based on the 260-day calendar. The lack of Maya written expressions on the otherwise iconographically and stylistically Maya paintings is a central paradox of the Cacaxtla murals. For the Classic Maya, Zender and Guenter (2003:107) translate God L's name as Ik'-(Y)ak'ab'-Ta[h]n ("Black His Dark Heart" or "Black is the darkness of the heart") based on an inscription on the Vase of the Seven Gods, although this could just as well serve as an epithet for the deity.

It is curious that a representation of the Maya merchant deity was depicted prominently in close proximity to Cholula, which would be a major cult center for merchants in subsequent centuries. Also of note, the very name of Cacaxtla derives from the Nahuatl "Place of the Merchant's Pack" (Carlson 1991:46). On one level, the appearance of God L in the Red Temple mural exalts the trade relations that Cacaxtla had with distant regions. Situated between the Gulf Coast and the Basin of Mexico, and near the pass between the imposing peaks of Popocatepetl and Iztaccihuatl, Cacaxtla occupied a strategic location for controlling the movement of goods. That the scene is set within the Maya Lowlands is suggested by cacao plants and a quetzal in front of the deity and the plumed serpent on which he stands (Schaafsma and Taube 2006:271; Taube 2006:158). The journey taken by God L in the mural essentially mimics the route taken by Maya merchants

to the highlands of Central Mexico. On the other hand, the scene may also represent the insertion of a Maya god of commerce into the Central Mexican pantheon by the Olmeca-Xicallanca as long-distance mercantilism became a more essential component of Mesoamerican economies. God L may be a precursor to the Late Postclassic Central Mexican merchant god. One of God L's most prominent features is his Roman nose, which may have been the basis for the exaggeratedly pointed and essentialized nose of Yacatecuhtli. The Classic Maya God L appears to serve as the basis for the Late Postclassic Gods L and M. God M, the long-nosed merchant god, does not appear in the Maya region until the Postclassic (Taube 1992b:90), and he may have been reintroduced to the Maya region after God L became incorporated into the Central Mexican pantheon.

Deities Not Represented in Late Postclassic Pantheons

The Fat God

An obese figure known as the Fat God is among the most widely occurring beings in Mesoamerican art. Carved stone images of the Fat God are recognizable by a prominent belly with protruding navel, arms on either side of the stomach, a seated posture and often missing their legs, usually a lack of sexual attributes, and a chubby face with closed eyes and often lips pursed as if blowing (Chinchilla Mazariegos 2002:10). Representations of this being date back to the Early Formative (Taube 2004c:157), with a large concentration of sculptures along the central Pacific coast of Guatemala dating to the Late Preclassic (fig. 2.79a; Chinchilla Mazariegos 2002:9), and they are found across Mesoamerica through the Classic period (Chinchilla Mazariegos 2002; Miller and Taube 1993:86; Parsons 1986:41; Taube 2004c:158-159; von Winning 1987:I:141-145). Despite the ubiquity of this figure in earlier time periods, there is no apparent equivalent to this deity in Late Postclassic pantheons, and he remains poorly understood.

Based on what is known of the Fat God, he is a physical manifestation of death and gluttony. Lee Parsons (1986:45) noted that the closed, puffy eyes indicate that Preclassic Fat Gods are dead. A *wahy* (fig. 2.79b) that shows up on vessels labeled *sitz' winik* ("gluttony man") or *sitz' kimi* ("gluttony death") (Grube and Nahm 1994:709-710) is identifiable as a Late Classic Maya manifestation of the Fat God (Miller and Taube 1993:86; Taube 2004c:159). In the illustrated example, the figure wears a "death collar" around his neck, a device that appears frequently on Maya death-related figures (see fig. 2.58b). With a clear association with overeating, the Fat God may also be related to the three-stone cooking hearth (Taube 1998:fn 7), and he also appears in threes and on the bases of Teotihuacan ceramic kitchen braziers (Taube 2004c:161). As a character who is the physical manifestation of excess and gluttony, the Fat God may have been the object of ridicule as a ritual clown, as he sometimes appears with a dance fan in Maya representations (Taube 2004c:159).

Although he believed that they were mortal humans rather than supernatural beings, Hasso von Winning (1987:I:144-145) noted that Teotihuacano Fat God figurines may be dressed as warriors wearing a woven armor, likely of cotton. The probable militaristic connotations of the Fat God may be a Classic-period innovation (Chinchilla Mazariegos 2002:22), and the same woven costume is common on Late and Terminal Classic representations of the Fat God from the Gulf Coast and Maya region (figs. 2.79d, 2.80, & 2.81a). In the Northern Maya Lowlands, the armored Fat God is a frequent subject of figurines (fig. 2.80a), and appears in monumental form in the Puuc region (figs. 2.80b-c). A column from Oxkintok portrays the Fat God with a star-shaped object that is likely a dance fan is placed near his left hand (fig. 2.80b). An example purportedly from Dsecilná, Campeche holds the fan under his right elbow and has what is probably a circular mirror on

his belly (fig. 2.80c). His right arm is raised in a manner that suggests he may be tied to the column. Another example has both arms raised and they appear to be bound with a cord (fig. 2.80d). His closed form crescent shapes, slack mouth is reminiscent of representations of the Central Mexican flayed god, Xipe Totec. These examples suggest capture and sacrifice, and recall a Late Preclassic example from El Baúl described by Parsons (1986:43) that was sculpted without a head, or rather, as having been decapitated. A large unfired clay sculpture from Cacaxtla (fig. 2.81a) may represent the Fat God as a captive, similar to the aforementioned examples from the Northern Maya Lowlands. The figure wears a shoulder cape, leaving his enlarged stomach visible. He does not have closed eyes, but his mouth forms a grimace. He has two cords (or possibly serpents) twisted around his belly, and may have once been tied as a captive. The texture on his shoulder cape may be loops of cotton, but it is painted blue and resembles feathers. A Late Classic incensario lid from Ojo de Agua, near Teotenango, has a body suit that also resembles feathers (fig. 2.81b). Although the head is missing, the rotund belly allows for identification of this figure as the Fat God.

The Fat God seems to be related to the being that I have argued is a Late Classic antecedent to Xochipilli and other closely related deities associated with such concepts as music, dance, and the flowery afterlife, but also with disease and excess. A figurine likely from the Late Classic site of Chalahuite, Veracruz has two long braids on either side of his head and likely represents this very being (fig. 2.82a). Interestingly, the figure has a mask representing the face of the Fat God on top of his head. This juxtaposition raises several interesting possibilities. As previously noted, the Fat God is portrayed as dead with eyes shut, but also as bound, decapitated, and possibly flayed. The Fat God mask could be his flayed skin. Alternatively, the figure wearing the mask may not be Xochipilli, but rather could be a human impersonator or dancer who will don the mask for a ritual performance.

This explanation does not account for the two long braids or tassels at either side of the figure's head, or for his skinny appearance. Finally, the Fat God could be an alterego of the Late Classic Xochipilli, and perhaps an embodiment of his more negative or harmful attributes. Mention has already been made of a dual-sided figure from the Gulf Coast that represents a clear representation of the Late Classic Xochipilli on one side, and perhaps a malevolent being on the other (fig. 2.46). It has also been noted that the Late Classic Xochipilli is often portrayed as chubby. A figurine from Teotihuacan appears to combine the attributes of both beings, as it wears a woven suit, but is thin and has a crest and side tassel (fig. 2.82b). While Xochipilli is a deity of pleasure and an manifestation of the human soul, the Fat God may be the embodiment of the excesses of pleasure, and perhaps the bloated, deceased human body.

Supernatural Monkeys

A recently reconstructed ceramic sculpture from Xochicalco (fig. 2.83) has the squared eyes typical of Maya solar deities (Garza Tarazona 2010:20). The crouching figure was dubbed "El Creador," due to its perceived association with fertility through what has been interpreted as two penises (Garza Tarazona 2010:22). Nudity is rare in Mesoamerican art, and representation of a deity with multiple genitals is unprecedented in Mesoamerica. Rather than penises, the dual elements at the figure's groin are more likely additional cacao pods growing from the vine that wraps around the figure's body.

The Classic Maya frequently portrayed monkeys in artwork, and often holding cacao pods. A howler monkey (*batz'*) holding a cacao pod appears as a *wahy* creature on Late Classic Maya painted vessels (fig. 2.84a; Grube and Nahm 1994:696-697). The example illustrated in figure 2.84b wears a pair pendent cacao pods at its chest, which may metaphorically represent pendulous breasts. Although cacao pods actually sprout from the

trunk of the tree in nature, Maya artists occasionally represented the plant as a vine twisted around the necks and bodies of fanged and bearded monkeys (fig. 2.85). The Maya supernatural simians shown in Figure 2.85 may be based on the howler monkey (genus *Alouatta*), which has a deep-set jaw and enlarged vocal box, giving it a bearded appearance.

Rather than a solar deity or creator god, with a beard, prominent canines, and a cacao vine draped around his body, "El Creador" more likely represents a Maya-style monkey, possibly a cacao deity. While it is noteworthy that Xochicalco is situated well outside of the natural range of both the howler monkey and spider monkey, the "El Creador" sculpture is remarkably similar to a pair of supernatural monkeys found on the Reviewing Stand of Copán's Temple 11 (fig. 2.85d), which Taube (1989) associates with ritual clowning and the Maya snake dance. The Copán examples wear cacao vines around their necks and kneel on one knee in similar fashion to the sculpture from Xochicalco, and it is possible that "El Creador" may have also originally held a rattle aloft in his raised right hand. Identification as a monkey does not preclude the possibility that the cacao vine wrapped around "El Creador" carries phallic connotations. For the Maya, monkeys may have been considered the antithesis of Maya cultural values for qualities including their coarse, licentious behavior and their nudity (Nájera Coronado 2013:244-245; Stone and Zender 2011:197), and in art, they often display prominent phalli (fig. 2.84a).

Conclusion

In tracing the deities that appear in Late Classic Central Mexico, several interesting patterns emerge. The important contributions of sites like Xochicalco, Cacaxtla, and (to a lesser extent) Teotenango toward the religious pantheons of Postclassic Central Mexico were not so much in their innovations, but rather in their integration of deities from other regions of Mesoamerica, a task begun by Teotihuacan. Deities such as the Old Fire God,

Tlaloc, the macaw solar deity, and possibly Xochiquetzal were likely inherited from Teotihuacan. Some deities were clearly imported directly from the Maya region, with Cacaxtla as a major agent in these transactions. God L, the scorpion-tailed star deity, and the Maize god, as he appears in the Red Temple Mural, have obvious direct parallels in the Maya region, and the solar beings that appear in the Structure A murals are closely aligned with Late Classic Maya imagery and symbolism as well. There are obvious counterparts to these beings in Postclassic Central Mexico, but the question remains whether the Cacaxtlans were responsible for this integration, or the later Toltecs, or perhaps both to varying extents. The crested being that I have argued is a precursor to Xochipilli likely originated on the Gulf Coast, and Ehecatl may have arrived in Central Mexico via the Gulf Coast or the Maya region. The appearance of the Fat God, a pan-Mesoamerican deity prior to the Postclassic period, would be difficult to trace in Late Classic Central Mexico. The enshrined Cerro Malinche figure, which may be a precursor to the Late Postclassic Chicomecoatl, may be among the few deities that makes a first appearance in Central Mexico during the Late Classic.

The incorporation of deities into Late Classic Central Mexican pantheons was a selective and locally variable process. The supernatural monkey from Xochicalco, which has no archetype in local fauna, bears striking resemblance to examples from Copán. It may not be coincidental that Xochicalco and Copán also share solar macaw symbolism associated with the ballgame in the form of the macaw "ballcourt marker" from Xochicalco (fig. 2.32b) and the stucco façade representing Yax K'uk' Mo' in avian form from Copán's ballcourt (fig. 2.30b). Skeletal death gods were not prominent in the art of Late Classic Central Mexico, but were widely represented on the Gulf Coast and along the Pacific coast from Cotzumalhuapa to Guerrero. The similarity in female figurines from Xochitecatl to examples from Nopiloa, on the Gulf Coast, and from coastal Tabasco and Campeche is striking, and

suggests a pattern of religious interaction that followed what was undoubtedly an important trade route that ultimately linked the Northern Maya Lowlands to Central Mexico. It is surely no coincidence that this type of imagery appears on small-scale, portable objects.

Two recent works have posited similar theories that suggest that a pan-Mesoamerican cult that linked elites in webs of exchange and interaction during the Postclassic period began during the Late Classic at sites like Xochicalco and Cacaxtla (López Austin and López Luján 2000; Ringle, et al. 1998). Both models place the Feathered Serpent at the center of a pan-Mesoamerican cult, based on the widespread veneration and strength of cults devoted to Quetzalcoatl during the Late Postclassic period. A number of Colonial ethnohistoric sources describe the life of Ce Acatl Topiltzin Quetzalcoatl, the founding ruler of Tollan, associated with Tula, Hidalgo, who became a model of rulership for Late Postclassic sovereigns. Variations in this story are found throughout Mesoamerica, including the Maya region (see Nicholson 2001). At the core of the story, the benevolent ruler Topiltzin Quetzalcoatl is tricked by the sorcerer Tezcatlipoca, leading to Topiltzin Quetzalcoatl's exile from Tollan and subsequent wanderings. According to some sources, Topiltzin Quetzalcoatl died and was immolated on the Gulf Coast, only to return as Venus the morning star. The star deity Tlahuizcalpantecuhtli is generally considered to be the transfigured Quetzalcoatl (Nicholson 1971b)429. Nicholson (2001:259) argues that Topiltzin Quetzalcoatl was a historical figure "who later became inextricably fused (and confused)" with the Late Postclassic Central Mexican wind deity Ehecatl-Quetzalcoatl.

There is much evidence to suggest that the duckbilled deity's associations with wind and music were present during the Late Classic period in Central Mexico the Gulf Coast, Oaxaca, and the Maya region. However, there is little iconographic or epigraphic evidence

that many of the deity's Late Postclassic roles, such as that of world-creator or arch-priest, were part of Late Classic myth systems. Feathered serpents are frequently cited as direct evidence of Quetzalcoatl cults, but they serve not only as manifestations of wind and vehicles of the morning star, but also as a supernatural means of transport for solar deities and deceased ancestors between cosmological realms across Mesoamerica. Two of the other essential characters from the Topiltzin Quetzalcoatl saga – Tezcatlipoca and Tlahuizcalpantecuhtli – are also ostensibly and notably absent from Late Classic pantheons, but are demonstrably present in the Early Postclassic Toltec art. As ethnohistoric sources suggest, the importance of Topiltzin Quetzalcoatl and his subsequent fusion with the wind god are probably Postclassic phenomena.

Shared religion in Late Classic Central Mexico involved multiple deities, and was by no means uniform from polity to polity. While in some instances the fusion of foreign gods into local cults was an organic process, in others it was likely a deliberate ideological maneuver to reify cosmopolitan identities and facilitate cultural and economic interactions. Rather than an overarching cult related to a single deity, elites and commoners alike from different polities were linked through several interrelated cults devoted to various deities. Regional deities and smaller cults undoubtedly became amalgamated with those of other polities or regions through cultural and economic interaction. The integration of religious cults from various regions within Mesoamerica was an ongoing process as polities sought to expand their economic networks, with Teotihuacan and Tula playing key roles during the Classic and Early Postclassic periods, respectively. This process was perhaps accelerated during the Late Classic period, as sites like Xochicalco and Cacaxtla struggled to define themselves as regional superpowers with far-reaching foreign ties. The roots of the shared religion and art styles during the Late Postclassic period can be found in the efforts of Late

Classic sites to foster allegiances with foreign powers, and the study of Late Classic deity cults can demonstrate the complexity local variability of exchange networks between sites and across regions. The complex webs of interaction that intersect via religion and commerce will be discussed at greater depth in subsequent chapters.

Chapter 3: Cosmology and the Flower World Complex in Late Classic Central Mexico

While there has been a number of studies that have focused on shared art styles and writing systems in Central Mexico during the Late Classic period, relatively few have delved into the actual shared religious and symbolic content and cosmological worldview that Late Classic artwork conveys. Recent theories put forth by López Austín and López Luján (2000) and Ringle, Bey, and Gallareta Negrón (1998) are among the only scholarly works that recognize the central role played by religion in facilitating and encouraging broad-scale interaction during the Late Classic period. These two related theories have gained wide acceptance, and at their cores, both argue that certain prestige goods, religious practices, and art styles demonstrate that elites from various polities across Mesoamerica took part in a supra-ethnic cult devoted to Quetzalcoatl, the semi-divine ruler of Tollan who served as an archetype of rulership and was symbolized by the plumed serpent. While the mytho-historic life of the priestly ruler Quetzalcoatl and his subsequent death, apotheosis, and veneration are typically considered to be Postclassic phenomena, these scholars argue that the roots of the Quetzalcoatl cult are found in the Late Classic period, originating in cosmopolitan sites such as Xochicalco and Cacaxtla. I believe these theorists are correct in considering religion a prime mover in the so-called "cosmopolitanism" of Late Classic Central Mexico, although I find little direct evidence of a cult devoted to Quetzalcoatl in the art of Xochicalco, Cacaxtla, and other Late Classic sites. Instead, I emphasize that a suite of religious beliefs concerning aesthetics, warfare, and the destiny of the soul, that was demonstrably present at Teotihuacan and among the Early Classic Maya, and continued to be prevalent in the art of sites like Xochicalco, Teotenango, and Cacaxtla.

Cosmology

A widespread characteristic of Native American cosmologies is a conception of the world as having four directions on the horizontal plane of the world and a center, which serves as a point of access between upper and lower cosmological realms. The world may be divided into directional quadrants, or the partitioning of the world may be based on solstice points at which the sun rises and sets (DeBoer 2005:73). World directions are also associated with specific colors, which vary depending on the cultural tradition (Wrem Anderson and Helmke 2013:177-179). For the Zuni and other groups in the Southwest, different colors of maize are related to world directions (Ford 1994:514). The Maya directional colors, red, white, black, yellow, and green are also colors of varieties of maize (Berlin and Kelley 1961). Some modern cultures, such as the Zuni, recognize six world directions – four corners on a horizontal axis, and a zenith and nadir on a vertical axis.

Directions may also be related to specific animals. For the Zuni, the animals and colors associated with each direction are "the yellow mountain lion of the northeast, the blue bear of the northwest, the red badger of the southwest, the white wolf of the southeast, the speckled or all-colored eagle of the zenith, and the black mole of the nadir" (Young 1988:103). Similar animal and plant directional symbolism was incorporated into Mesoamerican cosmology, as evident in page 1 of the Codex Fejérváry-Mayer (fig. 3.1), and pages 49-53 of the Late Postclassic Codex Borgia and which represent different world directions with specific birds and trees (figs. 3.2-3.5). Both codices reflect geographic distribution of flora and fauna relative to Central Mexico. For example, on page 50 of the Borgia and page 1 of the Codex Fejérváry-Mayer, northern trees are covered with spines, probably alluding to cacti from the desert environments north of Central Mexico. Macaws perch in the southern trees, reflecting the bird's natural range. The central tree of the Codex

Borgia, and pivotal axis mundi, is a maize-producing tree of abundance surmounted by a quetzal (fig. 3.6).

In addition to specific plants and animals, the directional pages of the Codex Borgia and page 1 of the Codex Fejérváry-Mayer denote specific deities, temples and celestial bodies in conjunction with world directions. On Codex Fejérváry-Mayer page 1, deity pairs flank each directional tree. On the upper right registers of pages 49-52 of the Borgia, deities support sky bands: Tlahuizcalpantecuhtli in the east, Xiuhtecuhtli in the north, Ehecatl-Quetzalcoatl in the west, and Mictlantecuhtli in the south. Codex Fejérváry-Mayer page 1 shows a temple platform and a solar disk beneath the eastern tree, alluding to the daily birthplace of the sun. A monstrous mouth that likely devours the sun in the evening sits beneath the western tree. Also of note, the female deities Tlazolteotl and Xochiquetzal flank the western tree, likely alluding to the west as Cihuatlampa, the "place of women." In the Borgia, each directional page portrays a temple. The eastern temple on page 49 is decorated with jewels and a solar disk. The northern temple on page 50 has flint almenas and a lunar symbol inside. The symbolism of the western temple on page 51 is less clear, but it has a twisted cord inside. The southern temple on page 52 is a temple of death and darkness, made of bone and inhabited by an owl. Although no documents on par with the Codex Borgia and Codex Fejérváry-Mayer before the Late Postclassic survive, it is probable that many of the concepts concerning directional symbolism and cosmological worldview were present in prior traditions. As noted in Chapter 2, for the Classic Maya, celestial bodies were also linked to world directions, as the eastern sun was opposed to western darkness, and the northern moon opposed the southern star or Venus.

It is important to note that calendrical dates were also linked to world directions in ancient Mesoamerican worldview, and the passage of time and spatial organization were

not discrete topics. In the Late Postclassic calendrical system of Highland Mexico, the four cardinal directions cycled through the progression of twenty day signs in a repeating counter-clockwise fashion beginning with the eastern day Cipactli, and ending with the southern day Xochitl. The thirteen-day weeks, or trecenas, named by the day on which they begin, also progress in a cyclical counter-clockwise rotation beginning with the eastern trecena 1 Cipactli. A 360-day solar year is named for one of the four day signs on which it begins (Acatl, Tecpatl, Calli, or Tochtli), known as yearbearers. On page 1 of the Codex Fejérváry-Mayer (fig. 3.1), the four yearbearers are shown in the corners within circular cartouches on the bodies of birds. Each yearbearer carries a world direction: Acatl is an eastern yearbearer, Tecpatl is northern, Calli is western, and Tochtli is southern. The Late Classic Central Mexican calendrical system recognized the same yearbearers, each denoted with a looped cord attached to a cartouche (Caso 1967:179; Nicholson 1966), and the Early Postclassic Toltec system portrayed yearbearer cartouches burdens carried within tumplines (Miller and Taube 1993:192). It is probable that the Late Classic yearbearers were also directional, as in the Late Postclassic system.

Directional and cosmological symbolism was incorporated into the architecture and layout of Mesoamerican cities, as well as in domestic space (e.g. Ashmore 1991; Gillespie 2000; Matthews and Garber 2004; Taube 2013b). Early Classic Teotihuacan has a distinctive gridded layout, with principle streets oriented toward cardinal directions. Civic layout in Late Classic Central Mexico varies, but Cacaxtla, Xochicalco, and Teotenango are arranged based on world directions. The 200 m long acropolis of Cacaxtla, which is considered a ritual and administrative center, is aligned roughly along a north-south axis. While most of the structures on Cerro Xochicalco are aligned more closely to the cardinal directions, the Pyramid of the Plumed Serpents is aligned 17° east of true north, which may

recall the orientation of Teotihuacan, aligned 15° 25' east of true north (Aveni and Gibbs 1976:513). Important ballcourts are situated just north, east, and south of Xochicalco's acropolis, probably defining the acropolis as the central axis. The excavated portion of Teotenango stretches east to west on the summit of Cerro Tetépetl. The two largest plazas are located on the lower, eastern end of the summit, and each has a large pyramid in the east end. A ballcourt set on an east-west axis may define the center of the site.

The murals of Cacaxtla emphasize strong oppositional and directional dichotomies. Prominent oppositional pairings include the jaguar and eagle figures on the Structure A murals (figs. 3.7-3.8), and the male and female "star" deities in the Temple of Venus murals. As previously discussed (see Chapter 2), the Structure A figures are not only differentiated by their costumes, but also by the raw materials that constitute the weapons that they hold. The jaguar figure holds a bundle of spears tipped with black obsidian points, from which drops of rain fall on the head of the serpent. Karl Taube (2011b:9) notes that while obsidian points are a product of Central Mexico, the chert eccentric blade that protrudes from the mouth of the centipede bar held by the eagle figure is a product of the Maya Lowlands. Furthermore, the materials may also incorporate color-directional symbolism as red, the color of the flint tongue of the centipede, is an eastern color, and black, the color of the obsidian points, is a western color (Taube 2011b:9). The spotted jaguar serpent and the blue feathered serpent that the figures stand upon also likely convey directional symbolism. Taube (1994a:665-666; 2011b:8-9) argues that the jaguar serpent represents the west and the plumed serpent the east. The Battle Mural on Structure B depicts the slaying of warriors in blue bird costumes at the hands of warriors dressed in jaguar costumes. Blue creatures and those with jaguar traits are also opposed on the staircase murals of the so-called "Red Temple." A blue toad crouches on the sloping water band of the east wall (fig. 3.9a). The

toad is juxtaposed with a jaguar-spotted toad opposite on the west wall (fig. 3.9b), and farther up, a hybrid jaguar-turtle ascends the slope (fig. 3.9c).

A recently excavated ballcourt ring from the eastern ballcourt of Xochicalco appears to denote the vertical partitioning of the cosmos into celestial and underworld realms represented by opposed creatures (fig. 3.10). The ring portrays a large bat and a pair of quetzals, identifiable by their long, pliant tail feathers. Karl Taube (pers. comm. 2012) has brought to my attention the fact that the ring is displayed upside-down in the Xochicalco site museum, and that the paired quetzals probably denote the floral celestial realm (discussed below). The correct orientation of the bat reflects the animal's inverted roosting posture, as observed in nature. On a fundamental level, the birds represent the upper level of the cosmos, whereas the bat carries chthonic connotations. As denizens of the earth's dark interior, bats are fitting representatives of the underworld.

The quetzals portrayed on the Xochicalco ballcourt ring are stylistically similar to contemporaneous and later examples. The most recognizable feature of the quetzal in Mesoamerican art is the long, pliant, green tail feathers of the male bird, which was a valued good and frequent subject in artwork beginning with the Formative-period Olmec (Taube 2000a:303-305). Other typical features of the quetzal in the art of Highland Mexico is a crest of feathers on the head, similar to that in concept, if not appearance, to the helmet-like crest of the bird in nature. Eduard Seler (1991-1998:5:228) noted that the hooked beak typical of Mesoamerican quetzal depictions more closely resembles that of a bird of prey. Examples in the art of Xochicalco (figs. 3.11a-b) and Cacaxtla (fig. 3.11c), as well as Oaxaca (fig. 3.12c; see also Caso and Bernal 1952:fig. 303) and Late Postclassic Central Mexico (fig. 3.12d), have a long, curved non-naturalistic band that runs along the wing and forms a volute where the wing meets the body. Examples from Xochicalco also have an object at the base of the tail

that resembles a cross-sectioned conch shell, possibly relating to the placement of cross-sectioned conchs among the feathers of plumed serpents in examples such as those that adorn the Pyramid of the Plumed Serpents at Xochicalco. Both the spiraling wing and basal tail element are present in earlier depictions of quetzals in the art of Teotihuacan (fig. 3.12a). The spiraling wing may be related to the "serpent wing" found on the Maya Principal Bird Deity (see Bardawil 1976), which also has the long tail feathers of the quetzal, and perches upon the world tree (fig. 3.13). The Principal Bird Deity appears in the Maya-style "Realistic Paintings" murals from Tetitla, Teotihuacan (Taube 2011b:7).

The bat represented on the Xochicalco ballcourt ring shares traits with other supernatural bats in Mesoamerican artwork. Like the example from Xochicalco, Late Classic Maya representations of supernatural bats also display crossed bones on their wings, as well as disembodied eyeballs (fig. 3.14). In art of the Late Postclassic International Style, eyeballs are often used to denote darkness, and crossed bones and eyeballs may decorate the clothing of deities of death, darkness, and sorcery (Taube 2010a:153-154). While it is not clear that eyes are represented on the wings of the Xochicalco example, the crossed bones follow the Classic Maya convention of portraying long bones with undulating lines running along the length of the shaft. The Xochicalco bat may be an underworld deity akin to the monstrous Kamazotz' of the *Popol Vuh*, or the Late Postclassic head-taking Central Mexican bat god, Tlacatzinacantli (see Moser 1973:40-41). Like the quetzal, the supernatural bat may be a creature of the east (see below). Seler (1991-1998:5:179) notes that supernatural bats appear in Late Postclassic codices of the Central Mexican Borgia Group on pages related to the east. For instance, a supernatural bat appears on the eastern page 49 of the Codex Borgia to the right of the solar temple (fig. 3.2), and page 24 of the Vaticanus B and page 41 of the Codex Fejérváry-Mayer feature bats above the eastern day

signs Cipactli, Acatl, Coatl, Ollin, and Atl (fig. 3.15). Found in the eastern ballcourt of Xochicalco, the ring not only portrays creatures representative of the vertical layers of the cosmos, but also of the east.

In ancient Maya artwork, the underworld is a watery place populated by aquatic creatures. Water bands containing aquatic creatures that frame images in the Red Temple and Structure A murals of Cacaxtla indicate a similar belief in a watery underworld (Martin 2013:534). Several authors have noted the similarities of Cacaxtla's water bands to those present in the murals of Teotihuacan (figs. 3.16a-b), which similarly feature scalloped diagonal bands and contain aquatic creatures (Brittenham 2008:87-88; Foncerrada de Molina 1980:196; Kubler 1980:164; Lombardo de Ruiz 1986:237; McVicker 1985:84-85). However, the aquatic borders of the Cacaxtla murals also bear strong similarities to water bands that appear in Classic Maya artwork (fig. 3.16c), and even repeatedly depict a shell that resembles the *le* signs that frequently appear in them (Brittenham 2015:63; Martin 2013:533; Taube, et al. 2010:fig. 56). *Le* signs are frequently used to denote water in Maya art, and are incorporated into the glyph NAHB, a waterlily that denotes pools of water (Houston 2010:71; Martin 2013:533; Taube 2010b:81). In addition to forming the basal or upper register of Classic Maya vases and stucco façades, a dark band decorated with undulating diagonal bars and *le* signs, much like water bands of Cacaxtla, constitutes the roof of an underworld temple in which God L sits on the Late Classic Vase of the Seven Gods (Taube 2010b:206). In addition to having Maya-style *le* signs, a band on the south portico of Structure A at Cacaxtla incorporates an eye (fig. 3.16a), a convention denoting water in the art of Teotihuacan. In the traditions of the Classic Maya, Teotihuacan, and Cacaxtla, the water band may represent the diaphanous boundary between the terrestrial world and the watery underworld.

The lower portion of the eastern wall of the Cacaxtla's Red Temple mural (fig. 3.17) is set in the eastern Maya region (Schaafsma and Taube 2006:271; Taube 2006:158). The Maya Merchant god (God L) stands on the back of a plumed serpent, a creature related to the eastern rain-bringing winds (Schaafsma and Taube 2006:271). The Merchant God stands in front of a pack laden with prestige goods from the east, including quetzal feathers, turtle shell, and bundles likely containing jade and cacao. A cacao plant surmounted by a quetzal, in front of the Merchant God, may serve a toponymic function indicating the eastern cosmological realm, much like pages 47-51 of the Codex Borgia and page 1 of the Codex Fejérváry-Mayer, in which birds perched in trees denote world directions. Neither the cacao plant nor quetzal is native to Highland Mexico. Although the cacao tree in the Codex Fejérváry-Mayer denotes the south, the eastern bird is a quetzal, and is consistent with the scene at Cacaxtla. The Red Temple scene mimics in small scale the journey that Maya merchants must have taken to reach the Central Mexican highlands (Carlson 1991:44). Along with routes of commerce, actual meteorological and environmental phenomena are portrayed in the form of the predominant winds that carry rain from the east into Central Mexico. The plumed serpent on the eastern side of the Red Temple mural at Cacaxtla is carrying rain into the highlands, and a river beneath it returns to the coast (Schaafsma and Taube 2006:271). As a place of luxurious goods and the dawning sun, the east was both economically and symbolically significant, and was linked to notions of Flower World, the abode of the souls of deceased warriors and rulers.

The Late Classic Flower World Complex

The Flower World complex is prevalent in the contemporary and pre-Hispanic indigenous belief systems of Uto-Aztecan language speakers in Central Mexico and the American Southwest, as argued by Jane Hill in 1992. According to Hill, Flower World is "a

complex system of spirituality centered on metaphors of flowers" (Hill 1992:117). Flower World is a chromatic spirit realm associated with the sun, ancestors, flowers, birds, and brilliant objects such as gems, and is accessed through ritual, song, and oratory. Based on Hill's work, Louise Burkhart (1992) points out that Flower World symbolism, prominent in extant Aztec poetry, fused with notions of the Christian afterlife in Early Colonial Nahua devotional literature. Subsequent work by Kelley Hays-Gilpin and Hill (1999) has demonstrated the presence of the Flower World complex in material culture of the ancient American Southwest, apparent beginning around the early twelfth century AD, and Michael Mathiowetz (2011) argues that the Flower World complex was transmitted to the Southwest via trade routes through West Mexico. Karl Taube (2004b, 2005a, 2006, 2010a, b, 2013b, n.d.) has shown that the flowery afterlife was a predominant aspect of supernatural beliefs of the Classic and Postclassic Maya, Teotihuacan, and the Toltecs, and Saturno, Taube, and Stuart (2005) draw attention to the presence of Flower World themes in the Late Preclassic Maya murals of San Bartolo, Guatemala. Oswaldo Chinchilla Mazariegos (2011:58, 64-65; 2013; 2014:6; 2015) has demonstrated that the Flower World complex was a prevalent theme in the art of Late Classic Cotzumalhuapa. The existence of this suite of beliefs has not previously been fully articulated for Late Classic Central Mexico, but I argue that Flower World symbolism is prevalent in the art of Cacaxtla, Xochicalco, Teotenango, and other sites, and was a key component of shared cosmological and religious beliefs.

In Mesoamerican Flower World ideology, the souls of certain personages become birds and butterflies that sip nectar in a verdant paradise and, at least for the Aztecs, they accompany the sun as it rises in the east. Flower World was invoked by the living through communal feasting, music and poetry, and religious ceremonies. Flowers, jewels, birds, and

butterflies appear in Flower World-related imagery and accouterments, and in particular, jade, quetzal birds, feathered serpents, and cacao are associated with the Maya region, to the east of Central Mexico, and with Flower World. As the paramount beings of Flower World, solar deities, such as the Postclassic Tonatiuh, often appear as Maya lords, and were an archetype of divine rulership in Central Mexico (Taube 2010a:147, 149; n.d.:10). It is noteworthy that emblems of Flower World from the Maya region, such as jade jewels, quetzal feathers, and cacao are portable and were important goods in long-distance exchange. In Late Classic Central Mexico, the Flower World complex may have provided a model for elite identity, a greater impetus for the exchange of prestige goods across regions, and justification for military conquest through the glorification of warriors.

For the Late Postclassic Aztecs, belief in the floral afterlife was intertwined with militaristic ideology. Speaking of the solar heaven, Sahagún (1950-1982:4:49) states:

> Those went there who died in war, who perhaps right there indeed died in battle, in the warring place, where they despoiled them, where their breathing ceased, where they laid down their cares, or only were taken in, those who were to die later. Perchance one was slain in gladiatorial sacrifice, or cast into the fire, or pierced by darts, or offered up on the barrel cactus, or shot by arrows, or encrusted [and burned] with pieces of resinous wood: all went to the home of the sun.

The solar afterlife was reserved for deceased warriors and those who were sacrificed, whether by gladiatorial sacrifice, burning, arrow sacrifice, or heart excision on the "barrel cactus." The deceased did not go directly to Flower World, but rather immediately after death, inhabited a desert-like place of magueys and mesquite trees.

> And when they had passed four years there, then they changed into precious birds – hummingbirds, orioles, yellow birds, yellow birds blackened about the eyes, chalky butterflies, feather down butterflies, gourd bowl butterflies; they sucked honey [from the flowers] there where they dwelt. And here upon the earth they came to suck [honey] from all the various flowers – the *equimitl*, the *tzompanquauitl*, the *xiloxochitl*, the *tlacoxiloxochitl*. (Sahagún 1950-1982:4:49)

Warriors, who died furthering the militaristic aims of the Aztec empire, were granted a glorious afterlife. In neighboring Tlaxcala, the souls of nobles became clouds, birds with precious plumage, and jewels (Mendieta 1980:97, cited in Taube n.d.:2). Flower World was not the ultimate destination of all souls in Late Postclassic Central Mexico, and access to paradise was granted based on ideology and social status.

The earliest strong evidence of the Flower World complex in Mesoamerica appears among the Early Classic Maya and at Teotihuacan. Butterfly imagery occurs frequently in the art of Teotihuacan, beginning in the Tlamimilolpa phase, during the third century AD (von Winning 1987:1:115).[24] In Teotihuacan's art, martial themes and butterfly imagery overlap. Janet Berlo, Annabeth Headrick, and Karl Taube (Berlo 1983; Headrick 2007; Taube 2000b, 2005a, 2006) find evidence in artwork from Teotihuacan suggesting that fallen warriors become apotheosized as butterflies and birds that accompany the sun was present during the Classic period. For example, nose ornaments shaped like stylized butterflies appear as insignia worn by warriors in painted depictions and on censers (fig. 3.18). Placed over the nose and mouth, the nose ornament may represent the breath or soul, two intertwined concepts. Taube (2005a, 2006) observes that theater-style censers from Teotihuacan and Tiquisate, Guatemala are frequently decorated with quetzal birds, butterflies, and radiant objects, suggesting that the censers represent Flower Mountain, the eastern solar paradise reserved for deceased warriors and revered ancestors. When in use, the censers resemble burning mortuary bundles, and the faces within may represent stone masks that presumably would have adorned them. The Temple of Quetzalcoatl at Teotihuacan may itself be a massive representation of Flower Mountain (Taube 2004b:88-

[24] This chronology for Teotihuacan is based on Cowgill (1997).

90; 2006:162; 2010a:182; 2010b). Taube (2010a:182) notes that the façade of the temple portrays plumed serpents swimming through a sea filled with marine shells, and emerging through giant flower blossoms.

Flower Mountain was not only an afterlife destination of elites and warriors, but was also the location from which the first people emerged to the surface of the earth. In both the art of the ancient Maya and in early Colonial Nahua manuscripts, wild and fierce beasts inhabit Flower Mountain, marking it as a primordial place (Saturno, et al. 2005:16-18). In the Late Preclassic Maya North Wall mural of San Bartolo, Guatemala (fig. 3.19), ancestral couples including the Maize God emerge from a zoomorphic cave, identifiable as Flower Mountain based on the flowers that grow upon it, bearing the food and water necessary for humans to populate the earth (Saturno, et al. 2005). Early Colonial images of the emergence of the ancestral Nahua from the seven caves within the mountain of Chicomoztoc, as well as modern myths of emergence in the American Southwest, are remarkably similar to the San Bartolo scene (Saturno, et al. 2005:50).

The production of theater-style censers that resemble Flower Mountain likely continued into the Late Classic period at Xico, located in the southern Basin of Mexico. Like Teotihuacano censers, censer lids from Xico portray a central figure flanked by flowers and quetzal birds (fig. 3.20). Paired quetzals, which frequently appear on censers (see fig. 3.18), may have functioned as a toponym for the floral paradise in both Teotihuacano and Maya art (Taube 2005a:38). The quetzals on the Xico censer have stylized wings and basal tail elements similar to those on the aforementioned eastern ballcourt ring from Xochicalco, which probably likewise denote Flower World (fig. 3.10). Furthermore, jade jewels (of eastern Mesoamerican origin) near the beaks of the quetzals from Xochicalco also likely allude to the floral paradise as a place of radiant and precious objects (see also fig. 3.13).

Another censer from Xico (fig. 3.21a) has appliqués in the form of three mountains with flowering plants sprouting from either side, similar to probable glyphic elements naming Flower Mountain that appears in the art of Teotihuacan (fig. 3.21b), as described by Taube (2005a:38; 2006:159). The central figure on the Xico censer, with a furrowed face, may represent the mortuary bundle of a revered ancestor.

The concept of the breath soul in Mesoamerica is closely related to conceptions of the floral paradise. Breath is widely depicted as jade jewels, quetzal feathers, and flowers in Mesoamerican art, ranging from the Middle Formative period to the Late Postclassic (Houston, et al. 2006:143-150; Houston and Taube 2000), which surely alludes to Flower World as the ultimate destination of certain souls upon their separation from the body. Breath souls commonly appear as flowers in front of the nose or mouth of figures in Olmec and Classic and Late Postclassic Maya art (Houston and Taube 2000; Taube 2004b:72; 2005b; 2010a:156-158). Flowers and jewels may be attached to curling speech scrolls in the art of Teotihuacan, which may allude to breath, or flowery speech or song (Hays-Gilpin and Hill 1999:16). As widely depicted across Mesoamerica, flowers themselves are also breathing entities, exhaling visible volutes of sweet aroma (Taube 2004b:72; 2010a:156).

The Late Classic site of Ojo de Agua, near Teotenango, was a spring into which the Late Classic inhabitants deposited elaborate ceramic censers and figurines. Like Teotihuacan theater-style censers, Ojo de Agua censers were decorated with floral appliqués in the form of four-petaled blossoms, many of which emit visual representations of fragrant aroma (fig. 3.22). Two small ceramic masks which probably adorned censers similar to earlier Teotihuacano theater-style censers portray the breath soul in the form of four-petaled flowers (fig. 3.23). The heavy eyelid of both figures suggest that they are deceased, and the large flowers in front of their noses and mouths may indicate that their

souls now reside in Flower World, but are still accessible through the ritual burning of fragrant incense.

Butterflies occur frequently in Central Mexican art related to Flower World. Beginning at Teotihuacan, butterflies tend to follow specific stylistic conventions. Aside from prominent wings, Teotihuacan butterflies tend to have large goggle-like eyes, a pair of feathery antennae, and a prominent curling proboscis (figs. 3.24a-b). In the art of the Late Postclassic International Style, the antennae tend to be reduced, and the proboscis forms a curling snout, and a lower lip also curls backward (figs. 3.24c, e-g). The abdomen of the butterfly may also be segmented, and the butterfly may have a fore wing and hind wing, as in nature, or have a single visible wing or wing pair. In some instances, butterflies have large, non-naturalistic forelimbs (fig. 3.24d). Several of the features present in International Style butterflies first appear in Late Classic art.

The Pyramid of the Plumed Serpents at Xochicalco portrays a prominent depiction of the breath soul (Taube 2005b), as well as a strong allusion to Flower World. The lower talud of the temple depicts several human figures seated among the coils of undulating feathered serpents (fig. 3.25). The figures have been commonly considered priests of the wind god Quetzalcoatl, given their proximity to the plumed serpents, creatures that manifest wind. However, as noted in Chapter 2, in Mesoamerican art, feathered serpents appear as vehicles for a variety of different entities, including other deities, the sun, stars, and ancestors (Mathiowetz 2011; Schwartz and Taube 2010; Taube 2010a:175-176; 2010b:217; 2011b:9-10; 2015:111-115). Within the Flower World complex, the feathered serpent is often a manifestation of the "floral road" upon which the sun and associated beings travel from the eastern floral paradise (Hill 1992:125; Mathiowetz 2011; Saturno, et al. 2005:25; Taube 2010a:175-176; 2010b; n.d.:9-10). The seated figures on the Pyramid of

the Plumed Serpents may also relate to Flower World, as the breath or speech scrolls that emerge from their mouths resemble stylized butterflies with tri-lobed wings, curling proboscises, and paired antennae (fig. 3.25b). The scrolls recall the butterfly-shaped nose plaques of deceased Teotihuacano warriors, and are a likely a visual representation of the breath soul. The lower talud of the Pyramid of the Plumed Serpents at Xochicalco may thus portray the conjuring of ancestors or rulers from the eastern Flower World. The figures appear wear War Serpent headdresses, a creature linked to Flower World and the fiery rebirth of warriors (see below), as suggested by a fragmentary plaque from Xochicalco with a similarly seated figure wearing a distinctly Maya version of the headdress (fig. 3.25c).

The plumed serpent is a creature that embodies several prominent themes related to Flower World. In addition to being the floral road, the plumed serpent is a physical manifestation of breath and wind (Taube 2001). The Late Preclassic Maya representation of Flower Mountain at San Bartolo (fig. 3.19) exhales a plumed serpent, replete with blossoms on its back, from a maw-like cave (Saturno, et al. 2005). Nestled among the feathers of the ophidians on the Pyramid of the Plumed Serpents at Xochicalco are cross-sectioned conch shells, a widespread iconographic device denoting wind and breath (Taube 2001). Both the shells and the quetzal feathers that cover the bodies of the serpents may have been referents to the east. In addition, serpents from Late Classic Cacaxtla (figs. 3.8 & 3.17) and Xochicalco (fig. 3.25a), and the roughly contemporaneous Chenes Maya site of Hochob, Campeche (fig. 3.26), bear blossoms on the ends of their tails, a probable allusion to Flower World (Taube 2010a:173).

In the art of Xochicalco, there are numerous portrayals of butterflies, which may allude to Flower World and the souls of deceased warriors and nobles. The so-called Animal Ramp, a feature on the eastern edge of Xochicalco's acropolis consists of around 400 stone

plaques incised with images of animals that served as a pavement. Of 286 stones analyzed by Eduardo Corona (2014), 40 depict butterflies. One example (fig. 3.27a), shown from the side, has the prominent curling proboscis prevalent in Late Postclassic examples. Other examples have large curved antennae (figs. 3.27b-c). While some have wings that are more naturalistic (fig. 3.27c), others have wings that have a crenulated appearance (figs. 3.27a-b), quite similar to a Late Classic Maya convention for depicting the feathered lining found on the War Serpent (see below), a creature with strong butterfly attributes (Taube 2000b:283). The majority of the natural and supernatural fauna represented on the ramp, including quetzals and other birds, and feathered serpents (fig. 3.28) are animals associated with Flower World. The Animal Ramp bears striking conceptual resemblance to a recently excavated Late Postclassic mosaic pavement located in front of the Templo Mayor (see Barrera Rodríguez, et al. 2012), which includes plaques carved with images of jades, warriors, and butterflies with human heads, all imagery related to Flower World. The southern half of the Templo Mayor itself was likely a conceptual Flower Mountain, with a shrine dedicated to a solar god of warfare who took the form of a hummingbird.

During the 1993-1994 field season on Xochicalco's acropolis, teams unearthed fragments of a relief sculpture in the form of a butterfly (fig. 329; Garza Tarazona and Mayer Guala 2005:379). One slab represents a portion of a butterfly wing decorated with large spots, attached to a segmented portion of a thorax or abdomen. Another slab that is carved the form of a segmented abdomen with two limbs visible, appears to have been placed on the corner of a building or as part of a door jamb. A portion of a zoomorphic face, showing an open maw and the lower rim of a large, circular eye, was presumably found with the wing and abdomen fragments. It is probable that the maw, sharply upturned toward the front, would terminate in the curling snout of a monstrous butterfly. Although it is unclear

which building or buildings the slabs adorned, they constitute one of the largest and most prominent representations of a supernatural butterfly (or butterflies) in Mesoamerican art.

Situated on top of a hill, the acropolis of Xochicalco may have been built as an earthly representation of Flower Mountain. In addition to having a building or buildings decorated with butterfly imagery, the Pyramid of the Plumed Serpents may evoke the Temple of Quetzalcoatl at Teotihuacan, which is likely an architectural rendering of Flower Mountain. As previously noted, the Pyramid of the Plumed Serpent's alignment of 17° east of true north is more similar the alignment of Teotihuacan than other structures at Xochicalco, which more closely follow cardinal directions (Aveni and Gibbs 1976:513). The decoration is also similar to that of the Temple of Quetzalcoatl of Teotihuacan, having a pair of serpent ballustrades on its west-facing staircase, and a series of undulating plumed serpents on its lower talud. Figures with butterfly breath elements situated among the coils of the serpents likely represent deceased warriors or nobles, perhaps conjured from Flower World and carried on the eastern wind. The Animal Ramp of Xochicalco, which rises from the east, may have been tantamount to the floral road, the diurnal path of the sun. It is conceivable that the animals incised on plaques that decorate the ramp, mostly butterflies and birds, represent souls that inhabit Flower World and accompany the sun on its journey. Xochicalco's acropolis may have been the symbolic point of access between earth and the heavens, and the mythical place of emergence for ancestors and the sun.

Imagery on a monument from Teotenango known as the Trapezoidal Stone (fig. 3.30) is similar to the butterfly slabs from Xochicalco. One side of the monument depicts a butterfly with the associated day sign 13 (or perhaps 12) Reptile Eye. Scholars have argued that the butterfly represents the Late Postclassic deity Itzpapalotl (Aguilera 2008; Seler, cited in Álvarez A. 1983:243), a Late Postclassic deity of death and warfare, although the

being is more likely a being of Flower World, perhaps a deceased warrior or ruler. The butterfly on the Trapezoidal Stone differs from examples at Xochicalco in that it has an avian beak, a crest on top of its head, and it wears a necklace, but like the aforementioned relief fragments from Xochicalco's acropolis, the butterfly on the Trapezoidal Stone has prominent non-naturalistic limbs with talons. The butterfly on the Trapezoidal Stone is a clear precursor to Early Postclassic representations of supernatural butterflies recently discussed by Taube (n.d.), such as an example on a panel from Tula (fig. 3.31), which shows a butterfly with an oblong abdomen and extended forearms. On a painted pottery example from the site of Chak Mool, Quintana Roo, the butterfly's proboscis resembles a curved beak (fig. 3.32). Taube (n.d.) identifies such butterflies with Flower World and the souls of deceased warriors.

In Flower World imagery, there is significant overlap between butterflies and quetzal birds. On a panel from Early Postclassic Chichén (fig. 3.33), a quetzal, rather than a butterfly, sips nectar from a flower (Taube n.d.). The quetzal, recognizable by its feather crest and long tail feathers, wears a necklace, probably of jade, similar to the beaked butterfly on the Trapezoidal Stone. Like this example, the butterfly from Teotenango is a bird-butterfly composite, with the probable head of a quetzal. It wears a necklace of what are likely jade beads, and perforated circles in the lower left corner may represent floating jewels, a likely allusion to the radiant floral paradise and the souls of deceased warriors and rulers. Butterflies are paired with a descending quetzal on a Late Classic *palma* from Veracruz (fig. 3.34). Much like the painted scene on a *tecali* bowl from Xochicalco (fig. 3.11a), the sculptor of the *palma* captured naturalistic behavior in the male bird, as it makes dramatic dives and swoops during mating displays. The quetzal has the stylized wings of examples from Xochicalco, Cacaxtla, and Teotihuacan (figs. 3.10, 3.11, & 3.12a-b), but has a

pair of opposed butterfly heads, identifiable by their curled proboscises and lower lips, between the wings and tail feathers (fig. 3.34b). As with the Trapezoidal Stone, the co-occurrence of quetzal and butterfly on the *palma* denotes Flower World.

Imagery related to Flower World is not limited to monumental sculpture during the Late Classic period. A fragmentary figure found on the floor of the Cámara de las Ofrendas at Xochicalco (Sáenz 1962:21) has a small curled butterfly proboscis on his headdress (fig. 3.35). The figure is lavishly dressed in a costume decorated in Maya Blue, and wears earspools, a nose ornament, and a necklace of jade. The figure's hair is painted red and he has T-shaped dentition, much like a stucco head from Cacaxtla that I argued is a solar deity (Chapter 2, fig. 2.32a). The figure's face emerges from what is likely the mouth of a butterfly, which constitutes his headdress. The circular shield that belonged to the same figure indicates that he was a warrior and suggests that the inhabitants of Xochicalco believed in an afterworld in which the souls of slain warriors are transfigured as butterflies. The butterfly warrior was probably part of a vessel similar to the example from Xochicalco illustrated in Figure 3.36. Describing this vessel, Debra Nagao (2014:282) states that "the idea of a butterfly has been transformed into an extraterrestrial creature at Xochicalco." However, in this instance, it is more likely that a deceased warrior or revered ancestor has undergone a transformation. The legs, arms, knotted belt, and skirt do not likely belong to the butterfly itself, but it appears that a head and torso have broken away from the vessel. The butterfly, with large, spotted wings, bulging eyes, and antennae likely constitute the costume of a deceased and transfigured human.

Flower World imagery appears on ballgame accouterments and related artwork during the Late Classic period. I have noted a Late Classic Veracruz *palma*, an object that appears projecting from the thick belts (yokes) of ballplayers in representations, that

portrays a descending quetzal with two butterfly heads placed between its tail and wings (fig. 3.34). A stone *hacha*, another object worn on yokes, from Xochicalco is carved as the head of a butterfly with large, circular eyes, two tube-like antennae, an upturned curling proboscis, and a downwardly curled tongue (fig. 3.37). With reduced antennae and both a curling tongue and proboscis, the *hacha* appears to prefigure representations of butterflies in the Late Postclassic International Style (figs. 3.24c-g). Although described as an earth monster mask, combining snail and toad features (Whittington 2001:185), the mask worn by a ballplayer figurine (denoted by the yoke that the player wears around his waist) from Late Classic Veracruz (fig. 3.38a) strongly resembles the *hacha* from Xochicalco. The mask has two forward-projecting tube-like antennae, a downwardly curled proboscis, and two flanges on either side that may be wings. A smaller butterfly with outstretched forearms appears to descend down the ballplayer's chest, and a feathery fringe lines his arms. Another stone *palma* from Late Classic Veracruz (fig. 3.38b) portrays a low-relief anthropomorphic butterfly in Tajín-style split-image format behind a three-dimensionally rendered human figure (Wilkerson 1990:173). The butterfly is identifiable by its curled proboscis, feathered antennae, and wing-like crenellated forms on either side of its face.

Butterfly and Flower World imagery appears in conjunction with the ballgame at the Late Classic site of Plazuelas, in the Bajío region of Guanajuato. The eastern ballcourt marker of the roughly north-south oriented ballcourt represents a supernatural butterfly, identifiable by its prominent curled proboscis and recurved lower lip (fig. 3.39), similar to examples from Xochicalco, Late Classic Veracruz, and Late Postclassic Central Mexico. Other butterfly features on the marker include a diminutive tri-lobed wing, a large circular eye, and a long, feathery antenna. The Plazuelas butterfly has prominent incisors, like contemporaneous examples from Xochicalco and the Gulf Coast (figs. 3.27a & 3.34), and

later examples of the Late Postclassic International Style (figs. 3.24d-e & g). The toothy maws of butterflies may ultimately derive from Teotihuacan representations, which often sport fanged maws like that of the rain god Tlaloc (fig. 3.24b). Like Teotihuacan butterflies, the Plazuelas example also has a large, curved fang. A small excised heart sits between two of the feathers of the antenna of the Plazuelas butterfly, and a cross-sectioned conch shell forms the base of the wing, perhaps recalling the basal tail element of quetzals from Teotihuacan and Xochicalco, and the conch shells on the bodies of the feathered serpents on the Pyramid of the Plumed Serpents at Xochicalco. The sculpture is paired with a western ballcourt marker, which represents a catlike beast with a curled snout, fanged maw, smoke or flame emanating from a ringed eye, and stylized feline paw (fig. 3.40). Two damaged ballcourt markers that were cached beneath the floor of the ballcourt appear to represent earlier versions of the same creatures (fig. 3.41), as is apparent by the curled proboscis and feathers on one example, and the feline foot and volutes of smoke or flame behind the face of the other.

In a recent study, María Elena Aramoni Burguete (2014:137) relates the form on the back of the head of the Plazuelas ballcourt marker to the tail of the Late Postclassic Xiuhcoatl (fire serpent), but identifies the being instead with earth monsters, Tlaloc B (see Pasztory 1974), and nocturnal solar deities (Aramoni Burguete 2014:138-146). The western ballcourt marker of Plazuelas, however, is identifiable as a version of the Teotihuacan War Serpent, a Late Classic manifestation of the Xiuhcoatl (Taube 2012:120). Taube (2012:120) notes that the stepped crest of the creature is a version of the Xi sign, a symbol denoting fire and turquoise. The Xi sign also appears in the form of almenas at Plazuelas (fig. 3.42b), and interestingly, several large cross-sectioned conch shell almenas (fig. 3.42a) are also known from the site, mirroring the juxtaposition between the Xi sign on

the War Serpent's head and the shell on the wing of the butterfly ballcourt marker. The basal knot of the Xi sign is also visible on the underside of the western ballcourt marker, essentially rendering it as a zoomorphic representation of the symbol. The Miccaotli phase (AD 150-225) façade of the Temple of Quetzalcoatl displays several prominent renderings of the Teotihuacan War Serpent as a headdress (fig. 3.43a). Caso and Bernal (1952:113-114) first argued that the angular objects carried by the plumed serpents on the structure's façade were versions of the Xiuhcoatl, the Late Postclassic fire serpent. Despite noting that the rings on the creature's forehead were not its actual eyes, it was frequently regarded as Tlaloc until Taube (1992c) revived Caso and Bernal's argument and noted that the head was actually a headdress carried on the tail of the plumed serpent. Taube presented several other examples of the headdress in the art of Teotihuacan and other cultures, including the Classic Maya. He favors the term War Serpent, rather than as Xiuhcoatl ("fire" or "turquoise serpent") since turquoise was not widely imported into Mesoamerica during the Classic period. The rings on the headdress are not Tlaloc eyes, but rather protective goggles worn by Teotihuacan warriors (Taube 1992:59).

The appearance of the War Serpent varies greatly, but has some consistent characteristics. The Classic Maya, who used the Teotihuacan War Serpent as an emblem of the office of war (Taube 1992:53), represented the being as an ophidian beast, whereas the features displayed by the Teotihuacan version of the War Serpent are strongly feline (Taube 2012:116-117). Taube (2000b, 2012) describes the major characteristics of the Teotihuacan War Serpent. As an ancestral form of the Xiuhcoatl, it was likely related to fire, comets, and perhaps lightning. It is a composite beast that possesses jaguar, serpent, and butterfly attributes, with a snarling maw and body of a feline, an upturned snout, and a forked tongue, and it has feathers around the eyes, similar to Teotihuacano representations

of butterflies, and often long, feathery antenna-like tassels. Another diagnostic feature present in some examples is a series of pointed elements or crenulations along the limbs. Like Teotihuacano warriors and butterflies, the War Serpent can also have goggled eyes (Taube 2000:273), emphasizing its relationship to warfare. Like the Plazuelas manifestation of the creature, the Teotihuacan War Serpent may also have a Xi sign on its head (fig. 3.43b) or as its tail, and War Serpent headdresses on the Temple of Quetzalcoatl façade are shaped like the Xi symbol when viewed head-on (fig. 3.43a; Taube 2012:118-119). The Xi sign survived into the Late Postclassic as a the tail of the Xiuhcoatl and a turquoise nose ornament known as a *yacaxiuhuitl*, worn by Nahua lords (Heyden 1972:4; Taube 2012:124).

As beings of fire and warfare, the War Serpent and its Late Postclassic counterpart, the Xiuhcoatl, are inherently related to the Mesoamerican Flower World complex. Aside from displaying butterfly attributes, both entities are likened to fiery caterpillars (Taube 2000b, 2012). Funerary bundles are akin to cocoons in which the warrior soul transforms into a butterfly through burning (Taube 2000b:309). The Aztec Calendar Stone, which portrays the transfiguration of the immolated Nanahuatzin as the sun god Tonatiuh depicts two smoldering Xiuhcocoa around its outer rim (Taube 2000b:319). Skeletal faces emerging from the maws of the fire serpents may represent deceased warriors prior to their metamorphosis as butterfly souls that will accompany the sun in Flower World. For the Classic Maya, the War Serpent may have been a being of Flower World. David Stuart (cited as pers. comm. 2002) notes that many of the texts on bones from Tikal Temple 1 Burial 116 describe the conjuring of the War Serpent at *nichte' witz*, Flower Mountain (Taube 2004b:88; 2006:161). In Aramoni Burguete's (2014) analysis of the War Serpent ballcourt marker of Plazuelas, she does not analyze it in conjunction with its butterfly counterpart. As a caterpillar/butterfly pair, the ballcourt markers embody the fiery transformation of

deceased warrior mortuary bundles into butterfly souls, at the very heart of Central Mexican Flower World symbolism.

Several of the ceramic figures known collectively as "Los Once Señores de Cacaxtla" wear costumes related to Flower World. The sculptures were found in 1998 in pairs some 800 meters east of Cacaxtla's acropolis (Morales Gómez 1999). The figures represent various beings identifiable as deities such as Tlaloc and Xipe Totec (see Chapter 2), wearing elaborate headdresses and flanked on either side by scrolling volutes. Two similarly dressed figures with conch shells appended from their belts and necklaces decorated with objects shaped like footprints wear avian headdresses (figs. 3.44). No pigment remains on the sculptures, but a forward projecting crest on one example (fig. 3.44a) may allow for identification of the headdresses as quetzals. Furthermore, both have jade nasal breath beads, perhaps related to Flower World. Two figures with bulging goggled eyes and fanged grimacing maws diagnostic of the rain god Tlaloc (see Chapter 2) wear headdresses typically identified as jaguars or "jaguar-serpent-birds,"(Brittenham and Nagao 2014; Martínez Lara 2013; Rivas Castro and Michetti Micó 2007), although the headdresses are clearly the War Serpent based on their feline faces and forelimbs and feathery antennae over the eyes (fig. 3.45; Taube n.d.:12). As noted in Chapter 2, the War Serpent headdress emphasizes Tlaloc's nature as a god of agriculture and beneficial rains, in addition to war and the destructive forces of lightning and flooding. Two other figures from the corpus wear similar War Serpent headdresses (fig. 3.46). One has two large blossoms at its nostrils (fig. 3.46b), a likely reference to Flower World related to Maya conceptions of the floral breath soul. The War Serpent with breath blossoms is remarkably similar to a pair of appliqués from Ojo de Agua (fig. 3.47), which portray probable War Serpent heads with breath

blossoms, and wings similar to those that appear on Late Classic butterflies from Xochicalco (see fig. 3.27a-b).

Two headdresses worn by figures from the Once Señores de Cacaxtla corpus resemble War Serpent headdresses, but have explicit butterfly traits (fig. 3.48). Both figures wear similar costumes consisting of sandals, a loincloth, and a belt with pendent conch shells, and large, beastly headdresses with curled proboscises at the ends of their snouts and feathery antennae. Small wings resembling those of a bat are visible to either side of one of the figures (fig. 3.48a). Rather than bat-like wings, the headdress of the other example (fig. 3.48b) is framed on either side by two forms that resemble halves of a stylized Teotihuacan-style butterfly, as commonly seen on Classic-period nose plaques. This device may be a direct reference to Teotihuacan militarism and notions of the glorious afterlife of deceased warriors. Butterflies with large fanged maws, feathery antennae, curled proboscises, and wings appear in the art of Teotihuacan (fig. 3.24b), which are the likely archetype for the butterfly headdresses at Cacaxtla.

The resemblance of the wings on the butterfly headdresses visible on Figure 3.48a and urns from Cacaxtla (discussed below) to those of bats may not be superficial. As previously noted, the eastern ballcourt ring from Xochicalco (figs. 3.10 & 3.50a) portrays a bat that is similar to Classic Maya examples with crossed bones and extruded eyes (fig. 3.14), but rather than eyes, the lobed designs on the Xochicalco bat's wings more closely resemble flower blossoms. In their discussion of Flower World imagery in the ancient American Soutwest, Hays-Gilpin and Hill (1999:5-7) note that bats are among the creatures that appear with floral symbols on their wings. Indeed, a Mimbres example that they provide (fig. 3.49b) bears striking resemblance to the bat on the Xochicalco ballcourt ring. It should also be recalled that supernatural bats in Borgia Group codices occur with eastern

daysigns (fig. 3.15), the direction of the floral paradise. Page 44 of the Codex Borgia (fig. 3.50) portrays a probable representation of Flower World with a prominent depiction of a bat. In the scene, a multicolored flowering tree grows from the abdomen of a prone Xochiquetzal, goddess of flowers, within a four-sided enclosure lined with flowers and jewels. A bat-costumed figure descends into the enclosure in a shower of blood, flowers, and jewels, holding an excised heart (fig. 3.50b). The costume is identifiable as a bat based on its mammalian face and dark grey coloring with an "earth net" pattern on its body, wings, and tail, following Borgia Group artistic conventions. Four winged creatures that resemble hummingbirds, but have antennae marking them as mosquitoes, pierce the bat with their beak-like proboscises. The association of hummingbirds and blood-drinking is a widespread Mesoamerican convention that dates back to the Middle Formative Olmec (Taube 2004c:122-124). An eagle, jaguar, and quetzal, opposite the bat, block the other entrances of the enclosure and pull the eyes out of figures that emerge from the mouths of fire serpents. The jaguar and eagle recall Aztec warrior orders and militaristic aspects of Flower World, and the opposition of quetzal and bat is reminiscent of the Xochicalco ballcourt ring.

Bats share a number of characteristics with the nectar-drinking birds of Flower World. Elizabeth Benson (1988:112) argues that bats are conceptually related to hummingbirds in Maya folklore. The drinking of blood may symbolically overlap with the drinking of nectar in Mesoamerican traditions, as noted by Taube (2004c:123; 2009b). However, like hummingbirds, some species of bat are prolific pollinators in their own right. The gloss of page 62 (recto) of the Codex Magliabecchiano discusses a bat that was born from the semen of Quetzalcoatl and brought a piece of Xochiquetzal's flesh to the Underworld, which brought forth aromatic flowers (Benson 1988:110; Boone 1983:206). This tale may be related to the aforementioned page 44 of the Codex Borgia, which portrays

a bat and Xochiquetzal and is part of a larger saga concerning Quetzalcoatl. Bats are widely associated with human sacrifice in Mesoamerica, another concept closely linked to Mesoamerican Flower World symbolism, and fruit bats' snatching of fruit from trees may have been likened to the act of decapitation (Miller and Taube 1993:44). In a well-known example in the *Popol Vuh* (Tedlock 1996:125-126), a bat with a bladed snout takes the head of Hunahpu in the Bat House of the Underworld. The "eastern" supernatural bats of page 24 of the Codex Vaticanus B and page 41 Codex Fejérváry-Mayer (fig. 3.15) likewise hold severed heads.

Beyond their roles as pollinators, bats and butterflies may also be symbolically linked in Mesoamerican thought (Benson 1988:113-115). According to Elsie Clews Parsons (1936:318), the bat is called "black butterfly" in Oaxaca and other parts of Mexico. On page 66 of the Codex Borgia (fig. 3.51), the deity Itzpapalotl ("obsidian butterfly" or "clawed butterfly") has grey wings with "earth net" markings, quite like the bat that appears on page 44 of the same document (fig. 3.50b). With prominent claws, Itzpapalotl may have been more accurately considered demonic bat of the eastern paradise realm of Tamoanchan (Miller and Taube 1993:100), perhaps synonymous with Flower World. In Nahua traditions, Itzpapalotl is a deceased female warrior, and in the Mapa de Cuauhtinchan No. 2, a woman identifiable as Itzpapalotl leads the Chichimecs out of Chicomoztoc (Yoneda 2007). It should be recalled that Chicomoztoc is a probable Flower Mountain, as the primordial place of emergence for the first peoples (Saturno, et al. 2005:50). While Itzpapalotl was likely a purely Postclassic deity, the relationship of bats to butterflies and Flower World may have roots in the Late Classic period or earlier, as suggested by examples such as Los Once Señores de Cacaxtla.

The paired ballcourt markers at Plazuelas, representing a butterfly and a version of the War Serpent/caterpillar, may be conceptually similar to the opposed serpents on the Structure A portico murals of Cacaxtla (figs. 3.7-3.8). In Chapter 2, I argued that the jaguar and eagle figures are rulers dressed as nocturnal and diurnal solar deities, or the deities themselves. The eagle-clad figure of the southern portico stands upon a plumed serpent, a creature of the east, and a manifestation of the floral road that the sun and ancestors travel upon from Flower World (Mathiowetz 2011; Schwartz and Taube 2010; Taube 2010a:175-176; 2010b:217; 2011b:9-10; 2015:111-115). The quetzal to the right of the figure emphasizes the scene's eastern connotations. Combining features of both jaguar and serpent, the creature that the jaguar-clad figure stands upon on the northern portico may be a Maya-style rendering of the War Serpent. The small blue element on the jaguar-serpent's brow may be analogous to the Xi sign or the smoke or flame on the brow of the Plazuelas War Serpent. Taube (1994a:665-666) notes that the jaguar/serpent opposition in the Cacaxtla murals is also apparent in Classic Maya art, in which the jaguar serpent may be opposed to the Bearded Dragon. Like its feathered counterpart, the jaguar serpent at Cacaxtla appears to function as a road, perhaps carrying the nocturnal sun god to Flower World where he will be reborn as the diurnal sun at dawn.

The poorly preserved inner mural of Structure A (fig. 3.52), situated behind the portico murals, adds another layer of cosmological symbolism to the program at Cacaxtla. In the extant portion of the mural, it is possible to see a series of stacked Maya-style *witz*, long-nosed zoomorphic symbols that, in this case, have serpents protruding from their mouths (Urcid and Domínguez 2013:658-659). David Stuart (1987:17-23) has deciphered the *witz* compound as "hill" or "mountain." In Maya art, *witz* symbols often appear with blossoms on their brows, marking them as Flower Mountain (Taube 2004b:83-86; 2010a:178-179).

Although blossoms are not apparent on the badly eroded Structure A inner mural at Cacaxtla, the setting of the scene may be the primordial Flower Mountain. Snakes and other wild animals are associated with Flower Mountain, and the cave-like maw of the mountain exhales breath in the form of serpents, visible in Maya art beginning at the Late Preclassic site of San Bartolo (fig. 3.19; Saturno, et al. 2005; Taube 2004b; 2010a:179). Claudia Brittenham (2015:203) likens the mural program of Structure A to Sustenance Mountain (Tonacatepetl) which, in the Early Colonial Nahua *Leyenda de los soles,* is the mountain which Quetzalcoatl enters to retrieve maize and other staples for humankind (see Bierhorst 1992:146-147). This interpretation is not at odds with identification of Structure A's program as Flower Mountain, as it is the very place from which the Maize God and his consorts bring foodstuffs to the surface of the earth in the North Wall mural at San Bartolo (fig. 3.19). That the entrance to Structure A was a conceptual cave of emergence is reinforced by an extant unfired clay relief on the outer jamb (fig. 3.53), which portrays a figure seated upon a *witz* mask within a cave-like zoomorphic maw (Helmke and Nielsen 2013b:367-370). The zoomorphic cave is decorated with Maya stone (*tun*) markings, consisting triangular arrangements of three dots (Brittenham 2015:210; Helmke and Nielsen 2013b:367). The wing of a bat, another creature linked to Flower World, is visible above the zoomorphic cave.

The Trapezoidal Stone from Teotenango portrays opposed creatures, similar to those on the Structure A portico murals of Cacaxtla and the ballcourt markers of Plazuelas. On the side opposite the aforementioned bird-butterfly hybrid (fig. 3.30), a crouching feline appears wearing a jeweled necklace (fig. 3.54a). It is unclear whether the calendrical inscription 2 Rabbit is a date or the calendrical name of the being. A petroglyph from the same site that was found near the east entrance of the city (fig. 3.54b) represents the same

being, and also labeled with a 2-Rabbit inscription, with a femur that likely serves a logographic function. The femur is also used as a glyph at Cacaxtla (fig. 3.55) and at Teotihuacan (Berlo 1989b:23). The feline on the petroglyph clutches a heart, which resembles the glyphic hearts in the Cacaxtla murals (Berlo 1989b:41), at Xochicalco, and in earlier murals at Teotihuacan. The pairing of avian and feline warriors also appears on the Battle Mural of Cacaxtla's Structure B (fig. 55), which portrays the slaughter of bird warriors at the hands of jaguar-clad figures. A glyphic compound that incorporates the heart glyph appears multiple times within the scene next to the victorious assailants.

In Chapter 2, I identified an Late Classic deity that appears in the art of the Gulf Coast and Cacaxtla, who is a probable precursor to the Late Postclassic Xochipilli. Among other qualities, Xochipilli is a deity of the youthful sun and fertility, music, and dance (Aguilera 2004; Mathiowetz 2011; Miller and Taube 1993:190; Nicholson 1971b:417-418), concepts associated with Flower World. He was a god of hallucinogenic plants, the use of which was a probable means of accessing the floral spirit realm. Xochipilli also may personify the idealized human soul, closely aligned with the floral paradisiacal solar afterlife (Séjourné 1976 [1956]:146-147; Taube 2005a:35). In the Codex Borgia, The Late Postclassic Xochipilli shares attributes with the sun god Tonatiuh (Seler 1991-1998:I:56; Taube 2004a:175), and is a probable manifestation of the dawning sun that makes its ascent out of the eastern solar paradise (Mathiowetz 2011). On page 37 of the Borgia (fig. 3.56), Xochipilli plays a flute and drum in a temple decorated with flowers and jades on the roof (Taube 2004a:175). The temple bears is nearly identical to the eastern temple on page 49 of the Borgia (fig. 3.2), and both temples have seven flowers on the roof. "Seven Flower" is also the calendrical name of Xochipilli used by the Late Postclassic Mixtecs (Pohl 2001), and the

probable Flower Mountain, Chicomoztoc, is named its the seven caves from which the first Nahua peoples emerged.

The probable Late Classic Xochipilli is dressed in a simple loincloth and necklace, and has a crest on top of his head and one or two side tassels, and appears on two urns from Cacaxtla. An example in the Cacaxtla site museum portrays two diminutive figures flanking a central being in an avian costume (fig. 3.57). The costume is that of a quetzal, based its the stylized wings and blue feathers, but has jade breath beads protruding from its nostrils in addition to two antenna-like projections on the top of the head. The figure wears a belt of conch shells, similar to avian-costumed figures in the Los Once Señores de Cacaxtla corpus (fig. 3.44). The smaller figure on the left side of the vessel plays a conch shell trumpet and appears to be the same character that I suggest is the Late Classic precursor to Xochipilli (fig. 3.57b). The being is here associated with music, and the conch shell may be the most fundamental of wind instruments.

On a vessel in the Museo Regional de Tlaxcala (fig. 3.58), two figures with crests and tassels flank a larger central figure wearing a butterfly costume with antennae, a curled proboscis and small bat-like wings. Both of the smaller figures wear only loincloths and necklaces, and hold conch-shell trumpets. A third urn from Cacaxtla is damaged, but presents a similar scene, with a central butterfly-garbed figure flanked by two diminutive characters (fig. 3.59). The plants that sprout on either side of the butterfly figures on the two vessels are undoubtedly cacao, and bear strong resemblance to a cacao plant painted on Cacaxtla's Red Temple Mural, which depicts the plant not as a tree, but more like a vine or maize plant with striated spade-shaped cacao pods growing from the trunk and branches (Contreras Martínez 2007).

Cacao, as a product of the eastern Maya region, was an important component of the Flower World Complex in Mesoamerica. Michael Mathiowetz (2011:703) notes that in Mixtec codices, the youthful solar deity 7 Flower-Xochipilli is represented as a cacao trader. Oswaldo Chinchilla Mazariegos (2013) argues that Flower World, cacao, and human sacrifice are closely intertwined themes at Late Classic Cotzumalhuapa. A human-faced cacao pod is among the fruit harvested from a tree in a probable Cotzumalhuapa Flower World (Chinchilla Mazariegos 2013:87). Cacao pods can serve as metaphorical substitutions for hearts in Mesoamerica, and the liquid is akin to blood (Contreras Martínez 2007:533-534; Thompson 1956:101). Simon Martin (2006) has demonstrated that among the Classic Maya, cacao was associated not only with death, but also with resurrection, a concept closely aligned with Flower World as the realm where the deceased sun is resurrected daily from the Underworld.

Cacao played a prominent role in feasting and rituals related to Flower World in Mesoamerica and the American Southwest. Taube (n.d.:16, 26) notes that cacao drinking was related to feasts commemorating deceased warriors in Postclassic Mesoamerica. Mixteca-Puebla vessels with floral and solar imagery are akin to open flower blossoms, which serve as portals to the celestial paradise, conceivably attracting the nectar-drinking spirits of Flower World (Taube 2010b:165-167). Noting the distribution of floral vessel types and the widespread use of cacao in Late Postclassic West Mexico and the American Southwest, Mathiowetz (2011) argues that Flower World ceremonialism linked elites in far-reaching networks of exchange. The widely distributed red-on-buff Coyotlatelco pottery of Late Classic Central Mexico is frequently decorated with petaled floral motifs (fig. 3.60). It is conceivable that these vessels prefigure Mixteca-Puebla floral vessels and may have

similarly been used for feasting and consumption of cacao in rituals related to Flower World.

The urns from Cacaxtla (figs. 3.57-3.59) are decorated with butterfly and quetzal garbed figures who likely represent deceased warriors or rulers, cacao plants, and the being that I suggest is the Late Classic predecessor of Xochipilli, a deity of music, the soul, and the newly arisen eastern sun. Two of the scenes (figs. 3.57-3.58) are framed with perforated circular disks, which probably denote jades (Contreras Martínez 2007:538), marking the location as a place of lustrous and radiant jewels. The urn in the Museo Regional de Tlaxcala (fig. 3.58) and the damaged urn on display in Cacaxtla's site museum (fig. 3.59), which also features a butterfly-garbed character as its central figure, both have flower blossom appliqués on their lids, as well as larger four-petaled flowers on top that served as knobs. In terms of subject matter, these vessels bear striking resemblance to Teotihuacano theater-style censers. Decorated with flower blossoms, circular jades, and cacao plants, these vessels probably portray Flower World, the radiant solar paradise and place of the dawning sun.

Conclusions

This chapter identifies several key aspects of ritual, religion, and worldview that link Late Classic sites of Central Mexico through shared beliefs in Flower World, the realm of deceased warriors and other important ancestors. Although directional symbolism continued to be an important factor in organizing city plans and structuring ritual, Late Classic Central Mexican sites particularly looked to the east as a source of wealth and fertility. Flower World ideology may have played a central role in interregional interactions of the Late Classic as it promoted militarism through the veneration of deceased warriors and the exchange of prestige goods. Important prestige goods associated with Flower

World, primarily cacao and jade, came from the Maya region to the east, which was likely cosmologically associated with the floral paradise and daily birthplace of the sun.

The Flower World Complex is a historically contingent and transmissible suite of beliefs (Hays-Gilpin and Hill 1999, 2000; Hill 1992; Mathiowetz 2011; Taube 2004b, 2005a, 2006, 2010a). Late Classic elites may have adopted Flower World ideology in order to bolster claims of legitimacy. Eastern goods such as cacao may have been used to edify elite status through feasting in honor of apotheosized royal ancestors. Another export from the Maya region was likely a model of divine kingship that equated rulers to solar deities and cast the royal soul as the point of access to an aesthetic realm of fragrant flowers and radiant objects. Adoption of this role required fine trappings associated with Maya rulers, such as objects of jade. While the role of religion in interregional interaction during the Late Classic has not been given due attention, the Flower World complex was an important means of interaction that promoted militarism and long-distance exchange.

Chapter 4: Rituals of Water, Fire, and Human Sacrifice in the Late Classic Period

Ritual may be loosely defined as patterned behavior. While ritual is most often considered within the context of religion, other types of behavior may become ritualized, and indeed the distinction between religious and secular rituals is often blurred (Bell 1997:138-169). Religion and ritual are frequently confused, but in simple terms, religion belongs to the domain of the conceptual, whereas ritual is action. Scholars have long debated whether religion shapes ritual or vice versa, and the longstanding anthropological debate of structure versus agency is at the heart of the matter (Fogelin 2007:56-59). While there are proponents of either side, most would now concur that ritual and religion exist in a dialectical relationship, with each informing and giving shape to the other. Ritual practices were once considered beyond the grasp of archaeological inquiry, but modern attempts to understand ancient ritual fall within two basic categories: symbolic approaches that make use of historical and ethnohistorical sources, and more experiential approaches that more directly analyze material remains as indicators of past behavior (Fogelin 2007). This chapter investigates the spread and adoption of religious ritual practices during the Late Classic period. While I focus primarily on the ritual practices that reinforced and gave shape to religious symbolism, I also consider material remains as a physical record of past behaviors and how they inform the various ways that ritual was adopted, enacted, and modified by past agents to become more relevant to local religious and ideological frameworks and concerns. Perhaps due to the "cosmopolitan" nature of Xochicalco, Teotenango, and Cacaxtla, these sites contributed to the "international" character of

Mesoamerican art and ritual of subsequent time periods by adopting and combining ritual practices from various regions of Mesoamerica in innovative ways.

Ritual is more than a performative aspect of religion, and carries important social ramifications. Public ritual can be an active element in the construction of social orders and can serve as an arena for the negotiation of power (Bell 1992; Fox 1996). Ritual practioners may use public events to demonstrate proximity to divine powers or to display coercive power or force. Those in power may also manipulate religious symbols to achieve desired aims (Inomata 2001; Mills 2004; Pauketat and Emerson 1991), and may control and regulate the production of ritual objects and imagery in order to "materialize" ideology and create a hegemonic discourse (DeMarrais, et al. 1996). Taking part in ritual may also function as a means of promoting solidarity and corporate identity among diverse populations (Pauketat and Alt 2004). During the Late Classic period, the emergent polities of Central Mexico and their counterparts in the Maya Lowlands and other regions of Mesoamerica used ritual to bolster claims of authority and promote unitary identities among the undoubtedly diverse constituents of their cities. Shared ritual practices may have also served as public forums of interaction between cities in order to buttress alliances and promote exchange. This chapter focuses on three major types of public ritual: those pertaining to the manipulation of water, those involving human sacrifice, and ceremonies that incorporate the ritual creation of fire. There is often overlap among these analytical categories, and certain rituals can involve a variety of symbolic elements and desired outcomes. The aim is to explore how Late Classic polities used ritual and ritual symbolism to demonstrate affiliation, enact common goals, and display power and authority.

Water Ritual

Ritual practices involving water, or more specifically to bringing rain, were a major preoccupation for Late Classic cultures. Although water-related ritual is omnipresent in Mesoamerica at least as early as the Formative period (e.g. Grove 1984; Ortíz and del Carmen Rodríguez 2000; Schaafsma and Taube 2006; Taube 1995), rituals performed with the intention of bringing rain necessary for sustaining crops and larger populations may have been especially important during the Late Classic period. The embattled years between AD 650 and 900 were marked by the widespread occurrence of droughts of varying magnitude throughout Mesoamerica that ultimately may have led to conflict, the abandonment of many Late Classic centers, and migrations of peoples to more ecologically stable and agriculturally productive locales (e.g. Armillas 1969; Beekman and Christensen 2011; Douglas, et al. 2015; Medina-Elizalde and Rohling 2012; Stahle, et al. 2011). Veneration of the rain god Tlaloc, a major aspect of Teotihuacan religion, retained its importance through the Late Classic period (see Chapter 2). Important widespread ritual complexes related to rain-bringing during the Late Classic period include the probable mimetic pouring of liquids over rock-carved architectural models, or *maquetas*, and the Mesoamerican ballgame.

Maquetas

Boulder *maquetas* carved in the form of monumental architecture have been found at Xochicalco and Teotenango (see Álvarez A. 1975:269-282; 1982; Smith and Hirth 2000:45-47). The boulders are carved with small stairs, channels, and depressions, and were probably used in rain or water rituals (Álvarez A. 1975:282). A large example from Xochicalco has an *I*-shaped depression in the form of a ballcourt at the foot of a stepped pyramidal structure (fig. 4.1; Litvak King 1982 [1965]). Presumably, liquid could be poured

onto the boulder, and it would trickle down the pyramid and collect in the ballcourt-shaped basin (Taube 2013a:299). Scholars note other *maquetas* located throughout Mesoamerica that may have functioned similarly in ritual involving water or other liquids (Cook de Leonard 1955; Hernández Rivero 2009; Houston 1998:359-360; Taladoire 2012:26). The arrangement of the Xochicalco *maqueta* evokes the concept of the *altepetl*, or "water-mountain," a term used to denote cities among Nahua speakers of the Late Postclassic. The *maquetas* suggest that, in terms of ceremony, one of the major functions of pyramidal structures and masonry ballcourts was to evoke celestial water. The largest and most elaborate *maqueta* of Late Classic Central Mexico is found at the important salt-producing site of San Miguel Ixtapan, Estado de México (fig. 4.2). The *maqueta* features several architectural forms, including numerous ballcourts and temples with staircases, and a sunken patio. Other smaller *maquetas* in the region include temples and staircases (Hernández Rivero 2009:23-24). The *maqueta* of San Miguel Ixtapan, however, does not resemble site plans of any site in the region (Hernández Rivero 2009), and may instead represent an idealized cosmological model (Taladoire 2012:25). The occurrence of similarly carved boulders at Xochicalco, Teotenango, and San Miguel Ixtapan suggests a shared religious complex concerning water ritual.

Although it is difficult to assign dates of construction to stone *maquetas*, examples in the Basin of Mexico that are stylistically similar to those of Xochicalco and Teotenango may have been made during the Late Classic. At Cuahilama, also known as Acalpixcan (fig. 4.3), near Xochimilco, and Cerro del Judio, on the western edge of the Basin of Mexico, similar *maquetas*, replete with miniature stairs, pecked cupules, and channels to direct the flow of liquid are carved into living rock recalling, albeit on a much smaller scale, the carved Inca monuments of Kenko, Peru. Eduardo Noguera (1972) dates the Cuahilama *maqueta* to the

Late Postclassic based on ceramic sherd analysis at the site and stylistic analysis of nearby petroglyphs, although an Late Classic component of Xochimilco, which includes Coyotlatelco pottery, has yet to be fully investigated (Crider 2011:25). Regardless of the dating of the aforementioned examples, the smaller-scale ceremonial landscapes represented in Late Classic *maquetas*, likely manipulated ritually to control the movement of water on a macrocosmic scale, may prefigure Late Postclassic examples such as the elaborate ceremonial hydraulic works of the Baths of Nezahuacoyotl, that features directionally oriented pools that collect water, and grooves that allow water to flow beside staircases (see Schaafsma and Taube 2006:242; Townsend 2009:143-148).

While they differ in medium and setting, the *maquetas* of Xochicalco, Teotenango, and San Miguel Ixtapan are reminiscent of miniature masonry temples found at Teotihuacan (see Schavelson 1982). Several have been found *in situ* at the centrally located La Ventilla compound (fig. 4.4). Although such *maquetas* could have been used in a variety of rituals, larger temple-shaped altars found in the patios of residential provide clues to their functions. Infant burials often appear beneath patio altars (Manzanilla 2002:61), and child sacrifice was generally held to propitiate rain deities in later Aztec society. The Teotihuacan altars, located within private compounds, suggest that lineage groups were in charge of more exclusive types ceremonies, or they were perhaps carried out in conjunction with more public ceremonies. The *maquetas* of Xochicalco, Teotenango, and San Miguel Ixtapan were fundamentally different from those of Teotihuacan because they did not appear in private residential compounds within a dense urban fabric, but rather appear to be "closer to nature" and carved into rock outcrops and boulders, although their smaller scale does suggest more private ritual. Most of the *maquetas* from Xochicalco were found in modern agricultural fields, or in one instance, on one of Xochicalco's terraces (Smith and Hirth

2000:45-47). It is possible that ancient inhabitants grew crops in the same fields and on the terraces (which may have doubled as defensive features and cultivable space), and the *maquetas* were used to petition rain for agricultural bounty.

At the site of Plazuelas, Guanajuato, architectural *maquetas* and rocks carved with channels and cupules are likely evidence of the ritual manipulation of water. In one remarkable example, a representation of actual architecture found at the site, rather than idealized pyramids and ballcourts, was carved onto the surface of a boulder(fig. 4.5a). The *maqueta* in question represents a sunken patio with a triple pyramid group, characteristic of the Late Classic Bajío region (Castañeda López 2007:37; Moguel Cos and Sánchez Correa 1989). Indeed, the *maqueta* is nearly identical to the Casas Tapadas complex (fig. 4.5b; Castañeda López and Quiroz Rosales 2004:156-157; Juárez Cossio 1999:43), the probable main religious focal point of Plazuelas. A smaller architectural *maqueta* is carved on the northern edge of the sunken patio (fig. 4.6). In the sunken patio itself, near the location of the *maqueta*, there is a stone drain, suggesting that the architectural feature itself could indeed be flooded. Outside of the sunken patio group, numerous rocks with large pecked cupules are arranged in rows. Upon visiting the site after a rainstorm, I observed that the cupules filled with water, and the relationship of the alignments to the sunken patio at the site's center was evident, with several rows of cupules appearing to radiate outward from the sunken patio group (fig. 4.7). The sunken patio group itself may have symbolically regulated the flow of water. The boulders among the structures of the nearby site of Zaragoza, Michoacán are literally covered with incised abstract designs, such as spirals and undulating lines (Cabrera Castro 1982). While it is not as apparent that the petroglyphs of Zaragoza were involved in rain-related ritual, like Plazuelas, they probably mark the site's

core as a locus of sacred ritual space, and perhaps as a ceremonial landscape with which people could interact to manipulate the larger cosmos.

At the Cotzumalhuapa site of Bilbao, Monument 93 (fig. 4.8a), a large carved boulder, discovered in 2010, was likely used for the ritual manipulation of fluids, although it differs significantly from the aforementioned *maquetas* from Central Mexico. Located on the southeast corner of Group A's platform, the monument is carved with cupules and drains for the collection of water, and was likely used in water-related ritual (Chinchilla Mazariegos 2014:6-10). Rather than architectural features, the monument portrays the relief-carved dismembered bodies of at least five human figures. Toward the bottom of the monument, the skeletal head of the death god appears next to a basin containing the faces of a male-female pair in high relief. Oswaldo Chinchilla Mazariegos (2014:10) identifies the female figure as an aged goddess that also appears on Bilbao Monument 21 (fig. 4.28). The basin in which the faces sit is strikingly similar to a basin containing two faces with features of the rain god Tlaloc on Bilbao Monument 34 (fig. 4.8b), which stood near a stream and may have been partially submerged (Chinchilla Mazariegos 2014:10). That Monument 34 portrays faces of the rain god and both Bilbao Monument 34 and 93 have basins and drains for collecting water suggests ritual affinities with Late Classic Central Mexico pertaining to the pouring and manipulation of liquids, although Bilbao Monument 93 clearly relates rain-making to ritual human sacrifice and dismemberment. Similarly, Karl Taube (pers. comm. 2015) suggests that the Xochicalco *maqueta* (fig. 4.1) could have functioned as a sacrificial stone, similar to an Aztec *techcatl* (see Beyer 1969 [1918]). Taube adds that the size and proportions of the monument are conducive to stretching a captive over the carved pyramid for heart removal (see discussion of heart sacrifice below), and blood would then pool in the cupule at its summit and trickle down into the ballcourt-shaped depression below.

The Ballgame

The widespread Mesoamerican ballgame was a ritualized sport typically played by two opposing teams or players who bounced a rubber ball back and forth on an *I*-shaped masonry court. While "the ballgame" is often discussed in a general sense, which may imply a lack of variation in method, purpose, and symbolism throughout Mesoamerican history, I use the term to refer to a probable constellation of events that used rubber balls in masonry courts with the caveat that rules, manner of play, purpose, and related ideology undoubtedly varied over time and among different cultures. Direct evidence in the form of ritually deposited rubber balls that date back to Early Formative El Manatí, Veracruz (Ortíz and del Carmen Rodríguez 2000), and a yet earlier Lacona phase ballcourt at Paso de la Amada, Chiapas (Blake 2011; Lesure 2011) indicates that the ballgame was a cornerstone of ceremonialism at the earliest major Mesoamerican settlements. While the ballgame is ubiquitous in Classic and Postclassic Mesoamerica, there was a major proliferation of ballcourts during the Late Classic period. Seventeen ballcourts had been known at El Tajín, Veracruz, and three additional courts have recently been discovered. At Cantona, Puebla, there were at least 24 ballcourts (García Cook and Merino Carrión 1998:200-203).

The large number of ballcourts at certain Late Classic sites is particularly curious, given that there were no known ballcourts at Teotihuacan. The "Paradise of Tlaloc" mural in the Tepantitla compound of Teotihuacan, however, depicts the game as played in an alley between two parallel walls. A Gulf Coast-style stone yoke (see below) was also cached along with a trophy skull at Tepantitla (Borhegyi 1980:4). The ballgame may have arrived relatively late at Teotihuacan, as the city expanded its reach to distant regions of Mesoamerica in which it was played in masonry courts. Classic-period ballcourts, mostly north-south in orientation, appear at sites showing marked Teotihuacan influence such as

Kaminaljuyu, Matacapan, and Los Horcones (Leyenaar and Parsons 1988:33-36). The ballgame became prominent in the Maya Lowlands during the Late Classic period, and according to Eric Taladoire (2001:109-110), more than half of the known ballcourts in Mesoamerica were built during that time. Perhaps even more curious than the absence of ballcourts at Teotihuacan is the utter lack of evidence of the ballgame at Cacaxtla, despite the prominent role of the ballgame in the site plans and material culture of other Late Classic sites. However, according to John Carlson (1991:49) 1991:49, a stone ballgame ring was found on the east side of Cacaxtla's acropolis. It is possible that one or more ballcourts await excavation at Cacaxtla, given that the full extent of the site has not been explored, or that they have been destroyed by modern urbanism and agriculture.

The Mesoamerican ballgame was far more than athletic competition or a spectator sport in its strictest sense. Artwork and ethnohistoric sources denote that the ballgame was a highly symbolic and ritualized event. A number of scholars have posited the possible religious symbolism and ritual significance behind the game. Several studies have considered the ballgame as a means of social integration (Agüero and Daneels 2009), or conflict resolution through mediation, boundary negotiation, or as a form of symbolic warfare (e.g. Gillespie 1991; Santley, et al. 1991; Stern 1949; Taladoire and Colsenet 1991). Santley and colleagues (1991) see a negative correlation between the number of courts at a site and their degree of centralized authority, which could partially explain the large number of ballcourts at some Late Classic sites. Likewise, since ballcourts are a means of expressing power and prestige, Taladoire (2001:114) suggests that numerous ballcourts within a single site may suggest that it was governed by a political confederacy, whereas a solitary court at a site denotes individual rule. Walter Krickeberg (1966) saw the ballcourt as the underworld stage upon which a symbolic battle between the dualistically opposed

forces of light and dark plays out. Eduard Seler (1988 [1904]:II:30) relates the ballgame to the movement of the sun, and other studies that equate the ballgame to celestial and agricultural cycles (e.g. Cohodas 1975; Knauth 1961) have perhaps been the most widely accepted explanations of ballgame symbolism. Recently, Karl Taube (2013a) has pointed out the ballgame's function in water ritual as a means of rain-bringing. While no single explanation necessarily excludes others, it should be noted that the purpose of the game was undoubtedly variable through time and across the vast geographical expanse in which the game was played. Furthermore, the ballcourts were performative and multifunctional spaces in which various types of rituals and other events could take place.

In accord with Taube's (2013a) observations on the role of ballcourts and the ballgame in rain-bringing ritual, water ritual in association with ballcourts, or ballcourt effigies, appears to have been widespread during the Late Classic period. The aforementioned stone *maqueta* from Xochicalco (fig. 4.1) features a ballcourt-shaped basin that could have collected liquid (Taube 2013a:299). Stephen Houston (1998:359) notes a similar Late Classic Maya stone-carved *maqueta* from Planchon de las Figuras, Chiapas. A Late Classic Maya ceramic vessel in the form of a ballcourt (fig. 4.9) is equipped with a spout and holes in the court, allowing the playing surface to fill with liquid (Houston 1998:359; Schaafsma and Taube 2006:245; Taube 2013a:298; Whittington 2001:164).[25] The large *maqueta* from San Miguel Ixtapan (fig. 4.2) is covered with miniature temples and at least

[25] Whittington (2001:164) dates the vessel to the Late Classic based on the ballcourt's architectural form, although other authors (Borhegyi 1980:4; Houston 1998:359; Schaafsma and Taube 2006:245; Taube 2013:298) place the vessel's manufacture in the Preclassic period.

six ballcourts that could have collected water or other ritually poured liquids (Hernández Rivero 2009).[26]

Historic sources suggest that the association of the ballgame with rain-bringing was widespread in Mesoamerica. In the *Popol Vuh*, underworld gods relate the sound of the game being played in a court above them to thunder. In an Aztec myth, the Toltec ruler Huemac insulted the rain gods after defeating them in the ballgame, and as a result, the Toltecs were subjected to four years of devastating droughts (Bierhorst 1992:156-157). Citing the chronicler Tezozomoc who speaks of the Aztec Great Ballcourt in Tenochtitlan, Graulich (1997:231) notes:

> In the center of the ball court the Mexica, on their arrival, made a hole called Huitzilopochtli's "tzompantli" (skull rack), through which the ball was supposed to pass. By pouring water into it, the Mexica changed the region into a lake; and it was over that hole that Huitzilopochtli sacrificed Coyolxauhqui. The following morning, the water disappeared through "a hole in the lake," no doubt the same one.

In fact, three springs were found near the site of the Tenochtitlan ballcourt (Ovando-Shelly and Manzanilla 1997). In Late Classic art, a Gulf Coast manifestation of the rain god Tlaloc figures prominently in the central relief-carved panels of El Tajín's South Ballcourt, where he appears as the protagonist in acts of creation, which includes letting penile blood onto a fish man (Taube 1986:55-57; 2013a:302). The ballcourt was apparently widely regarded as a primordial and watery place.

Beyond ballcourt-shaped depressions on *maquetas*, it appears that a many actual ballcourts could be ritually flooded. Two parallel rectangular structures within an enclosure at the Middle Formative site of Teopantecuanitlan, Guerrero constitute an early example of a floodable ballcourt, having a system of aqueducts that enters and exits the court

[26] For a thorough list of ballcourt-shaped *maquetas* and petroglyphs, see Taladoire 2012:20-21.

(Schaafsma and Taube 2006:245; Taube 2004c:11; 2013a:297). During the Late Classic, the East Ballcourt of Xochicalco was equipped with a drain at each end so that it could be flooded for rain ritual (Schaafsma and Taube 2006:245-246; Taube 2013a:299). Likewise, a drainage system was located near the ballcourt at Plazuelas (Castañeda López and Quiroz Rosales 2004:155). Taube (2013a:299) notes that the East Ballcourt of Xochicalco resembles steep-sided, enclosed Late Classic Maya *palangana* ballcourts (see Smith 1961:116-117; Taladoire 2001:106), that would likely fill with rain during tropical storms. Although true *palanganas* are rectangular and lack the end zones of *I*-shaped courts (Taladoire 2003:332), they are often located at or near the base of a pyramid, evocative of the temple and ballcourt arrangements of the Xochicalco and San Miguel Ixtapan *maquetas*. Furthermore, at Cantona, the twelve "Cantona Type" ballcourts (see García Cook and Merino Carrión 1998:200) are also similar to *palangana* ballcourts of highland Chiapas and Guatemala (Taube 2013a:299-300). Taladoire (2003:332) points out that *palangana* ballcourts are more common than generally recognized, citing additional examples from Oaxaca and the Tehuacan Valley.

Temazcals, ritual sweat baths, are architectural features that involve the use of water in ritual, and are often located in close proximity to ballcourts during the Late Classic period. Temazcals may have been used for ritual purification and cleansing before or after the game, and may have been considered primordial space (see Houston 1996). A temazcal near the North Ballcourt of Xochicalco is one of the best preserved archaeological examples in Mesoamerica (Garza Tarazona and González Crespo 1995:118). A cistern located near a polychrome altar decorated with red and green undulating lines served to store and convey water to the temazcal (Garza Tarazona and González Crespo 1995:122-124). The decoration on the altar may allude to heat and water, two essential components of the sweat bath.

Temazcals are also found in close proximity to ballcourts at the Maya sites of Piedras Negras, Toniná, and Chichén Itzá, as well as the Zoque site of San Antonio, Chiapas (Taladoire 2001:114). Plazuelas may have also had a sweatbath located near its ballcourt (Castañeda López and Quiroz Rosales 2004:156). A temazcal was discovered at the east end of the Teotenango ballcourt, but it was partially buried by the court, proving that it is a later construction (Reyes V. 1975:131). Despite the chronological difference between the two structures, the association of the ballcourt and the temazcal is evocative of a similar arrangement at Xochicalco, and links the water feature to the ballcourt. Furthermore, the construction of the Teotenango ballcourt over a water feature recalls the close relationship of water and ballcourts at other sites, and the placement of Tenochtitlan's Great Ballcourt near a series of springs.

The ballgame appears to have been particularly important at Xochicalco. In addition to the three ballcourts located on Cerro Xochicalco, three other ballcourts are located on nearby hills (Hirth 2000:211). Tenoned stone rings, located above the playing surface near the center line of the court, are a common feature of Early and Late Postclassic ballcourts. Xochicalco is among the earliest sites to incorporate stone rings into masonry ballcourts, predating other well-known examples such as those at Uxmal (see Kowalski 1991). Stone rings are perhaps primarily a Central Mexican feature, although other Maya sites with ballcourt rings include Naranjo, Cobá, and Chichén Itzá (Cohodas 1991:254, fn. 256), and a stone ring was found at Cotzumalhuapa (Termer 1930:98, cited in Chinchilla Mazariegos 2009). The West Ballcourt at Xochicalco has similar dimensions to the ballcourt at Teotenango, Ballcourt 1 at Tula, and the main ballcourt of Copán (Hirth 2000:76; Reyes V. 1975:122). It is conceivable that Xochicalco's ballcourt may have served as a prototype for those at Teotenango and Tula, although its relationship to that of Copán remains unclear.

Curiously, both sites share macaw imagery in association with the ballgame, in the form of a large stone "ballcourt marker" from Xochicalco, and a stone mosaic macaw on Structure 10L-10 of Ballcourt A-III of Copán as well as several smaller tenoned macaw heads associated with the ballcourt (fig. 4.10).

Prior to the Early Postclassic period, three distinct types of stone ballgame paraphernalia were manufactured and widely distributed. Yokes (or *yugos*), which are typically *U*-shaped in form, resemble thick padded belts worn by players, as first noted by Samuel Lothrop (1923). Yokes first appear in the archaeological record in Olmec contexts, but are more common by the Late Classic period, with carved examples often bearing toad or reptilian imagery (Scott 2001:53-58). *Hachas* typically represent the head of a human, deity, or animal, and are thin and taper toward the front in cross section. The name derives early mistaken identification of *hachas* as ceremonial ax blades. Most examples incorporate a notch or tenon that is usually left undecorated or unpolished, for attachment to a yoke or chest protector. While there is no suitable way to attach an *hacha* to a stone yoke, Late Classic Maya ballplayers occasionally wear *hachas* mounted onto heavily padded belts, likely of softer perishable materials, in representations. Monument 171 of Toniná provides both lateral and frontal views of *hachas* mounted on the fronts of padded belts worn by two Maya rulers playing ball (fig. 4.11). *Palmas,* a third type of stone ballgame paraphernalia, vary in shape and size, but most are tall and slender, flaring laterally toward the top and becoming thinner. With concave bases, some *palmas* cannot stand upright on a flat surface, and must have been designed to rest on a convex surface (Ekholm 1949:2). At the top, they often become paddle-shaped, bifurcated, or separated into four or five rays. Although plant, reptile, bird, and mammal representations are common, *palmas* frequently appear carved with imagery related to human sacrifice (Kampen 1978; Wilkerson 1984:117-118). Among

other representations, the relief-carved Panels 3 and 4 of El Tajín's South Ballcourt portray figures wearing *palmas* attached to the fronts of their belts (fig. 4.12), although it is noteworthy that, unlike *hachas*, they do not appear to be worn by players during the actual ballgame.

By the Late Classic period, yokes, *hachas*, and *palmas* were prestige objects distributed widely throughout Mesoamerica. According to Leyenaar and Parsons (1988:44-45), stone ballgame paraphernalia spread from Veracruz into Central America around AD 400, roughly coinciding with the widespread appearance of ballcourts in the Maya region. Curiously, relatively few examples of stone ballgame gear have been found in the Maya region, although they are plentiful on the periphery to the west and south (see Shook and Marquis 1996). Noting this phenomenon, Wigberto Jiménez Moreno (1966:65) argued that Pipiles spread the yoke-*hacha*-*palma* complex from the Gulf Coast to southern Central America during migrations following the collapse of Teotihuacan. While the similarities between Gulf Coast and southern Central American stone ballgame paraphernalia are striking, as previously noted, such objects do appear in Late Classic Maya artwork, and yokes made of perishable material would rarely survive archaeologically. In an extraordinary example at Tikal, Jorge Guillemín was able to preserve in plaster the remains of a stucco-covered, polychromed wooden yoke found in a Late Classic tomb (Leyenaar and Parsons 1988:77). Excavated examples of yokes, *hachas*, and *palmas* have typically been found in caches or accompanying human burials (Leyenaar and Parsons 1988:48-49; Shook and Marquis 1996).

At Xochicalco, César Sáenz excavated two plain yokes and a full-round *hacha* with a crude straight tenon (fig. 4.13a) on the floor of the Cámara de las Ofrendas, attached to the façade of Structure A (Sáenz 1962:21). An *hacha* in the form of the head of a butterfly from

Xochicalco is also round (fig. 4.13b), unlike typical thin examples from Late Classic Veracruz and Southern Guatemala. The aforementioned large macaw "ballcourt marker" from from Xochicalco (fig. 4.10) is carved as an over-sized *hacha*, including a notch in the back that allowed smaller hachas to be attached to a yoke. Macaw heads or humans wearing macaw headdresses are relatively common subject matter among *hachas* from southern Chiapas, Guatemala, and El Salvador (see Shook and Marquis 1996:161-167). *Hachas* and yokes from Xochicalco may be of more local manufacture, given the difficulty of transporting heavy stone objects across great distances, although they suggest intellectual exchange with distant parts of Mesoamerica.

Mesoamerican ballcourts also provided a setting for other types of public events and rituals. John Fox (1996) argues that ballcourts were loci of competitive feasting, undertaken in order to aggrandize elites or factions vying for power. Dances, other types of performances, and ritual combat may have also been held in ballcourts. Objects such as stone spheres and *manoplas* or "yuguitos" have long been considered implements of variations of the ballgame, and indeed many heavily padded figures in Mesoamerican art, such as those in the reliefs of Late Formative Dainzú, Oaxaca, have erroneously been considered ballplayers. Recent research has demonstrated the importance of ancient Mesoamerican ritual combat, and that these objects and many heavily padded figures are actually ritual combatants, rather than ballplayers (Chinchilla Mazariegos 2009:154-157; Orr 2003; Taube 2004c:84-85; 2013a:304-311; Taube and Zender 2009; Zender 2004:7-8). Ritual combat was also a likely form of ceremonial rain-bringing, as Pre-Hispanic boxers were often dressed as jaguars, similar to contemporary Nahua of Zitlala, and other communities in highland Guerrero, who dress as jaguars and box at the beginning of the rainy season in spring to ensure a good harvest through bloodshed that metaphorically

fertilizes the earth (Orr 2003:90-91; Taube 2013a:310-311; Taube and Zender 2009:161-162). As noted by Taube (2013a:310) and Taube and Zender (2009:175), pre-Hispanic ritual boxing was probably often carried out in ballcourts, as places of rain-bringing ceremony.

Although no direct evidence of boxing has yet been found at Late Classic Xochicalco, Cacaxtla, or Teotenango, ritual combat was likely widespread and took many forms. So-called gladiatorial sacrifice among the Aztecs, undertaken as part of the Tlacaxipehualiztli festival in spring, involved ritual combat between a prisoner armed with a feather-lined sword and tied to a perforated stone who faced warriors clad in a jaguar costumes and armed with swords lined with blades (Durán 1971:177-180). This event, involving jaguar-clad fighters battling at the beginning of the rainy season, may well be a variation of the ritual combat of modern highland Guerrero and ancient Oaxaca and the Maya region. Also worth noting, Aztec stone tenoned ballgame rings, known in Nahuatl as *tlachtlitemalacatl*, are similar in form to the tenon-less *temalacatl*, the circular perforated stone to which the prisoner was tied. The similarities in Aztec stone rings may be evolutionary, rather than coincidental, and it is worth considering the possibility that, in addition to use during the ballgame, stone rings may have served as anchors to limit the movement of tied ritual combatants, keeping them in place on the ballcourt during matches. In support of this suggestion, ritual boxers often appear with ropes or long cloths attached to their waists, arms, necks, or helmets (fig. 4.14). While many of the figures with ropes do not come from sites in which ballcourt rings have been found, they may have been tied to something else, such as a wooden ring, or a variety of stone sculptures labeled as ballcourt markers that appears widely during the Late Classic period. If correct, this also suggests that some ritual combatants may not have been willing participants.

Human Sacrifice

Human sacrifice was a key element of Mesoamerican ritual, as demonstrated by the earliest evidence from the Early Formative period, to numerous Spanish accounts from the time of contact. Any discussion of pre-Hispanic human sacrifice requires contextualization. Human sacrifice was a widespread practice among ancient societies, and was by no means unique to the pre-Hispanic cultures of the Americas (e.g. Campbell 2014). In general, sacrificial victims could be selected from within or from outside of the group, such as a captive taken in battle, which may have been the most common type of victim. Autosacrifice, perhaps the most widespread form of sacrifice in Mesoamerica, which generally involved the penitential act of offering one's own blood, is well represented in Late Classic Maya and Aztec art, as well as in Early Colonial sources. "Sacrifice" derives from the Latin *sacer facio*, "to make holy or sacred," and in this sense, may be viewed as a transaction between humans and divine powers. For the Aztecs, the gods were considered to have let blood to create the first humans, as well as to have provided food for them, and thus it was an obligation for humans to reciprocate with an adequate offering in fulfillment of a "divine contract" or as perpetual repayment of original debt (Hamann 2002; Swenson 2014:39). Human sacrifice served as reenactment of other cosmogonic events as well, as in the case of Aztec New Fire ceremonies, which commemorated the self-immolation of the gods to create the current era (see discussion below; Taube 2000b:315-316). Other occasions for human sacrifice in ancient Mesoamerica include the dedication of a monument or building, the accession or death of a ruler, periodic maintenance of calendrically prescribed events, or as a petition to deities that could affect certain outcomes.

Aside from a means of interacting with supernatural powers, human sacrifice, especially when carried out as public spectacle, reinforces and legitimates hierarchies of

power and perceived social orders (Inomata and Triadan 2005; Swenson 2014; Wolf 1999). According to Nigel Davies (1984:212), "all over the world, wherever one looks at the record, the sacrificial victims were taken from the same categories of people: war captives, slaves, women, and children—that is to say, precisely those who had few, if any, rights of their own." Although Davies has made an overgeneralization, his statement emphasizes that human sacrifice reinforced and perpetuated existing power hierarchies at the expense of subalterns. In this regard, human sacrifice is not unlike modern structural violence. However, human sacrifice differs from structural violence in that the identity of the aggressor and the nature of the power they hold over their subjects is made apparent in a decisive and visceral act. Performed ritual killing makes abstracted or intangible forms of power appear more real (Swenson 2014:36). Human sacrifice in ancient Mesoamerica reinforced elite status through demonstration of divinely sanctioned power.

Until relatively recently, the Classic Maya were viewed as a pacifistic society. Ritualized violence that appears in Early Postclassic Maya artwork was considered to be the byproduct of Central Mexican influence, especially during the Early Postclassic period. Perhaps in effort to "pass the buck" and maintain notions of Teotihuacan as a theocratic state, others have suggested that certain forms of human sacrifice and public display of human remains originated in the northern Mesoamerican frontier. During the 1980s, a number of studies (e.g. Robicsek and Hales 1984; Schele 1984; Schele and Miller 1986; Taube 1988b) demonstrated that the Classic Maya engaged in a variety of forms of human sacrifice prior to the appearance of Toltec influence in the Northern Maya Lowlands. Simplistic diffusionist models that attribute the spread of human sacrifice to waves of migration or invasion no longer appear tenable. As is apparent in considering various sacrificial practices during the Late Classic period and attempting to trace their origins, it is

not always apparent how or from where such practices spread. It appears that the Late to Terminal Classic was a time in which rulers of smaller states sought new ways to consolidate power through violent display, but it was also a time in which pre-existing concepts and practices, such as ballgame sacrifice, the display and curation of sacrificial remains, and heart sacrifice coalesced, and perhaps became more widespread and institutionalized.

Ballgame Sacrifice

The decapitation of a ballplayer is widely considered to be a culminating event of the Mesoamerican ballgame. However, some scholars believe that post-game sacrifice was a relatively rare occurrence (Agüero and Daneels 2009:123; Gillespie 1991). Although it is widely depicted in ballgame imagery, there is little direct physical evidence of this practice. As rare examples, the Late Classic sites of Toluquilla and Ranas, Queretaro had caches of severed heads buried beneath their ballcourts (Mendoza 2007:409), as did the ballcourt at later Paquimé, Chihuahua (Di Peso 1974:2:415). Stephen de Borhegyi (1967:545) noted the resemblance of *hachas* to trophy heads, and argued that they were awarded to victorious ballplayers. Early *hachas* tend to be full-round, roughly life-size carvings of human heads that appear to be deceased (Scott 2001:59; 2009:103-104). As previously noted, *palmas* are frequently decorated with imagery pertaining to human sacrifice, including dismembered body parts and sacrificial victims.

Curiously, figures wearing yokes, *hachas*, and *palmas* are seldom portrayed as playing the ballgame, especially outside of Late Classic Maya art. Chinchilla Mazariegos (2009) notes that figures in Cotzumalhuapa art that are commonly referred to as ballplayers are not playing ball, but rather sing, dance, and give offerings to deities. South Ballcourt Panel 4 of El Tajin (fig. 4.12) shows three figures wearing yokes and *palmas*, in

ballcourt; one restrains a seated victim who has a has a knife held at his throat by another (Kampen 1972:55). Several authors have noted the similarity of the scene to the Early Postclassic ballcourt reliefs of the Great Ballcourt of Chichén Itzá, which portray rows of players wearing yokes and *palmas*. On either side of a ball with a skull superimposed on it, a figure holds a severed head and a knife, while the victim kneels with serpents and a flowering vine springing from his neck (fig. 4.15). The vine growing from the victim's neck recalls similar imagery from Cotzumalhuapa (Taube 1994b:228). The serpents, which likely represent the victim's blood, similarly appear on reliefs from Aparicio, Veracruz (fig. 4.16a), which depict decapitated figures wearing yokes and fan-shaped *palmas* (Cohodas 1991:fn. 7; Moser 1973:22; Taube 1994b:228). Images similar to the panels from Aparicio also appear on Panel 7 of the Pyramid of the Niches at El Tajín, and in the murals of Las Higueras, Veracruz (Agüero and Daneels 2009:128). It is noteworthy that *palmas* are worn by both sacrificial victims and their executioners, and given the frequency with which sacrificial imagery appears on *palmas*, it appears that they are most closely associated with sacrifice on the court, rather than with the actual playing of the game. The relief-carved images of decapitated ballplayers with serpents springing from their necks from Early Classic Chichén Itzá and the Late Classic Gulf Coast likely derive from imagery on Teotihuacan-style vessels from Escuintla, Guatemala (Hellmuth 1978:79-81, fig. 11). An example from Escuintla in the Denver Art Museum (fig. 4.16b) portrays a kneeling decapitated ballplayer wearing a yoke. In addition to serpents emerging from the figure's neck, there is a trilobed blood glyph superimposed on the chest (see below), suggesting that the heart has also been extracted.

A large corpus of Late Classic Maya monuments adds a political dimension to the modern understanding of ballgame sacrifice. For the Maya, epigraphy and imagery suggests

that the ballgame was a culminating act of warfare (Miller and Houston 1987; Schele and Miller 1986:250). Important war captives may appear trussed as balls, struck by victorious rulers in ballgame gear, or bouncing down the steps of a temple (Miller and Houston 1987). Carved stairs from Yaxchilan's Structure 33, for example, depict the ruler Bird Jaguar striking the prominent captive known as "Jeweled Skull," who serves as the ball (Miller and Houston 1987:54; Schele and Miller 1986:248-249). Enemy rulers captured in battle may have been taken to the victor's city and forced to play the ballgame, after which they would be publically executed (Schele and Miller 1986:249-250). While iconographic and epigraphic evidence is lacking in Central Mexico, it is quite possible that contemporaneous Late Classic rulers may have likewise used the ballgame as a means of demonstrating their prowess, celebrating martial victories, and reinforcing their right to rule through defeat on the court and subsequent public execution of enemies.

Skull Racks

During the Postclassic, skull racks, known by the Nahuatl term *tzompantli*, were often placed near or adjacent to ballcourts. *Tzompantli* were used to display the severed heads of victims of post-ballgame sacrifice and other rituals that culminated in decapitation.[27] Late Postclassic skull racks, such as those in the Sacred Precinct of Tenochtitlan (fig. 4.17) consist of a stone platform, upon which rows of horizontal wooden poles sat, each bearing several skulls pierced laterally through their temporal bones. An excavated Late Postclassic example, Structure B of the Sacred Precinct of Tenochtitlan (fig. 4.18), is a square structure with a staircase on its western side and 240 stuccoed stone skulls decorating its sides (Matos Moctezuma 1987:197). However, even among the Aztecs,

[27] For a list of Aztec veintena ceremonies that culminated with the placement of severed heads in skull racks, see Moser 1973: Table 1.

there is considerable variation in the form in which *tzompantli* took. At *tzompantli* platform at Calixtlahuaca is decorated with stone skulls, like Structure B, but is cruciform in shape. The large Early Postclassic *tzompantli* platform at Chichén Itzá, is shaped like a "T" and decorated with eagles, serpents, warriors, and approximately 2400 skulls (Tozzer 1957:131). Each of the relief-carved skulls that decorate the base shows a vertical rod skewering the skull through the roof and foramen magnum, rather than through either side (fig. 4.19). Hundreds of skull fragments were found associated with a *tzompantli* platform near Ballcourt II at Tula (Diehl 1983:66), although unlike that of Chichén Itzá, the Tula *tzompantli* platform was apparently undecorated (Miller 1999:358).

The geographic and cultural origins of the *tzompantli* are debatable. Several scholars argue that head-taking and subsequent display on skull racks derives from Sierra Madre Occidental cultures of West and Northwest Mexico, and diffused into Central Mexico during the Postclassic (Diehl 1983:153; Hers 1989; Kelley 1978). The Late Classic Chalchihuites culture of Zacatecas and Jalisco created features for the display of human bones that may be analogous to the Postclassic *tzompantli*. At the site of Alta Vista, Zacatecas, at least two wooden structures displayed perforated crania and long bones (Kelley 1978). The skulls found in association with these features were pierced by small holes at their apices, suggesting that they were hung from a wooden structure using cord (Kelley 1978:109; Pickering 1985:302-303). Evidence of analogous structures with similarly perforated skulls comes from the contemporaneous site of Cerro del Huistle, Jalisco (Hers 1989:89-93). Charles Di Peso (1974:562; Di Peso, et al. 1974:768-771) excavated a similar, but slightly later feature that he terms a "bone mobile" at the site of Casas Grandes. It may be a minor point of argument, but the *tzompantli*-like features from Alta Vista, Cerro del Huistle, and Casas Grandes differ from those of Central Mexico and the Maya region in the manner in

which bones are suspended and their inclusion of long bones. A much earlier probable predecessor to the *tzompantli* is not from western or northern Mexico, but rather from Late Formative Oaxaca (Mendoza 2007:401-403; Miller 1999:346; Spencer and Redmond 1997:520-524). At the site of Loma de la Coyotera, a wooden rack held and displayed at least 61 skulls in rows, much like the *tzompantli* of the Postclassic (Spencer and Redmond 1997:520-524).

While there is no direct evidence of skull racks at Classic-period Teotihuacan, there is some evidence of the *tzompantli* or similar display of skulls and long bones at the Late Classic sites of Xochicalco and Teotenango. At Xochicalco, perforated skulls and long bones were apparently hung at "strategic points" in the city (Garza Tarazona and Alvarado León 2007:261), including Structure I-4 (the portico in which the Xochicalco Stelae were recovered), which contained a number of perforated skulls and other bones strewn across the floor (Garza Gómez 1996). The treatment of the bones is reminiscent of the aforementioned "bone mobiles" of Alta Vista, Cerro del Huistle, and Casas Grandes, although it is not clear whether these features are directly related to the display of perforated skulls and long bones at Xochicalco. Of possible relation, a Teotihuacan-style incensario from Escuintla, Guatemala is formed as a temple with five severed arms hung on the lintel (fig. 4.20), suggesting that Teotihuacanos may have also displayed body parts on public architectural façades.

A series of four carved stone skulls on display in Xochicalco's site museum (fig. 4.21) may have once adorned a *tzompantli* or similar structure (Testard 2014:846), although contextual information would clarify how these sculptures were displayed. Likewise, Kenneth Hirth (2000:259) suggests that a small stone skull from Xochicalco may relate to the taking of trophy heads destined for the *tzompantli*. An altar curiously situated within a

patio compound at Tula's Canal locality was decorated with tenoned stone skulls (Healan 1989:124-128). At Teotenango, eight skulls with large circular dorsal and ventral perforations could have been displayed in a *tzompantli* (Romano P. 1975:440). The orientation of the perforations is reminiscent of the relief-carved skulls that decorate the base of the *tzompantli* at Chichén Itzá that show rods piercing the skulls vertically (fig. 4.19), rather than horizontally as in Late Postclassic depictions. Several femurs and tibias with small perforations in their ends were recovered from Teotenango (Romano P. 1975:439), suggesting that they may have been suspended in similar fashion to the Chalchihuites culture "bone mobiles."

Eric Thompson (1951) believed that the skull rack was introduced to the Maya during the Postclassic by Mexican "invaders," however there is a good deal of evidence that the *tzompantli*, or similar structures used to display skulls, date back to at least the Late and Terminal Classic periods in the Maya region. A series of low stone altars bearing relief-carved skulls, crossed bones, and extruded eyeballs in the Cemetery Group at Uxmal may have served as platforms for *tzompantli* (Houston, et al. 2006:85; Miller 1999:349). Similar panels bearing skulls, crossed bones, and extruded eyes are known from the sites of Nohpat and Dzibilchaltún, Yucatán (Mayer 2010; Miller 1999:349-350; 2007:171). The platform at Nohpat that the panels decorated lies just south of the ballcourt (see Mayer 2010:fig. 20). At Seibal, Structure A-13, a four-sided platform located near one of the ballcourts (Structure A-19), contained the butchered and burnt remains of 11 males, possibly sacrificed in association with the ballgame (Smith 1982:62, 240). A similar four-sided platform sits adjacent to the ballcourt at Toniná (fig. 4.22), and it is conceivable that these platforms may have once supported skull racks. Twelve monuments from the main ballcourt at Toniná portray captives (Taladoire and Colsenet 1991:172). Tenoned ballcourt markers in the form

of a bound captives appear bent over as if awaiting decapitation (fig. 4.23). Such imagery suggests that the heads of decapitated captives may have been displayed in an adjacent skull rack. At Copán, Stair block I of Structure 10L-16 (fig. 4.24) resembles a skull rack in appearance, if not in function (Fash, et al. 2009:211; Taube 2004d:285). Reconstruction of the low-relief blocks that constitute Stair block I by Karl Taube and Barbara Fash revealed eighteen skulls encircling a massive skeletal visage that resembles that of the Central Mexican rain god Tlaloc (Taube 2004d:284-285; see discussion below).

The *tzompantli* was symbolically viewed as a tree, bearing severed heads as its fruit. A tree with skulls and banners (*pantli*) in its branches on a Toltec mural at Ixtapantongo, Estado de Mexico, can be read as "tzompantli" (fig. 4.25a; Taube 1994b:228). Similarly, page 19 of the Codex Borgia portrays the deity Tlahuizcalpantecuhtli kneeling on top of a platform in front of a rod that skewers two skulls and a tree with banners in its branches (fig. 4.25b; Taube 1994b:228-229). A stucco façade at Toniná portrays a possible *tzompantli* as a leafy arbor decorated with the inverted severed heads of captives (fig. 4.26), and postholes in front of the scene could have accommodated a wooden armature (Houston, et al. 2006:72, 221; Taube 2003a:478). In a well-known episode of the *Popol Vuh*, the Lords of Xibalba place the severed head of One Hunahpu in the branches of a calabash tree at the Place of Ballgame Sacrifice (Tedlock 1996:97-98). Taube (1994b:228-229) notes that this act is akin to placing a head in a *tzompantli*, and relates the episode to the aforementioned Ixtapantongo mural and page 19 of the Codex Borgia. A Late Classic Maya vessel shows a probable early version of the *Popol Vuh* sequence (fig. 4.27), with the head of the Maize God placed in a cacao tree (Taube 1985:175).

The art of Late Classic Cotzumalhuapa may also metaphorically portray skull racks as trees bearing fruit in the form of human heads. On Bilbao Monument 21, a sinuous vine

produces fruit with human faces (fig. 4.28). Chinchilla Mazariegos (2013:88-89; 2014:10) relates the act of harvesting portrayed in the scene to decapitation. Cacao pods appear to have been metaphorical substitutions for severed heads in a pair of similar monuments, El Baúl Monument 12 and Pantaleón Monument 1, which depict busts of probable rulers with nearly identical headdresses, with the exception of a centrally placed cacao pod on one example, and a severed head in the same location on the other (Chinchilla Mazariegos 2012:figs. 31 & 32; 2013:88). Chinchilla Mazariegos (2013:88) notes that the severed heads held by figures dressed as ballplayers on Monuments 3 and 4 of Bilbao likewise resemble these fruit and probably incorporate the same symbolism. A scaffold-like form, to the immediate right of a figure in ballgame gear on Bilbao Monument 3, which Lee Parsons (1969:106) describes as "a human trophy head on a rack or frame," is most certainly an early representation of a *tzompantli* (fig. 4.29), as noted by Alfred Tozzer (1957:131).

Although the act of taking and displaying skulls was clearly present in Late Classic Central Mexico, it is unclear from where the practice ultimately derives. Symbolism relating fruit-bearing trees to skull racks was well developed in the Maya region and at Cotzumalhuapa by the Late Classic period, and by that time, the Maya also likely had specialized platforms that supported *tzompantli*. Perforated skulls and long bones at both Xochicalco and Teotenango suggest a practice similar to that of the Chalchiuites culture of Alta Vista and Cerro del Huistle, although it is equally possible that the practice of making "bone mobiles" spread north from Central Mexico. The vertical skewering of skulls at Teotenango, likely also represented in the stone skulls from Xochicalco (fig. 4.21) is reminiscent of representations of skulls on the *tzompantli* of Chichén Itzá. An early skull rack at Loma de la Coyotera, Oaxaca may be ancestral to the *tzompantli* of later periods, but

currently, direct evidence of skull racks at Teotihuacan and among the Early Classic Maya is lacking.

Trophy-Taking

Aside from examples in which crania were displayed in skull racks, head-taking and caching of skulls was widespread in Mesoamerica during the Late Classic periods. Several large caches of skulls have been found at Late Classic Maya sites such as Colha, Belize, and Altar de Sacrificios, Guatemala (Berryman 2007:392; Massey and Steele 1997; Smith 1972:211). Mound 2 of the Late Classic site of El Zapotal in the Mixtequilla region of south-central Veracruz, which features a life-sized terracotta sculpture of an enthroned death deity (discussed in Chapter 2), also included some 80 stacked human skulls (Torres Guzmán, et al. 1975). At Late Classic Xaltocan, in the northern Basin of Mexico, Morehart and colleagues (2012) report the sacrificed and dismembered remains of at least 31 individuals, of which 13 severed crania were arranged in a line facing east. Fournier and Vargas Sanders (2002:49-50) note 12 severed heads found in an altar at Late Classic Chapantongo, near Tula. Skulls, cached individually or in small groups, were found in several locations at Teotenango (Zacarías B. 1975). At Cacaxtla, an offering on the western edge of the acropolis contained two complete and two partial adult skulls, along with a stone sculpture representing the face of the rain god Tlaloc, and a ceramic sculpture of a figure with a Tlaloc mask that is split revealing a human face beneath (see Chapter 2, fig. 2.13a; Jiménez Ovando 1995). However, the vast majority of dismembered human remains, including severed heads, found in dedicatory contexts at Cacaxtla belong to infants and adolescents (Delgadillo Torres and Santana Sandoval 1990, 1995). At Xochicalco, a dedicatory cache under a patio contained a cinnabar-covered mandible (Hirth 2000:260). Decapitation was apparently also a component of the ritual dedication of certain structures

at Classic Teotihuacan, as exemplified by Burial 4 of the Pyramid of the Moon, a dedicatory offering consisting of the severed crania of 17 individuals (and an 18th individual represented by a single atlas vertebra) dating to around AD 350 (Spence and Pereira 2007:149-151; Sugiyama and López Luján 2007).

Head-taking was apparently a culminating sacrificial act of captives taken on the battlefield. Glyphic texts at Dos Pilas and Naranjo, Guatemala reference post-conflict "heaped" skulls and "pools" of blood (Houston, et al. 2006:72, 225). A scene depicting the arraignment of captives in Room 2 of Bonampak includes a severed head resting near one of the captives (Houston, et al. 2006:72). Late Classic Maya rulers frequently appear wearing small, possibly shrunken, trophy heads as costume elements on headdresses and belts (Houston, et al. 2006:70-72; Moser 1973:14-16; Schele 1984:9; Taube and Houston In press:218). Similar to their method of depiction on the *tzompantli* on the stucco façade at Toniná (fig. 4.26), Maya trophy heads often hang upside-down. While it is unknown if victorious rulers or warriors wore trophy heads at Classic-period Teotihuacan, sacrificed men in warrior garb inhumed in the Temple of Quetzalcoatl wore probable war trophies in the form of necklaces consisting of a series of artificial human maxillae, and in one instance, an authentic example (Cabrera Castro 1993; Spence, et al. 2004; Sugiyama 2005:171-179). A trophy maxilla was found at the roughly contemporaneous Cerro Tilcajete, Oaxaca (Duncan, et al. 2009). Diego de Landa records the wearing of defleshed mandibles as war trophies among Yucatec Maya around the time of contact (Tozzer 1941:123). Schele and Miller (1986:54) suggest that the Classic Maya practiced a form of sacrifice that involved jaw removal. Caches of defleshed mandibles have been recovered from the Late Classic Maya sites of Cancuen, Mountain Cow, Toniná, and Altar de Sacrificios (Berryman 2007:393;

Welsh 1988). The patio of house 2C at Xochicalco yielded a cinnabar-covered mandible as part of a dedicatory cache (Hirth 2000:260).

For the ancient Maya, carved long bones, such as those found in Burial 116 of Tikal's Temple 1 (see Trik 1963), and a skull elaborated with carving from Kaminaljuyu and two others described by Francis Robicsek (1991), may have been prized as war trophies. The Mayan *baak* can refer to "bone" or "captive," suggesting a possible relationship between these two concepts in the form of bones taken as trophies from sacrificed enemies. On Late Classic Maya sculptures such as Yaxchilan Lintel 8 and several slabs depicting captives at Toniná, the name glyphs of royal captives are inscribed on their thighs (see Schele and Miller 1986:figs. V.3 and V.7). This transference of the primary locus of identity from the more typical head or headdress may serve to dehumanize the captive as a body of meat and bone, and allude to the notion that the captor will dismember and possess the body as prized trophies and permanent records of victory.

The inhabitants of Cacaxtla and other Late Classic polities also engaged in the practice of carving human bones, which may have been taken as war trophies. Kenneth Hirth (1989:77; 2000:260) interprets a femur that appears next to a warrior on the Cacaxtla Battle Mural as a war trophy attached to his costume (fig. 4.30). Given that the victorious warriors in the scene have various objects next to them that likely constitute glyphs, it is perhaps more probable that it is part of the figure's name. However, bones that served as probable war trophies do appear at Cacaxtla. A partial human pelvis (fig. 4.31), found in excavations in the Palacio complex, is completely covered with carved imagery (López de Molina and Molina Feal 1986:74). A mandible with deeply incised geometric designs is on display in the Cacaxtla site museum (fig. 4.32). Although only the left half of the mandible remains, it is possible that the distal end of the bone portrays a crouching figure, perhaps

with curling "bigote" resembling that of the rain god Tlaloc. What may be a monkey appears on the ramus. Holes drilled in the mandible may have allowed for suspension, perhaps as a costume element. A carved mandible from Xico bears a frontal zoomorphic face and rattlesnakes on either side, and has holes drilled in either ramus (fig. 4.33; Franco 1968).

Mandibles carved similarly to the examples from Cacaxtla and Xico are known from the Ñuiñe culture of northern Oaxaca, but they are decorated with calendrical day signs. Investigators suggest that the Ñuiñe examples may be the elaborated bones of revered ancestors (Rivera Guzmán 2015; Urcid 2011b:134; Winter and Urcid 1990:48), although it is often difficult to determine whether dismembered and manipulated remains are those of ancestors or sacrificial victims (Tiesler 2007). It is equally possible that the Ñuiñe mandibles were war trophies similar in concept to the collars of human maxillae from Teotihuacan, or that they were parts of skeletal masks, as suggested by drilled holes that allowed for suspension. A carved skull from Late to Terminal Classic contexts at the Maya site of Pakal Na, Belize, bearing a woven mat design on the cranium and cartouches on the mandible, apparently served as a mask. The skull belonged to a young man and the carvings were made around the time of death, suggesting that it was a war trophy, rather than the remains of an ancestor (Harrison-Buck, et al. 2007). A human occipital bone from Xochicalco carved in the form of a human face with closed eyes and the foramen magnum forming the mouth bears perforations around its rim was a probable trophy that was worn as a costume element (fig. 4.34; Hirth 1989:76; 2000:260). Depressions in the forehead may have once held inlay.

The transformation of bones, likely taken from sacrificial victims, into musical instruments is a practice that can be traced to Late Classic Central Mexico. Long bones carved with a series of transverse notches for use as rasps were known as *omichicahuaztli*

by the Late Postclassic Aztecs. Numerous bone rasps have been found in deposits at Teotenango (Lagunas R. and Zacarías B. 1973:42; Romano P. 1975:439-440; Tommasi de Magrelli 1980), and a pair of similar rasps is on display in the Cacaxtla site museum (fig. 4.35). A skull with a large circular aperture cut into the top (fig. 4.36) was found in the fill of Cacaxtla's Structure B (López de Molina and Molina Feal 1986:74). The aperture, with a diameter of 9 cm, appears too large and carefully cut to have been made for placement on a *tzompantli*, and it is possible that the skull may have been used as a cup or other type of container. The cut in the top of the skull is similar in dimension to one on a skull found in the Sacred Cenote of Chichén Itzá, which was used as an incense burner (see Coggins 1984:155; Moholy-Nagy and Ladd 1992:133-140), although there is no apparent trace of burning inside the braincase of the Cacaxtla example. Another possible interpretation is that the skull may have been used as a resonating chamber for another instrument, such as a rasp. Page 24 of the Late Postclassic Mixtec Codex Vienna similarly portrays the deity 9 Wind playing a rasp with a probable human skull resonator (fig. 4.37a). Similarly, a *huehuetl* drum appears with a human skull over the sound hole on the Late Postclassic Maya murals at Santa Rita, Belize (fig. 4.37b). Scrolls that issue from the mouth of the skull can be understood as the rhythmic singing of the slain victim as the drum is played. The scrolls also resemble smoke, perhaps recalling the aforementioned skull incense burner from Chichén Itzá. It is noteworthy that Cacaxtla's Structure B, in which the perforated skull was recovered, is in turn decorated with vivid murals portraying the slaying of war captives.

Flaying

The curation of human body parts in ancient Mesoamerica was by no means limited to durable bone. The practice of flaying sacrificial victims among the Aztecs was well-documented by Spaniards. The curation of human skin is far more difficult to ascertain

archaeologically than the ritual dismemberment of sacrificial victims, although cut marks on skulls may denote flaying, as noted by some scholars (e.g. Massey and Steele 1997; Mock 1998). Despite the difficulties inherent in determining whether victims were flayed for the procurement of their skin or for cleaning the skeleton of soft tissue, there is ample iconographic evidence of the flaying and use of human skin as early as the Classic period in Central Mexico.

Depictions of the Late Postclassic Xipe Totec ("Our Lord the Flayed One") and his predecessors offer a corpus of indirect evidence of human flaying and curation of skin. During the Late Postclassic period, Aztec priests impersonated the deity by donning flayed human skins, although the wearing of skins was an element of several different rituals devoted to various deities. As noted in Chapter 2, an early probable depiction of Xipe Totec comes from the Zacuala compound of Teotihuacan (fig. 4.38; Séjourné 2002 [1959]:26; Taube 1992b:107). The figure is identifiable as a precursor to the Late Postclassic Xipe Totec by the closed eyes, slack mouth, and vertical stripes running through the eyes. Also noted in Chapter 2, ceramic representations of this being with closed, lifeless eyes and slack mouths from Late Classic Central Mexico include large ceramic examples from Xolalpan and San Mateo Tezoquipan (fig. 4.39), and three smaller ceramic from the Los Once Señores de Cacaxtla corpus (fig. 4.40). Although these examples do not constitute direct evidence of human flaying and wearing of skins, it is reasonable to infer that impersonation of flayed deities was an important element of ceremonialism long before the Late Postclassic Aztecs.

Among the Classic Maya, there is additional evidence of human flaying and curation of skins. In Maya hieroglyphs and iconography, the logograph for "shield" (*pakal*), employed in the metaphorical pairing *u took' u pakal* ("his flint, his shield") to refer to warfare, consists of the stretched skin of a flayed human face in the center of a rounded shield (fig.

4.41; Houston 1983; Stone and Zender 2011:87; Taube 1992b:107-108; Taube and Houston In press:218). The eyes are shut, and the rounded open mouth often has what appears to be a bloody handprint across it. The glyph strongly suggests that Late Classic Maya rulers made powerful statements of military prowess by incorporating the dried skins of enemies taken in battle into their martial regalia.

Several depictions of flayed humans appear in the artwork of the southern piedmont of Late Classic Guatemala. Chinchilla Mazariegos (2014) discusses a ceramic effigy figure found near the acropolis of El Baúl that appears to wear a stretched and wrinkled flayed skin over the face (fig. 4.42a). In addition to several similar ceramic examples from the Cotzumalhuapa region, Chinchilla Mazariegos (2014:4) also discusses a large tenoned head, now missing, from Finca El Portal, which also appears to wear a flayed human skin, given the narrowed eyes, stretched nose, and slack mouth (fig. 4.42b). Although the ceramic effigy figure does not likely represent Xipe Totec (Chinchilla Mazariegos 2014:4), the large tenoned head from FInca El Portal wears a two-tiered turban, similar to the squared turbans worn by the three Los Once Señores de Cacaxtla (fig. 4.40). Shook and Marquis (1996:189-196) note several *hachas* from southern Guatemala and El Salvador that represent human heads with either eyes and mouths visible under flayed skins, or closed, lifeless eyes and slack mouths. Although they categorize the *hachas* as examples of Xipe Totec, there is no direct indication that any of them represent the deity, rather than a flayed skin or human wearing a flayed skin mask.

Representations of flaying are rare in Late Classic Central Mexico, but there are some examples that suggest that the curation of human skin was practiced at Xochicalco and Cacaxtla. As previously noted, three representations of a probable precursor to Xipe Totec among the Los Once Señores de Cacaxtla sculptures offer indirect evidence of human

flaying. A greenstone pendant from Cacaxtla has closed eyes and what appears to be a pair of lips visible beneath an open mouth, and may therefore represent a figure wearing a flayed skin (fig. 4.43). The aforementioned occipital bone from Xochicalco that was carved in the form of a human face may also represent a flayed skin (fig. 4.34). The eyes are closed and lifeless, the nose appears to be stretched flat as in examples from Cotzumalhuapa, and utilization of the foramen magnum as the mouth of the mask gives it a rounded appearance similar to the slackened mouths of flayed faces. With a slack mouth and closed eyes, the aforementioned *hacha* from Xochicalco, found in the Cámara de las Ofrendas (fig. 4.13), may represent a flayed human skin mask, if not a severed head. A sculpture from Xochicalco representing a supine human torso with a large slit running the length of the abdomen (fig. 4.62, further discussed below) displays deeply incised ribs, suggesting that the figure has been flayed (Seler 1991-1998:II:85). Finally, the two visible life-sized, supine figures painted on the Captive Stair of Cacaxtla (fig. 4.44) may represent defleshed or flayed sacrificial victims (Domínguez and Urcid 2013:563). The display of captives on stair treads is of great antiquity in Mesoamerica, with an early portrayal on Monument 3 of Middle Formative San José Mogote, but the feature is particularly prominent at Late Classic Maya sites along the Usumacinta corridor (Helmke and Nielsen 2011:33-34). However, Maya captives are typically shown bound and stripped of their finery, but with their bodies intact. While the faces of the figures on Cacaxtla's Captive Stair appear to be intact, visible ribs and joints suggest that the skin of their bodies has been removed. Their bodies are painted red, suggesting that they have not been stripped down to whitish bone.

Heart Sacrifice

Among the Late Postclassic Aztecs, heart extraction was the most prominent and potent form of human sacrifice. According to Early Colonial sources, the hearts of thousands

of sacrificial victims were extracted in a single event and offered to the sun from atop the Templo Mayor. Although not likely practiced on a scale approaching that of the Aztecs, scholarship in recent decades has demonstrated that heart sacrifice was much more widespread in Mesoamerican cultures prior to the Late Postclassic period than previously acknowledged. Heart sacrifice is represented in the artwork of Teotihuacan, the Late Classic Maya, and Late Classic Central Mexico, but becomes more prevalent in Early Postclassic imagery. Furthermore, a specific type of sacrificial altar associated with heart sacrifice known as a chacmool, common among Toltecs, Aztecs, and Tarascans, has probable origins in Late Classic Central Mexico.

Artwork suggests that human heart extraction was practiced at Teotihuacan. Several scenes in Teotihuacan murals and painted ceramics portray long, curved obsidian blades, often with a heart hanging from the tip. A mural fragment from the Atetelco compound (fig. 4.45a) portrays a warrior holding a blade that pierces a heart that drips four gouts of blood. The particular manner of depicting hearts, first identified by Laurette Séjourné (1976 [1956]:121), continued at Late Classic Xochicalco, Cacaxtla, Teotenango, and parts of Guerrero (Urcid 1993:156). A mural fragment that was likely looted from Techinantitla portrays the rather non-naturalistic killing of a deer by two animals typically identified as coyotes that extract the heart from their victim's chest (fig. 4.46). Clara Millon (1988a; b:121) notes that in other instances, coyotes are portrayed as warriors, and this scene metaphorically represents human heart sacrifice. Esther Pasztory (1993b:48) adds that the mural reframes heart sacrifice as part of a natural order, akin to a predator-prey relationship. Animals portrayed devouring hearts in the art of Teotihuacan include felines, plumed serpents, and the War Serpent (fig. 4.47a). In rare instances the Classic Maya depicted animals devouring hearts such as on a headdress on Piedras Negras Stela 9, which

portrays a bird and probably intentionally evokes Teotihuacan-style imagery (fig. 4.47b). Animals, especially jaguars and birds of prey, are similarly shown devouring hearts the art of the Zapotecs, Teotenango, and Early Postclassic Tula and Chichén Itzá (figs. 4.47c-f). The birds and jaguars of Tula and Chichén Itzá appear to prefigure Aztec eagle and jaguar warrior orders, and may allude to heart sacrifice as a culminating act of warfare and a predator-prey relationship between Toltecs and their enemies.

There is increasing recognition of the importance of heart extraction among the Classic Maya, although decapitation was perhaps a more favored form of human sacrifice. In addition to the aforementioned Stela 9, which depicts a bird devouring a heart, there are several allusions to heart sacrifice in the art of Late Classic Piedras Negras. In an oft-cited example, Stela 11 (fig. 4.48a) and Stela 14 portray small figures within bowls at the bases of royal accession scaffolds. Taube (2009b:101) notes that the feathered object tied with a series of knots on Stela 11 is a sacrificial knife that protrudes from what is likely the victim's heart. On Piedras Negras Stelae 7 and 8 (figs. 4.48b-c), probable hearts dangle from the curved tips of eccentric blades that top staffs. The object that hangs from the blade on Stela 8 is reminiscent of the trilobate scroll that can represent a heart in Teotihuacan and Classic Zapotec art (see fig. 4.48c). The blades are marked with a pair of halved concentric semicircles, a Late Classic Maya convention for denoting obsidian. Among Late Classic Maya sites, the art of Piedras Negras shows a particularly high degree of influence from Teotihuacan (Stone 1989). The eccentric blades on Stelae 7 and 8 immediately recall the long obsidian blades that pierce hearts in Teotihuacan imagery.

In Classic Maya skeletal remains and material culture, evidence of heart sacrifice is not readily apparent. Robicsek and Hales (1984) outline a possible method of Classic Maya heart extraction that involved cutting across the chest through the sternum and sternal ribs.

Problematically, there is a lack of corroborating skeletal evidence to reflect this practice. Tiesler and Cucina (2006) suggest a different method in which the abdomen is punctured below the ribcage, cutting only through soft tissue. The authors note examples in which subtle, but noticeable evidence on victims' skeletons consists of cut marks that appear on the ventral sides of thoracic vertebrae, gouged by the tip of the blade as it penetrated through the abdomen. Sacrificial victims may have been stretched over dome-shaped monuments such as Copán's Altar 4 during heart extraction, providing access to the heart from beneath the ribcage (Miller and Houston 1987:56; Taube 1994b:229).

The Battle Mural that decorates the two lower taluds flanking either side of the staircase of Cacaxtla's Structure B may present the most vivid allusion to heart sacrifice in Late Classic Central Mexico. In the graphic pair of scenes, warriors dressed in jaguar pelts slaughter stripped warriors, several of whom wear avian headdresses. Although some authors consider the Battle Mural to be primarily mythical or allegorical in content (Escalante Gonzalbo 2002; Piña Chán 1998; Quirarte 1983:216; Uriarte Castañeda and Velázquez García 2013), others (e.g. Brittenham 2008, 2011, 2015; Helmke and Nielsen 2011:28; Lombardo de Ruiz 1986:229-230; McVicker 1985) generally concur that the mural portrays a historical scene embellished with mythical and cosmological elements. Ellen Baird (1989:105-106) argues that rather than battle, the murals more precisely depict the aftermath of combat, as the mostly unarmed avian warriors are stripped as a sign of humiliation, and are being bound, sacrificed, and eviscerated by jaguar warriors who stand among them. Other authors (e.g. Carlson 1991; Piña Chán 1998:81-87; Uriarte Castañeda and Velázquez García 2013) support a reading of the mural program as post-war sacrifice, however, Claudia Brittenham (2011; 2015:117-121) points out that the scenes more accurately portray a synoptic moment in which some of the bird warriors are vanquished,

others are bound, and some continue to fight, but the victory of the jaguar warriors is inevitable and uncontested.

Each of the victorious jaguar warriors is accompanied by a set of glyphs that include a variable symbol and a compound consisting of a maxilla that appears to devour a heart, surmounted by a quartered disk (fig. 4.49a). A similar compound appears repeatedly next to seated figures on the upper talud of the Pyramid of the Plumed Serpents at Xochicalco, consisting of a set of jaws oriented toward a quartered disk (fig. 4.49b). Several authors (Baddeley 1983:63; Baus de Czitrom 1986:510; Berlo 1989b:28; Stone 2002:29-32) have used the Nahuatl translation of "teeth" (*tlantli*) to suggest a rebus reading of the compound as a locative (-*tlan*), as in Aztec writing.[28] Marta Foncerrada de Molina (1982; 1993:126) interprets the compound as a verb relating to human sacrifice. Hirth (1989:73-75; 2000:256-259) relates the glyphs to collecting tribute through "devouring" territories at Xochicalco, and collecting "blood tribute," on behalf of deities at Cacaxtla. A likely interpretation is that the bloody heart compound represents a personal title, as suggested by other authors (Helmke and Nielsen 2011:25-28; Paulinyi 1991:63; Taube 2000c:17-18). The glyph alludes to heart sacrifice, and although the Battle Mural portrays figures dying from a variety of inflicted wounds, including disemboweling, on the eastern talud, two figures' hearts are removed. One figure (fig. 4.50a) has gashes on his thigh and forearm, and his entrails are pulled out of his abdomen, but also has blood streaming from a wound in his

[28] Andrea Stone (2002) argues that the quartered disk in both the Cacaxtla Battle Mural and the upper register of the Pyramid of the Plumed Serpents at Xochicalco is actually a bound rubber ball. She further argues that both sets of glyphs are locative, referring to the historical Olmeca, "the people of (the land of) rubber." While this argument is intriguing, one wonders why the quartered disk at Cacaxtla is painted blue, rather than the black used to represent rubber balls in Maya depictions on painted vessels, when black pigment was readily available and used liberally throughout the Cacaxtla murals.

chest upon which a stylized heart sits. Another figure (fig. 4.50b) is pierced in the chest by a blade, likely with the aim of removing his heart.

A figure bearing the calendrical name 3 Deer appears twice in the Battle Mural (fig. 4.51), and may be dressed in garb specifically associated with human sacrifice. Both images appear to depict the front and back of the same costume, with the only major exception being that he wears clawed boots in the eastern portion of the mural. 3 Deer's costume consists of a loincloth and kilt (likely made of jaguar pelt), a belt decorated with masks and hearts, an object tied with knotted and likely blood-spotted cloths on his back, a beaded jade collar, and a "balloon" headdress with a trapeze and ray, or "Mexican year sign." The most unique feature of the costume, not worn by other characters in the mural, is the mask shown in X-ray view, which consists of a three-pronged curved element that extends from the forehead to the nose, and a large, curling lip, resembling that of the Central Mexican rain god Tlaloc, three long, straight fangs, and a red trefoil stream that falls beneath the fangs. A similar mask, but with the addition of circular goggles, appears on 3 Deer's belt on the eastern mural (figs. 4.51a & 4.54a). As noted by several authors (e.g. Helmke and Nielsen 2013b; Nagao 1989), Late Classic Maya rulers and ancestors wear a similar "Tlaloc" mask on monuments, including Aguateca Stela 2 (fig. 4.52a), Dos Pilas Stela 16 (fig. 4.52b), and Yaxchilan Lintel 25 (fig. 4.52c).

Maya Tlaloc regalia shares a number of characteristics with the costume worn by 3 Deer, including the mask, balloon headdress with trapeze and ray, beaded jade collar, and jaguar boots. On Aguateca Stela 2 and Dos Pilas Stela 16, both commemorating the victory of Ruler 3 of Dos Pilas over Seibal (Houston and Mathews 1985:17), the figures also have jaguar mittens, as well as other elements, including a bird worn as a pendant, and spondylus

shells on the collar.[29] The Maya figures hold long spears and stand on top of captives. The balloon headdress is made of a deer haunch, suggesting a relationship between predator and prey among the jaguar and deer elements of the costume. In other instances, Maya sacrificial victims are metaphorically linked to deer (Taube 1988b). In other Maya representations, the Tlaloc mask consists of a fleshless, skeletal maxilla with a curling upper lip, in addition to eye goggles. Linda Schele (1984:33) notes that Maya Tlaloc regalia appears in contexts of blood sacrifice and warfare. Likewise, Robicsek and Hales (1984:73) suggest that the jaguar boots and mittens on Aguateca Stela 2 and Dos Pilas Stela 16 may be sacrificial paraphernalia. Until recently, the Maya Tlaloc costume was considered linked to so-called "Venus-regulated" or "Tlaloc-Venus" warfare (e.g. Carlson 1991; Freidel, et al. 1993; Schele and Freidel 1990; Schele and Miller 1986:213). The notion that the Classic Maya conducted war in conjunction with certain astronomical phenomena has fallen out of favor, but it is significant that the Maya Tlaloc costume conveys militaristic and sacrificial themes, as at Cacaxtla.

As previously mentioned, along with several other examples of skeletal Tlaloc masks from the site, the *tzompantli*-like tableau on Stair Block I of Copán's Structure 10L-16 (fig. 4.24) portrays a large mask surrounded skulls (see Fash and Fash 2000:figs. 14.16, 14.17, & 14.19; Taube 2004d:284). Taube (pers. comm. 2014) notes that the scrolls beneath the Tlaloc mask denote the being as a blood-drinker. The red scrolls emanating from beneath the masks of 3 Deer on the Cacaxtla Battle Mural (figs. 4.51a-b & 4.54a) appear to confirm that blood is the substance beneath the Tlaloc mask at Copán. The three-pronged object on the brow of the mask that 3 Deer wears is painted black, resembling an obsidian eccentric,

[29] The skull worn as a pendent, visible on Dos Pilas Stela 16, but not visible on its entirety on Aguateca Stela 2 appears to be pierced vertically by a rod, and could conceivably be part of a *tzompantli*.

as noted by Janet Catherine Berlo (1989b:27). Actual obsidian Tlaloc masks have been found at both Cacaxtla and Xochicalco (fig. 4.53). A similar three-pronged object appears on the Aguateca Stela 2 mask (fig. 4.52a), and on Dos Pilas Stela 16, three such objects hang from beneath the goggle (fig. 4.52b). It is conceivable that Late Classic Maya Tlaloc masks were also made of obsidian. Also of note, most Maya representations of the Tlaloc mask include ear ornaments with a quincunx in the center (fig. 4.24).[30] The quincunx occurs frequently in Teotihuacan art, and appears on a border from the Zacuala compound of Teotihuacan with a curved obsidian blade with a heart on its tip (fig. 4.45c), possibly relating the symbol to heart sacrifice.

The association between obsidian blades and heart sacrifice, apparent at Teotihuacan and Piedras Negras, may also be present in the Maya Tlaloc costume. The belt worn by 3 Deer on the western talud of the Battle Mural (figs. 4.51a & 4.54a) includes a fanged and goggled mask, and several pendent hearts, suggesting that his costume is worn during heart sacrifice.[31] The apron mask on Aguateca Stela 2 similarly portrays a frontal goggled mask with a rounded cruciform object in front of the mouth (figs. 4.52a & 4.54b). The placement of the apron mask is likely analogous to the mask and hearts on 3 Deer's belt. The rounded cruciform object may likewise be a heart, and is shaped similarly to the heart that appears in a bird's mouth on Piedras Negras Stela 9 (fig. 4.47b). The cruciform object also hangs from the end of an ear ornament worn by Ruler 3 on Dos Pilas Stela 16 (fig. 4.54c). The form of the ear ornament immediately recalls curved obsidian blades with hearts hanging from their tips in Teotihuacan imagery (figs. 4.45b-c). Taube (2004d:290-

[30] The bird on the headdress of Piedras Negras Stela 9 wears the same ear ornaments (fig. 4.47b).

[31] Another possible explanation for the appearance of excised hearts on 3 Deer's belt is that they represent the number of captives he has taken.

293) argues that similar rounded cruciform objects that appear Late Classic Maya iconography represent raindrops and analogous drops of blood. The symbolism regarding hearts, raindrops, and obsidian may overlap, and indeed, raindrops fall from the obsidian spear points held by the jaguar figure on the north portico mural of Cacaxtla's Structure A. Stocker and Howe (2003) have arrived at a similar conclusion, linking gouts of blood from excised hearts to falling rain. A profile goggled mask on the kilt worn by Ruler 3 on Dos Pilas Stela 16 (fig. 4.54e) shows the same rounded cruciform object hanging from a hooked form that appears from under the mouth, again recalling Teotihuacan obsidian knives and hearts. The hooked form is remarkably similar to an obsidian eccentric that projects from the mouth of a centipede on Piedras Negras Stela 9 (fig. 4.54d). Similarly shaped objects, likely also obsidian blades, emerge from beneath the mouth of the goggled mask on the ruler's apron on Dos Pilas Stela 16 (fig. 4.54f).

The costume that appears in Late Classic Maya art, worn also by 3 Deer, does not appear to directly evoke concepts of rain and agricultural fertility, primary attributes of the Central Mexican rain god Tlaloc. I have suggested elsewhere (Turner n.d.) that the costume does not represent the normative Central Mexican rain deity, but may instead recall one of several goggled members of Pasztory's (1974) problematic "Tlaloc B" category, or another entity mistakenly conflated with Tlaloc. The only examples of the mask that exhibit pointed fangs are those that appear on the Cacaxtla Battle Mural, and they are straight and conical, and not the curved variety displayed by "Tlaloc A." Examples of the mask in the Maya region lack fangs altogether. The Teotihuacan Tlaloc is not a skeletal being, nor is he represented with the pronged element that appears between the goggles, or the hairy or feathery fringe that appears on the brows of the apron mask of Aguateca Stela 2 (fig. 4.54b). Furthermore, the costume is more wholly feline in nature, with the inclusion of jaguar mittens and boots.

The Teotihuacan Tlaloc is a bellicose deity (see Chapter 2), but is not directly linked to the sacrifice of captives taken in battle in other representations.

Chacmool Sculptures

The chacmool, a sculptural type that was used for offerings of blood and hearts by the Mexica and appears widely during the Early and Late Postclassic, may originate in the Late Classic period. Chacmool sculptures represent reclining male figures, generally with their knees and upper torsos elevated, their hands placed near the lap, and the head turned 90 degrees toward the viewer. That the chacmool was used to make sacrificial offerings is evident in the incorporation of a *cuauhxicalli*, an offering bowl used as a recipient for excised hearts and blood, held on the figure's midsection in Mexica examples (fig. 4.55; Gutiérrez Solana 1983:111). The *cuauhxicalli* metaphorically evokes both the wound cut in the chest of a sacrificial victim and an open flower blossom from which solar deities and deceased warriors apotheosized as nectar-sipping birds and butterflies receive offerings (Taube 2009b:89-90, 103). While the *cuauhxicalli* is not incorporated into other chacmool sculptures, a flattened area, plate, or tray on the abdomen likely served as a platform for similar offerings. Despite wide distribution during the Late Postclassic among the Mexica, Tarascans, and Tlaxcaltecans, and a range from Queretaro to El Salvador (López Austin and López Luján 2001:60), the chacmool is most closely identified with Early Postclassic Tula and Chichén Itzá. Fourteen chacmool sculptures were excavated at Chichén Itzá and twelve from Tula (Miller 1985:7). Toltec chacmools generally resemble the figures carved on the atlantean columns from Tula, that is, they represent glorified, deceased Toltec warriors, often with butterfly pectorals on their chests (fig. 4.56). The chacmool emerged out of Late Classic and Terminal Classic Maya traditions, although there is some debate whether the sculptural form originated in West Mexico or the Maya region.

Marie-Areti Hers (1989:63-68) argues that a stone sculpture excavated at the Late Classic Chalchihuites culture site of Cerro del Huistle, Jalisco is a prototype for later Toltec chacmool sculptures. The rather crude and angular sculpture (fig. 4.57) appears to represent a supine figure with a flat torso that could have held offerings, and an elevated head with rudimentary eyes and a mouth. Given the possibility that other Early Postclassic conventions such as the *tzompantli* (discussed above), colonnaded halls, sunken plazas, and red-on-buff pottery may have arrived at Tula from the Chalchihuites and Bajío regions (Diehl 1983:49-50; Hers 1989; Kristan-Graham 2011; Mastache and Cobean 1989), it is also possible that the chacmool may have accompanied these innovations. However, it is not clear whether the Cerro del Huistle sculpture was intended to be displayed horizontally, and given its lack of detail, it is difficult to discern whether the intended reading of the imagery was sacrificial in nature, or whether it may have carried different meaning.

Other authors (e.g. Kubler 1961:65; Miller 1985; Miller and Samayoa 1998; Werness 2003:23-26) believe that the chacmool originated in the Maya region. Mary Miller (1985; Miller and Samayoa 1998:65) argues that the pose of the chacmool is reminiscent of that of war captives in Classic Maya art. Late Classic Maya captive stairs, such as at Tamarindito (fig. 4.58a), often portray prisoners with one leg elevated and the head turned away from the body, perhaps anticipating the frontal gaze of the chacmool. Miller (1985:9) notes that at both Xultun and Naranjo, captives on stela have frontally portrayed faces, a rarity in Maya art. Maline Werness (2003:23-26) relates the reclining figures on Pabellon Molded-Carved pottery (fig. 4.58b), a ceramic type distributed widely throughout the Southern Maya Lowlands during the Terminal Classic period, to the recumbent pose of Maya captives and suggests that they represent a prototype for the chacmool. Indeed, some chacmool sculptures from Chichén Itzá do not have their knees elevated, but rather rest to one side

with feet crossed (fig. 4.58c). Given the physical constraints of coarse limestone, it is possible that such chacmool sculptures were meant to approximate the pose with crossed legs, typical of Maya captives on monuments and some Pabellon Molded-Carved figures.

The reclining figures that appear on Pabellon Molded-Carved and vessels and Thin Orange ceramics from the Pasión drainage are strikingly similar in pose to figures on relief-carved and stuccoed panels from the Palacio Quemado of Early Postclassic Tula (fig. 4.58d; Taube n.d.:20-21). Cynthia Kristan-Graham (1989:282-290; 1999:171) notes that the reclining figures at Tula probably represent deceased rulers and warriors. Alba Guadalupe Mastache (cited in Mastache, et al. 2009:307) observes that the recumbent figures in the Tula reliefs are similar to a series of deceased warriors that recline on the roof of an eastern solar temple on page 33 of the Codex Borgia (fig. 4.59). The reclining figures on the panels were originally located in a somewhat analogous location to the figures on the roof of the temple in the Borgia; that is, they likely decorated the upper perimeter of Sala 2 of the Palacio Quemado (see Mastache, et al. 2009:fig. 13). According to Karl Taube (n.d.:20), the deceased, reclining kings and warriors on the Palacio Quemado panels appear to fly toward flower-like *cuauhxicalli* offering vessels. The relationship between deceased warriors and the *cuauhxicalli* recalls the chacmool, which likely served as a support for such offering vessels. In fact, Jorge Acosta excavated a chacmool within Sala 2, in close proximity to the relief-carved panels (Kristan-Graham 1989:286).

Although the reclining figures on vessels and the panels of Tula show more dynamic poses than the comparatively static chacmools, this may be attributable to limitations of carving three-dimensional and functional stone sculpture versus low-relief imagery which is not subject to the same structural constraints. Contrarily, perhaps the art style used by Maya and Toltec artists in two-dimensional works favored showing more of the body than

an oblique profile view would afford, hence the head is turned in the opposite direction of the body, and both of the arms and legs of a single reclining figure are shown. The same rule may have held true for the Mixteca-Puebla art style used in the Borgia. In fact, aside from their splayed arms and legs, the poses of the reclining deceased warriors on page 33 of the Borgia (fig. 4.59) are quite similar to that of the chacmool, including the placement of both hands near the waist as if ready to hold an offering bowl.

While the chacmool may be conceptually related to Classic Maya imagery depicting captives, certain sculptural forms from Late Classic Campeche representing sacrificial victims may be precursors to the Early Postclassic Maya-Toltec chacmool in terms of function. An unprovenienced sculpture in the Museo Regional de Campeche Fuerte San Miguel (fig. 4.60a) is a life-sized representation of a captive, bent backward and stripped nude. A flattened depression in the figure's chest suggests heart-removal, and may have doubled as a platform for holding offerings. A Jaina-style figural vessel (fig. 4.60b) is a similar, although much smaller representation of a tortured and sacrificed victim. The figure is in virtually the same pose as the aforementioned sculpture, on his back with limbs slayed, and an aperture in the lower abdomen suggests heart extraction, or more likely, disembowelment. In addition to organ removal, the figure was scalped and has probable sticks of firewood tied to his back (Schele and Miller 1986:228). While it might be speculative to suggest what this vessel may have held, it is conceivable that it was intended as a receptacle for offerings. The vessel and sculpture may thus prefigure the chacmool as a platform for providing offerings, although in a decidedly more visceral manner than the glorified deceased Toltec-Maya warrior.

Although it would seem apparent that the pose and function of the chacmool originated in the Maya region during the Late Classic period, there are several analogues in

Central Mexico during the Late Classic period. Panels portraying reclining figures virtually identical to those of the Palacio Quemado have been found at Late Classic Tula Chico (fig. 4.61a; Mastache, et al. 2009:313; Suárez Cortés, et al. 2007). The reclining male shown in Figure 4.61a holds a ceremonial bar tied with knots similar to Late Classic Maya examples and such imagery could have traveled widely via decorated ceramics or textiles, although this convention may have also arrived at Tula Chico via Cacaxtla as a Maya entrepôt, or perhaps from earlier Maya settlements in the barrios of Teotihuacan. Rex Koontz (2009b:263) points out that the pose of a bundled Tlaloc figure on South Ballcourt Panel 6 of El Tajín is similar to that of a chacmool (fig. 4.61b). A glyph constituting part of the name of a jaguar warrior on the western talud of the Cacaxtla Battle Mural is also similarly posed to the chacmool, representing a supine decapitated and disemboweled sacrificial victim with knees elevated (fig. 4.61c). The symbolism of deceased and sacrificed warriors found in chacmool sculptures of the Early Postclassic was very much present in Late Classic Central Mexico.

The aforementioned glyph from the Cacaxtla Battle Mural finds a life-sized analog in the form of a stone sculpture from Xochicalco (fig. 4.62). The sculpture represents a human torso with arms at either side of the body and a long gash running the length of the chest, which suggests that the internal organs have been removed. Eduard Seler (1991-1998:II:85) noted that the torso was carved without a head, and that exposed ribs suggest that the body was flayed, although an equally likely possibility is that the figure is emaciated. Possible bindings on the wrists and a knot on the right shoulder suggest that the figure may have been a war captive (Hirth 1989:76; 2000:259; Smith and Hirth 2000:34). The monument no longer rests in its original position, but according to Antonio Peñafiel (cited in Smith and Hirth 2000:33), it was found at the foot of the staircase of the Pyramid of

the Plumed Serpents in 1887. Hirth (1989:76) believes that the monument functioned a sacrificial altar, and Juliette Testard (2014:843) relates the sculpture to a *cuauhxicalli*. Indeed, the large gash on the figure's chest may have served as a recipient for blood or other liquid. Debra Nagao (2014:151-152) suggests the sacrificial stone of Xochicalco may be a precursor to the chacmool. Although Seler (1991-1998:II:85) believed that the figure's legs were doubled back under the torso, no legs are apparent on the sculpture. Rather, it appears that the figure's legs are broken and missing, but the angle of the break suggests that the figure's legs were in a flexed position with the knees elevated (fig. 4.62d). As such, the pose of the figure is reminiscent of later chacmool sculptures.

It is not clear whether the Early Postclassic chacmool originated in Central Mexico or Maya region. The chacmool appears to derive in part from the reclining figures on Pabellon Molded-Carved pottery and panels from Tula Chico, and the two art forms may be roughly contemporaneous. The relationship between the two styles warrants further investigation, but is a testament to the rapid exchange of concepts and themes during the Late Classic period. In constructing the Early Postclassic chacmool, such reclining figures appear to have been "grafted" onto altars in the form of slain captives that are also found in both regions. Speaking of miniature atlantean columns used as bench supports at Chichén Itzá, George Kubler (1982:103, 115) observed that Toltec-Maya artists had replaced the stripped and humiliated captives that served as bench supports in Late Classic Maya art with more dignified figures that seem to willingly "support" the state. Although Kubler viewed the atlantean figures as heads of local lineages or towns rather than as deceased warriors in similar attire to that of Early Postclassic chacmool sculptures, his observation highlights a major ideological and aesthetic difference between Toltec modes of visual representation and those of their Central Mexican and Maya predecessors. Representations

of slain warriors and captives in Late Classic Central Mexican and Maya art, such as the Battle Mural of Cacaxtla, the sacrificial stone of Xochicalco, and the captive stairs of Tamarindito evoke fear, pain, and humiliation. In the case of the chacmool, Toltec art seems to depersonalize violence and glorify the deceased warrior. In this regard, Toltec art is similar to that of Teotihuacan in which force, according to Pasztory (1993b:49), is "neutral and distanced." Offerings, likely hearts and blood, were placed in vessels held by Postclassic chacmool figures, rather than representing the slain figures themselves as corporeal offering vessels of sorts, thereby allowing a small but significant distance between the sacrificial victim and the offered contents of the body.

Toltec militaristic ideology may foreshadow that of the Aztec empire, in which the fallen warrior who died in service of the state and the enemy of the state sacrificed to nourish its patron deities shared a common fate as nectar-drinking birds and butterflies that dwelt in a solar paradise (Sahagún 1950-1982:III:49). Edward Swenson (2014) notes that the motivations behind human sacrifice are highly variable and historically, economically, and culturally contingent. The same is certainly true for artistic representations of human sacrifice. The smaller polities of Late Classic Central Mexico and the Maya Lowlands focused on torture and bodily mutilation in artistic representations of sacrifice, which may suggest that their position was less secure among various warring polities and they relied more heavily on threat and intimidation to maintain their status. By contrast, Toltecs may have promised a more glorious fate for those who died in service of their political and economic goals.

New Fire Ceremonies

Ancient Mesoamerican cultures ritually commemorated a number of important calendrical events, from monthly festivals to period endings. In Late Postclassic Central

Mexico, the most important calendrical ritual was the New Fire ceremony, or "Binding of the Years," carried out at the end of the 52-year cycle, at the transition of the years 1 Rabbit and 2 Reed. Fray Bernardino de Sahagún (1950-1982:VII:25-32) provides a lengthy description of the New Fire ceremony of Tenochtitlan. According to Sahagún, on the last day of the year 1 Rabbit, a time of great apprehension, people extinguished their fires and discarded hearthstones, pestles, and domestic idols. At midnight, fire priests made fire on the chest of a captive of high rank at Huixachtlan (Cerro de la Estrella). Once the priests successfully ignited the fire, they removed the captive's heart and burned it along with the body. If they did not successfully light the fire, demons of darkness would descend from the sky and sun would not rise. After lighting the fire, the priests brought the firebrand before an image of Huitzilopochtli and scattered incense over the fire. Runners then distributed the newly ignited fire to temples and neighborhoods.

The practice of ritually drilling fire to initiate a new calendrical period may originate at Teotihuacan. The Aztecs considered Teotihuacan to be the site of the first new fire, undertaken when the gods threw themselves into a brazier to create the Fifth Sun (Taube 2000b). Hasso von Winning (1979; 1987:II:18, 21) argued that iconographic motifs such as burning torches, twisted cords, and bundles were indicative of a New Fire ceremony practiced at Teotihuacan. Such imagery appears on ceramics, mural painting, and sculpture, including large stone braziers and panels encountered by Leopoldo Batres during early 20th century excavations at the Pyramid of the Sun (fig. 4.63a). James Langley (1986:153-167) concurs that the symbols are linked to a calendrical ritual involving fire, and refers the collection of symbols as the Manta Compound, which consists of bundles of fire wood or other vegetal material, paper or vegetal strips, the twisted cord, a vertical fire drill, and often undulating flames on the ends of the wood and on either side of the drill (fig. 4.63b;

Langley 1992:272; Taube 2000b:274-280). Whereas von Winning (1979:21) views the twisted cord as a binding for bundles of rods, Taube (2000b:292) considers it to be related to pump drills for making fire, or perhaps the swirling and twisting of flames. Alternatively, the form could refer to the twisting motion necessary to produce fire. William Fash and colleagues (2009:208-209) believe that the Teotihuacanos practiced the New Fire ceremony on the Pyramid of the Sun, given that the aforementioned braziers and panels were found on the Adosada platform on the front of the temple.

A monument from Xochicalco provides the most compelling evidence for pre-Aztec New Fire ceremonies (fig. 4.64). In the 1965-66 field season, Sáenz located the stone in a field just north of Cerro Xochicalco (Sáenz 1967a:10; 1967b:18). Sáenz (1967a; b:18-19) notes that the monument represents a vertical fire drill flanked by undulating flames, with a year date of 1 Rabbit and the day 2 Serpent. Late Postclassic and Colonial Nahua artists similarly represented New Fire dates as a glyph portraying a vertical reed drill with small plumes of smoke to either side (fig. 4.65a). Due to the eroded state of the monument, particularly around the fire drill, Sáenz and subsequent investigators have overlooked a small, but significant detail in the carving of the Xochicalco monument. Although only faintly visible, a series of three small curved forms arranged vertically beneath the fire drill is strongly reminiscent of the twisted cord in earlier Teotihuacan fire bundles. The presence of the twisted cord on the Xochicalco monument appears to affirm that similar imagery in Teotihuacan art refers to calendrical fire rituals. The twisted cord was not overlooked by Mexica artists who, as Emily Umberger (1987a:91-92; 1996:94) notes, may have deliberately emulated Xochicalco calendrical monuments in order to legitimize their political claims. The headdress on the Aztec imperial sculpture from Veracruz in Figure 4.65b is remarkably similar to the New Fire monument from Xochicalco. It includes both the

twisted cord and undulating flames, suggesting that artists may have copied the very monument or a more likely, a similar example that included the burning bundle beneath the drill and cord, and perhaps the fire serpents emerging from the flames above. Karl Taube (pers. comm. 2015) notes that both monuments share a common convention in portraying the undulating flames with central shafts that resemble the rachis of a feather, suggesting symbolic overlap between feathers and flames.

Some issues arise with the dates and numerical coefficients on the Xochicalco New Fire monument. The dates of the year 1 Rabbit and day 2 Serpent do not correspond with the Aztec date of the New Fire ceremony, which took place during the month of Panquetzaliztli in the year 2 Reed. Some scholars (e.g. Sáenz 1967a:16; Umberger 1987a:92; 1987b:442-444) argue that the Aztecs moved the New Fire ceremony from its traditional date of 1 Rabbit, due to devastating cycles of famine that happened during that year. Another consideration is that dates of the New Fire ceremony varied greatly among different ethnic groups during the Late Postclassic, even within territories controlled by the Aztec Empire (Elson and Smith 2001:170; Marcus 1992:117-118). A perforated disk (a coefficient of 1) appears to the left of the fire drill on the Xochicalco New Fire monument, prompting Sáenz (1967a) to conclude that the monument commemorates Mesoamerica's first New Fire ceremony, undertaken at Xochicalco. The aforementioned evidence from Teotihuacan casts some doubt on this idea, although not conclusively. It is also worth noting that new fire was drilled at various times other than period endings, including at the founding of a city (Boone 2000:16; Olivier 2007:301; Taube 2000b:294-295).

Iconography related to fire ritual at Teotihuacan and Xochicalco emphasize the act of drilling, although there is little evidence of the other pivotal event in the Aztec New Fire ceremony, the accompanying act of human sacrifice. The drilling of new fire on the body of a

captive during the Aztec New Fire ceremony was symbolically charged and related the ritual to the self-sacrifice of the god Nanahuatzin during the creation of the Fifth Sun (Taube 2000b:315-316). While these concepts of self-sacrifice are deeply intertwined with Aztec conceptions of militarism and creation mythology, there may be evidence of human sacrifice in the New Fire ceremony of Xochicalco. I noted above that the sacrificial stone of Xochicalco representing a decapitated and defleshed or emaciated body with the torso cut open could be a precursor to the Early Postclassic chacmool (fig. 4.62). Another possibility that is perhaps not exclusive of the first is that the sculpture represents the human surface upon which new fire was drilled during the ceremony. It may have even served as an altar for drilling fire, as the large trench cut down the abdomen could easily accommodate a bundle of flammable vegetal material. The aforementioned captive altar from Campeche (fig. 4.60a) and the Jaina-style vessel representing a tortured and disemboweled captive (fig. 4.60b), which I argue are analogous to the sacrificial stone from Xochicalco, may have been conceptually similar in this regard as well. As noted by Schele and Miller (1986:228), the Jaina-style figure appears to have kindling tied to his back. Conceivably, the small vessel may have been used for burning incense or other offerings.

While there is no evidence to suggest that the Classic Maya commemorated a 52-year cycle by drilling new fire, it is noteworthy that fire was a key element of Maya ceremonialism (e.g. Fash, et al. 2009; Stuart 1998a; Taube 2004d, 2009b). In fact, David Stuart (1998a:402-409) provides epigraphic evidence that the ancient Maya drilled fire during important period-ending events. Taube (1988b:343) notes the similarity of the Jaina-style vessel to the sacrificed victims at the bases of accession scaffolds on Piedras Negras Stelae 11 and 14, as well as the presence of paper, as probable kindling, beneath them. Perhaps after heart removal, new fire was drilled in the chest cavities of the victims to

commemorate the accession of Maya rulers. Like the later Aztecs, the Classic Maya may have also conducted fire-drilling ceremonies on mountaintops (Houston, et al. 2006:85; Stuart and Houston 1994:82). An incised Early Classic Maya vessel (fig. 4.66) portrays a zoomorphic mountain with a fire drill and burning bundle in the cleft on its peak (Houston, et al. 2006:87). The same "Fire Mountain" is portrayed in Tikal Stela 18, and as a glyph on Tikal Stela 31 (Stuart and Houston 1994:82-84). Lucia Henderson (2014) suggests that the mountain, with fire at its peak, represents a volcano. Karl Taube (pers. comm. 2015) notes that volcanoes are likely evoked during mountain fire ceremonies, as was likely the case during the Aztec New Fire ceremony held on top of Cerro de la Estrella.

For the Aztecs, another set of ritual events accompanied the drilling of new fire. Stone sculptures referred to as *xiuhmolpilli* represent bundles of sticks, each likely representing a year (fig. 4.67a-b). These sculptures often bear the glyph of the year 2 Reed, and in many instances, glyphs for the *trecenas* (13-day weeks) 1 Flint and 1 Death (fig. 4.67b).[32] The *trecena* dates are typically affixed with a smoking mirror. Aztec and Toltec-Maya imagery portrays the practice of drilling fire on pyrite mirrors (see Coggins 1987; Taube 1992a:186; 2000b). Alfonso Caso (1967:130) notes that a *xiuhmolpilli*, bound as a mortuary bundle, appears on page 36 of the Codex Borbonicus, signifying the death of the previous calendrical cycle (fig. 4.67c). Stone *xiuhmolpilli* effigies were found by Batres in 1900 inside an altar decorated with skulls and crossed bones on the Calle de las Escalerillas in Mexico City (fig. 4.67d) which, as Caso (1967:134) observes, was akin to a tomb for

[32] According to Caso (1967:138), 1 Flint and 1 Death represent the dates of the birth and death of Huitzilopochtli, respectively.

interring year bundles.[33] On page 34 of the Borbonicus (fig. 4.68), four priests feed year bundles into a burning brazier. This ritual apparently took place in Tenochtitlan after the drilling of new fire, as indicated by the footprints that lead from the mountain surmounted by a fire drill in the upper right corner, and the placement of the brazier near a temple devoted to the Aztec patron deity Huitzilopochtli, undoubtedly in the heart of the Aztec capital, shown at the center of the upper portion of the page.

Stone effigies of bound vegetal material may be ancestral to later Aztec *xiuhmolpilli*. Von Winning (1979) argues that the collection of elements that Langley calls the Manta Compound is an ideographic representation of a year bundle. Langley (1992:272, 273) refers to a ceramic adorno as a bundle of sticks (fig. 4.69a), implying a conceptual relationship to the *xiuhmolpilli*, however Taube (2000b:276) points out that the bundle flares at its ends, denoting instead that the bound objects are made of pliant vegetal material. Another example from Teotihuacan, consisting of bound rods with flames at either end (fig. 4.69b), may be a precursor to the stone *xiuhmolpilli* of the Late Postclassic Aztecs (León Velasco 2009). It is indeed a more probable candidate, as it strongly resembles the bundles of burning wood that appear in some examples of the Manta Compound (fig. 4.63b). A key difference between bundled rods in Teotihuacan iconography and Aztec *xiuhmolpilli* is that the examples from Teotihuacan do not bear calendrical inscriptions that would directly link them to specific historical events.

A stone monument in the Iglesia San Lucas Evangelista in the delegación of Iztapalapa, Mexico City, datable to the Late Classic period or possibly the Early Postclassic, may be the earliest example of a *xiuhmolpilli*, and a direct precursor to later Aztec examples

[33] The imagery on Aztec Skull Altars immediately recalls the aforementioned similarly decorated altars at Nohpat, Dzibilchaltun, and the Cemetary Group of Uxmal.

(fig. 4.70).[34] The monument represents a cylindrical bundle of reeds or wooden rods, bound at the center by a cloth, and bearing a calendrical date in the center. It has been set into the axis of a spiral staircase, but is upside-down, given that bar-dot numerical coefficients are placed beneath day sign cartouches in Late Classic calendrical notation. The monument's reuse does not allow examination of the ends and the side of the monument. Ángel González (pers. comm. 2015) notes that the date on the monument is 11 Reptile Eye.[35] Von Winning (1979:17) considers the rods in Aztec *xiuhmolpilli* to be a counting device for keeping track of calendrical dates, but given that spear points appear on the tops of the "rods" and fletching on the bottoms, it is clear that in this instance, they in fact represent darts or spears. Feather tufts that appear on Aztec representations of fire drills suggest that they too may represent darts (Taube 2000b:295), implying militaristic and perhaps hunting overtones to fire-drilling ceremonies. Furthermore, on a number of Aztec 2 Reed glyphs, designating the date of the New Fire ceremony or the beginning of another calendrical cycle, the reed is similarly bound with a cloth.

The church in which the monument is located sits within a few kilometers of Cerro de la Estrella, the site of the Aztec New Fire ceremony, indicating the monument's probable place of origin, and suggesting that New Fire ceremonies were held at Cerro de la Estrella long before the arrival of the Aztecs. Cerro de la Estrella, along with Cerro Portezuelo,

[34] I wish to thank Ángel González for bringing this monument to my attention and for many enlightening discussions about its significance.

[35] The attribution of the Reptile Eye glyph to a known day sign is a topic of much debate, with most scholars identifying it as either Crocodile or Wind. Helmke and Nielsen (2011) argue that the Reptile Eye glyph is equivalent to the day sign Reed, however, I find this unlikely given that a Late Classic Reed glyph that resembles the Late Postclassic Central Mexican equivalent has already been successfully identified, and I know of no examples in which the Reptile Eye glyph appears with a looped cord attached to the cartouche, which designates yearbearer day signs in Late Classic writing systems. It is also worth recalling, as previously noted, that Aztec *xiuhmolpilli* often bear dates other than 2 Reed.

Chalco, and Xico, comprised a major cluster of settlements during the Late Classic period, located along the southern shore of Lake Texcoco (Crider 2011:25-29). The site was within Teotihuacan's sphere of influence during the Classic period, and became an independent polity during the Late Classic period, at the beginning of which fortifications and the first phase of the Temple of New Fire were constructed (Pérez Negrete 2004). In addition to major monumental construction during the Late Classic, petroglyphs found just south of the site proper bear calendrical dates in Late Classic Central Mexican style (Helmke and Nielsen 2011:17; Ramírez Acevedo 2003:166). The population of Cerro de la Estrella declined drastically at the end of the Late Classic period, and the site may have been largely abandoned during the Early Postclassic (Blanton 1972:98; Crider 2011:28-29). However, the Late Classic *xiuhmolpilli* indicates some degree of continuity through the Late Postclassic period, at least in terms of ritual.

Given the likelihood that the bundle of spears from Iztapalapa represents a year bundle, it is possible that other representation of spear bundles in Classic and Late Classic art could relate to fire ceremonies that commemorate important events, although not necessarily of a calendrical or period-ending nature. Warriors carrying bundles of spears appear frequently in the art of Teotihuacan. The spear bundle in figure 4.71a has diagonal bindings similar to those on the Teotihuacano stone effigy bundle in figure 4.69b. The jaguar figure on the north portico mural of Cacaxtla's Structure A also holds a bundle of spears, held together with a cloth and blood-spattered triple knots, although water dripping from the obsidian points does not appear to imply ritual burning (fig. 4.71b), unless of course it refers to the later Aztec concept of *atl-tlachinolli* ("burning water"), a metaphor for warfare. It would appear that falling rain, in this instance, is likened to blood dripping from

the spear points. Bundles of darts or spears also appear as relief-carved decoration on Late Classic Gulf Coast *palmas* (fig. 4.71c).

A relief carved slab from Structure 4, adjacent to the Pyramid of the Niches at El Tajín (fig. 4.72a), may also depict a New Fire ceremony (Piña Chán and Castillo Peña 2001:67). Koontz (1994:30) notes that the circular feather-rimmed object in the center of the scene is a back mirror (*tezcacuitlapilli*), similar to those worn by Central Mexican warriors (Taube 1992a). Among the Toltecs and as depicted in Central Mexican codices, fire was likely drilled on pyrite mirrors (Coggins 1987:465; Taube 2000b:317-319). Two serpents that could be precursors to the Late Postclassic Xiuhcoatl fire serpent intertwine around the feather-rimmed mirror, which sits upon a bundle of darts. The artist's intention was probably to indicate that the mirror and darts sit horizontally upon the platform in the lower center of the scene. This manipulation of naturalistic three-dimensional space in favor of conveying additional content is not at odds with artistic tendencies in Late Classic Veracruz art, as figures could be splayed and duplicated to show both sides of the body (fig. 4.72b). On the Structure 4 slab, a person to the right of the mirror holds a burning bundle in his right hand and a folded cloth or perhaps vegetal kindling in the left, and a figure to the left also holds the same folded object and a knife in his left hand. Although speculative, the folded cloth could represent offerings soaked with sacrificial or penitential blood, recalling blood-soaked offerings of paper burned in Late Classic Maya imagery such as Yaxchilan Stela 25. Two additional figures hold "incense" bags, perhaps full of fragrant offerings for the fire. Regardless of the bags' contents, the arrangement of four figures recalls the burning ceremony depicted on page 34 of the Codex Borbonicus (fig. 4.68), and perhaps establishes the fire as the pivotal axis mundi at the nexus of four directional figures. The turtle beneath the platform (or hearth) may represent the earth itself, with cosmic fire drilled above the

center of its shell. This interpretation is consistent with imagery on a Late Classic Maya bowl that depicts the Maize God emerging from a Kan cross, which for the Classic Maya conveys concepts of fire, centrality, and the hearth, on the earth turtle's carapace (fig. 4.72c; Taube 2000b:312-313). A vertical element that is not part of the twisting bodies of the serpents is flanked on either side by three curving tapered forms may well represent a fire drill and new fire emanating from the mirror and burning darts, and is remarkably similar in appearance to the flames and drill on the Xochicalco New Fire monument (fig. 4.64), as well as other examples in Mesoamerican art (fig. 4.73). The intertwined bodies of the serpents recall the twisted cords that appear on Teotihuacan, Xochicalco, and Aztec examples.

Iconographic evidence suggests that fire rituals were a key component of Central Mexican ceremonialism long prior to the climactic Aztec New Fire ceremony. The ritual burning of bundles of wood was clearly important at Teotihuacan, although given that such imagery lacks accompanying calendrical notations, it is speculative to argue that Teotihuacanos practiced a New Fire ceremony to mark important period endings, although it is certainly not outside of the realm of possibility. The earliest evidence for a calendrically associated New Fire ceremony dates to the Late Classic period at Xochicalco, although the Xochicalco New Fire monument clearly makes use of iconography developed at Teotihuacan. Inconsistencies in calendrical dating suggest that either period ending dates were variable from culture to culture, or that the Aztecs manipulated a widely shared calendar to suit their own purposes or conform to their beliefs. The year bundle from Iztapalapa in the form of a bundle of darts, whether dating to the Late Classic or Early Postclassic period, provides an important link between earlier rituals involving the drilling

of fire, and the Aztec New Fire ceremony, practiced at nearby Cerro de la Estrella hundreds of years later.

Conclusion

In exploring ritual complexes in Late Classic Mesoamerica, several noteworthy patterns emerge. Similar boulder *maquetas*, including temples and steps, likely used in rain-bringing rituals, appear at Xochicalco, Teotenango, San Miguel Ixtapan, and possibly the Basin of Mexico. *Maquetas* similar in concept to those examples are found at Plazuelas, in the Bajío region, and in the Southern Maya Lowlands, perhaps suggesting a broadly shared ritual complex involving the pouring of liquid over architectural models to mimetically invoke rainfall. These monuments may serve as permanent records of anxiety and hardship due to widespread drought during the Late and Terminal Classic periods. Ballcourts were also probable loci of rain-bringing ritual. The proliferation of ballcourts during the Late Classic could also reflect concerns over water, or may reflect patterns of social organization. Masonry ballcourts and stone ballgame paraphernalia are found throughout Mesoamerica, but yokes, *hachas*, and *palmas* from the Gulf Coast and southern Guatemala and Central America are most similar, suggesting a cross-isthmian pattern of interaction and exchange, as first argued by Jiménez Moreno (1966:65). With stone rings and dimensions similar to ballcourts at Teotenango and Tula, Xochicalco's West Ballcourt may have served as a prototype for others, and displays notable similarities to the ballcourt of Copán.

In addition to rain ritual, ballcourts also served as venues of public spectacle. The ballgame may have been a culminating act of warfare, in which captured enemies of the state were executed following ritualized play of the game, as was apparently the case in Late Classic Maya polities. The result would allow viewers to directly witness the final decisive act of a military victory, while reinforcing the might and prestige of the ruler. Various types

of events were held in ballcourts, and it is quite possible that elites or political factions hosted games as an expression of power and as a means of boosting one's political clout, similar to the hosting of games, theater, and gladiatorial combat by elites in early Imperial Rome (Beacham 1999). Visitors from other cities may have been invited to witness these events as well, which could account for the spread of features such as ballcourt rings and court types and dimensions.

Human sacrifice, including several distinct forms such as decapitation, display of dismembered body parts, carving skeletal trophies, flaying, and heart sacrifice, was not a Late Classic innovation, nor was it demonstrably introduced to the Maya region from Central Mexico, or into Central Mexico from the northern frontier of Mesoamerica. Rituals involving human sacrifice such as the ballgame and new fire ceremonies do, however, seem to coalesce during the Late Classic period, tying together various strands from across Mesoamerica and becoming more codified into forms that were brought to full term during the Early and Late Postclassic periods. Iconic forms such as the chacmool, a sacrificial altar widely used during the Postclassic, may have roots in the Late Classic, and makes use of symbolism found in both the Maya region and Central Mexico. Sacrificial imagery from the Late Classic period differs from that of later periods in that it appears less "iconic" and institutionalized, and seems to have the aim of evoking a more visceral reaction from the viewer. This could represent anxieties concerning political instability among competing city-states. On a socio-political level, the need for sacrifice and display of violence is often salient in times of crisis, accompanying the need to restore a perceived social and ideological order (Burkert 1983; Swenson 2014; Wolf 1999).

Shared ritual practices at Late Classic sites reinforced widely shared Mesoamerican religious concepts, while simultaneously providing a venue for social cohesion and

statements of power. Religious rituals, by necessity, are deliberately anachronistic and imply continuity with past traditions (Fogelin 2007:57). Late Classic ritual practitioners actively perpetuated prior traditions, such as those pertaining to rain-bringing, the ballgame, and human sacrifice. However, they added and combined elements, and often manipulated the scale of such practices, perhaps in effort to impress and instill a sense of unity among ethnically diverse populations. Through public ritual, Late Classic elites could also express their authority, might, and proximity to the supernatural. While the successes they achieved during the tumultuous Late Classic period were brief, they set a foundation for state ritual practices of the later Toltecs and Aztecs.

Chapter 5: Shared Iconographic Themes and Late Classic Networks of Interaction

The artwork of Cacaxtla, Xochicalco, and Teotenango suggests influences from distant regions of Mesoamerica. Authors often describe the artwork of such sites as "eclectic," combining artistic elements from Teotihuacan, Xochicalco, the Gulf Coast, Oaxaca, and the Maya Lowlands (e.g. Cohodas 1989; Hirth 2000:265-266; Kubler 1980; Nicholson 1971a:104; Piña Chán 1977). The intermingling of foreign styles and iconographic motifs in Late Classic Central Mexican artwork is often attributed to migrations following the break-up of Teotihuacan's wide-reaching political network. While theories of migration and cultural diffusion have fallen out of fashion, others (e.g. Brittenham 2015; Nagao 1989; Stone 1989) emphasize that the adoption of foreign traits by Late Classic artists and their patrons in both Central Mexico and the Maya region was a deliberate and selective process, rather than one of passive adoption of outside influence. This was likely the case during the Late Classic, although in order to understand the ideological impetus behind the adoption of foreign traits, it is necessary to more precisely define the origins of foreign elements and the forms of interaction that they reveal. This chapter aims at a more precise assessment of the foreign traits in the art of Cacaxtla, Xochicalco, Teotenango, and the sites and regions with which they interacted in order to understand the nature of the relationships between these sites and other regions, and the reasons why they incorporated foreign artistic elements.

Interaction between networks of elites from different sites and regions may account for the appearance of foreign traits in Late Classic artwork of Central Mexico (Hirth 2000:264-266; López Austin and López Luján 2000). Intersocietal interaction is carried out by factions (Schortman 1989; Schortman and Urban 1987) or individuals within cultures

(Schortman and Ashmore 2012), rather than by the cultures themselves. Ringle and colleagues (1998) argue that a pan-Mesoamerican proselytizing cult based on veneration of Quetzalcoatl served as a vehicle for elite interaction and accounted for the spread of artistic traits during the Late Classic. While religion and ritual undoubtedly played a crucial role in the spread of ideas (see Chapters 3 and 4), I find little direct evidence for a widespread veneration of Quetzalcoatl during the Late Classic (see Chapter 2), and would argue that rather than a single sweeping religious movement, the driving force behind the spread and adoption of foreign styles was a series of smaller mutually beneficial relationships initiated by social actors for the purpose of economic and political aggrandizement.

Rulers at Cacaxtla, Xochicalco, and Teotenango likely used ties to foreign powers and access to exotic goods to secure and maintain elevated status among their peers. As Schortman and colleagues (2001:313) note, "acquiring and defending power depends, in part, on defining an elite identity." Central Mexican rulers may have looked primarily to Maya models of divine rulership in the construction of elite identity and access to highly desirable and luxurious objects and raw materials (Taube 1992b:142; 1994b:225; 2010a:147, 149; 2011b:10; 2015:108-109). The importation of precious objects and raw materials, such as greenstone, cacao, and quetzal feathers could be used to secure elite status through display of wealth and trappings of office, alliance-building through exchange, and gift-giving to establish patron-client relationships. The adoption of shared interregional elite identities may have thus united rulers of different groups under a common goal of class domination, and monopolized access to foreign goods and powers, while safeguarding against usurpers who lacked such connections (Schortman 1989; Schortman, et al. 2001; Schortman and Nakamura 1991). Commissioning monumental artwork that incorporated foreign styles was an enduring expression of power and access to foreign sources of wealth

that simultaneously reinforced for exotic imported goods, while perhaps signaling allegiance to visiting dignitaries and exchange partners.

Art and Interaction at Cacaxtla

Since the Maya-style murals of Cacaxtla came to light in the 1970s, there has been much speculation over the identity and origin of the artists who painted them. Despite the distinctly Maya appearance of the murals, they are located at a considerable distance of some 700 km from the nearest Maya site. Furthermore, to date, no Maya texts have been found at the site, with the exception of an incised Maya vessel found at nearby Xochitecatl (Brittenham 2015:25). There are, however, ample examples of signs from the Central Mexican writing system of the Late Classic. The mechanism for the arrival of motifs, themes, and styles from the Maya region to Central Mexico has generated much speculation. Scholars have suggested that styles, themes, and motifs may have traveled to Central Mexico via portable objects such as polychrome vessels (e.g. Quirarte 1983:217-218), or designs drawn on textiles or paper. Some have argued that the painters of the murals were ethnically Maya (e.g. Foncerrada de Molina 1993; Walling 1982), who either settled in the region or were perhaps captured or imported as court painters (Robertson 1985). Others (Brittenham 2015; Nagao 1989) consider the mural painters local Central Mexican artists who incorporated and assimilated a variety of styles and techniques, including those of the Lowland Maya, to suit local needs.

Previous studies have explored ideological reasons why Cacaxtla may have favored Maya-style imagery over more local forms. Claudia Brittenham (2009:140) posits that Cacaxtla may have intentionally used art that did not resemble that of Teotihuacan or Cholula in order to distance itself from associations with the Early Classic superpowers. Likewise, Debra Nagao (1989:92-93) suggests that the lack of direct Teotihuacan-inspired

motifs, themes, and objects may reflect a deliberate rejection of Teotihuacan models in favor of a Maya style. She suggests that themes that are associated with Teotihuacan may have traveled back to Central Mexico after they were initially adopted by the Maya (1989:91-93). Other authors argue that the murals incorporate a blend of both Maya and Teotihuacano traits. While imagery and techniques in the murals reflect Maya influence, some scholars (Kubler 1980:169; McVicker 1985:89-90) view the aquatic borders of the images as derivative of borders on Teotihuacan murals. Some iconographic traits including the star motif (Baird 1989:108-111) are directly associated with Teotihuacan and may reflect Teotihuacan influence (Foncerrada de Molina 1980).

Cacaxtla's murals are not the only source of evidence suggesting interaction or incursion by peoples from the east. As Uruñuela and Plunket (2005:319) note, the Late Classic period is the earliest point in Mesoamerican history that ethnohistoric sources address. According to some sources, the inhabitants of Cacaxtla were a Gulf Coast group known as the Olmeca-Xicalanca (Armillas 1946). The late-sixteenth century *Historia de Tlaxcala* by Diego Muñoz Camargo describes the group as migrants to the area who built a fortified city. According to the *Historia Tolteca-Chichimeca*, the Olmeca-Xicalanca controlled Cholula when the Tolteca arrived (Liebsohn 2009:32). In support of historical records, of the ceramics recovered in excavations, the most common tradewares were varieties of fine orange and fine grey originating from southern Veracruz (Santana Sandoval and Delgadillo Torres 1995:366). Although the attribution of the Cacaxtla murals to the Olmeca-Xicalanca is widely accepted, others are critical of using Colonial-period documents to accurately describe historical events that happened nearly one thousand years prior to being recorded (e.g. Brittenham 2008:255-259; Smith 2007:586-593). Part of the difficulty in discussing the Olmeca-Xicalanca as an archaeological culture is that they have been poorly defined, and

relatively little archaeological work has been done in the region purported to be their homeland, as a point of comparison the Cacaxtla murals.

In a pioneering study, Stanley Walling (1982) noted that Maya-style traits in Cacaxtla's murals include the use of space, treatment of the body, perspective, foreshortening, mass, and a sense of movement, which stand in contrast to artistic tendencies in Central Mexican painting traditions. Relatively few studies have addressed specific Late Classic Maya iconographic traits that appear in the murals in depth, with some notable exceptions (e.g. Helmke and Nielsen 2013b; Nagao 1989). Due in large part to advances in recent decades in Mayan epigraphy, it is no longer adequate to consider of the Maya Lowlands as a monolithic, internally homogenous cultural unit. There was considerable diversity within the Maya Lowlands in terms of art and architecture, and Late Classic Maya cities and their rulers actively engaged in profitable networks of alliance and intense, and often detrimental rivalries (see Golden and Scherer 2013; Martin and Grube 2000; Schele and Freidel 1990; Schortman and Ashmore 2012). Further inquiry into specific Maya traits that appear at Cacaxtla, and their places of origin in the Maya region, may clarify the nature of Cacaxtla's relationship to individual sites within the Maya Lowlands and the anomalous appearance of Maya-style murals far from the Maya region.

Before discussing specific Maya traits in Cacaxtla's murals, I will note some characteristics shared with Late Classic Maya art and architecture that appear in the material culture of Cacaxtla. The remains of a frontally posed figure rendered in unfired clay and stucco in low relief on a pilaster from Cacaxtla's Structure E (fig. 5.1a) are reminiscent of similar Late Classic Maya examples. The tabular pilaster from Cacaxtla differs from squared columns from Teotihuacan's Temple of Quetzalpapalotl, which portray relief-carved birds on all sides. While only the lower portion of the pilaster from Structure E

remains, the outwardly turned feet and the cut and detail of the skirt evoke some Late Classic Maya monuments that portray queens (figs. 5.1b-c). At Palenque -- unlike most major Late Classic Maya sites -- stuccoed piers and building façades, rather than stelae, were favored for the monumental portrayal and commemoration of rulers. Numerous stucco images of rulers survive on the columns and roofs of the Palenque's palace complex, and Cacaxtla's column, and presumably others that do not survive, may have intentionally evoked such works.

In Central Mexican traditions, buildings and stone sculptures were often covered in thin layers of stucco, but stucco and unfired clay were not common media for producing three-dimensional sculpture. At Cacaxtla, the remains of several fragmentary anthropomorphic sculptures were found together on the northeast side of the acropolis (Brittenham 2015:213). In Chapter 2, I argued that some of these sculptures may represent Huehueteotl, another being that is likely a Central Mexican solar deity, and the Fat God (figs. 5.2c-e). While the subject matter of these sculptures, with the exception of the Fat God, is decidedly Central Mexican in nature, the sculptural medium is more reminiscent of examples from the Maya region and Gulf Coast. It is not clear whether the sculptures were free-standing or fixed in place, but it is possible that they constituted a sculptural tableau similar in concept to that of El Zapotal, Veracruz, which features a large seated death god in unfired clay along with a retinue of life-sized ceramic figures, or perhaps an elaborate Late Classic Maya stucco façade such as the well-preserved example at Ek' Balam, Yucatán.

Clay jambs on the portico of Cacaxtla's Structure A, represented by a near-complete example on the north jamb (fig. 5.3), and a fragmentary example on the south jamb, evoke Maya conventions in both subject matter and context. While some authors consider the jambs to be reminiscent of art from the Gulf Coast or Oaxaca (e.g. Galindo Trejo 2013:117;

Kubler 1980:172; Piña Chán 1998:97), Helmke and Nielsen (2013b:367-370) correctly note that the jambs each portray a human figure seated on a Maya zoomorphic mountain known as a *witz*, complete with Maya-style stone (*tun*) markings in the form of triple arrangements of dots. Karl Taube (pers. comm. 2011) suggests that the unfired clay jambs may imitate carved wooden lintels that adorned the entrances of certain Late Classic Maya temples, such as the well-known examples from Tikal's Temples I-IV. George Kubler (1980:166) compares the seated profile view of the figures on the clay jambs to those of rulers on Tikal's lintels.

The ceramic sculptures known as Los Once Señores de Cacaxtla show Central Mexican subject matter, including Late Classic versions of the deities Tlaloc (fig. 5.4a) and Xipe Totec (see Chapter 2; Brittenham 2015:33; Brittenham and Nagao 2014; Martínez Lara 2013; Morales Gómez 1999; Rivas Castro and Michetti Micó 2007). However, the swirling volutes that flank the figures may also be a characteristic that incorporates Maya symbolism. The volutes resemble a series of cross-sectioned conch shells, much like those that adorn the bodies of the feathered serpents on the Pyramid of the Plumed Serpents at Xochicalco (Houston and Taube 2011:23; Martínez Lara 2013). The cross-sectioned conch was a widely employed symbol of breath, wind, and swirling water in Mesoamerican art (Houston and Taube 2011:21-25; Taube 2001). Rivas Castro and Michetti Micó (2007:455) consider the volutes on the Cacaxtla sculptures to represent clouds. Indeed, the placement of the deities in front of scrolling clouds may recall a series of paintings in Teotihuacan's Zacuala compound, which portray the Teotihuacan Tlaloc emerging from a cloud-like portal, rimmed with scrolls (fig. 5.5a). However, the scrolls on the Cacaxtla sculptures also strongly recall a convention present in the art of the Late Preclassic Maya. A mural painting from Tikal's Structure 5D-Sub-10-1st (fig. 5.6a) and a stucco sculpture from Uaxactun's Structure H-sub 10 (fig. 5.6b) both portray anthropomorphic figures standing amidst swirling volutes

(Houston and Taube 2011:22). A similar example is visible in Structure Sub-1B from San Bartolo (Savkić 2014; Taube, et al. 2010:8). The figures are also formally similar to Late Classic *wahy* creatures that are engulfed in flames (fig. 5.6c-d).

Due to the tabular projections on the bottoms of the sculptures, the Once Señores de Cacaxtla are typically described as almenas. There is some reason to doubt that they adorned the roof of a building, as the small details would have been difficult to discern from below. The sculptures were found cached in pairs near a wall some 800 meters to the west of Cacaxtla's acropolis (Morales Gómez 1999), providing little evidence to suggest their original context or function. I suggest that these sculptures may have been placed near braziers used for burning offerings, or perhaps set into altars, and in this instance, the volutes may also represent smoke. This interpretation is germane to cloud symbolism in Mesoamerica, as smoke, mist, and clouds may be conflated. A flanged brazier from Xochicalco may be similar in concept and function to the Cacaxtla sculptures, bearing a frontally facing figure flanked on either side by painted volutes (fig. 5.7a), much like the Cacaxtla sculptures. Another flanged brazier from Xochicalco portrays an aged figure wearing a large avian headdress (fig. 5.7b), much like that of the Cacaxtla sculpture illustrated in Figure 5.4b.[36] Objects on either side of the avian figure on the brazier from Xochicalco may be cross-sectioned conch shells. Three almenas from Xochicalco are also lined with cross-sectioned conch shells (figs. 5.41a-b, 5.42, see discussion below), as is a small fragment, likely from Teotenango (fig. 5.7c). The aforementioned stucco figures from Uaxactun were placed on top of large stucco masks which, as Taube (1998:450-454) suggests, resemble giant braziers. Hasso von Winning (1987:I:165-166) discusses a stone

[36] An additional noteworthy feature that appears on the avian headdresses of both the Cacaxtla and Xochicalco examples is Maya-style breath beads that emerge from the nostrils.

monument that is probably of late Teotihuacan origin that appears to portray a bundle of flammable material flanked by volutes (fig. 5.5b). This symbolism may have continued into the Late Postclassic period in Central Mexico, as several Aztec censers have been found which portray a three-dimensionally rendered deity flanked by smoke and flame (fig. 5.8), recalling the Once Señores de Cacaxtla sculptures.

Flanged censers bearing the likenesses of deities are widespread in the Maya region. Well-known examples include a series of Late Classic braziers from Palenque, which feature deity heads and stacked zoomorphic masks (see Cuevas García 2007). A lesser-known corpus of Late Classic braziers bearing full-figure likenesses of deities comes from a system of caves in the sierra near Tapijulapa, Tabasco, on the western frontier of the Maya region. While Maya deities seated or standing upon *witz* masks, particularly Chahk and the Jaguar God of the Underworld, are most frequently portrayed, the Tapijulapa braziers are reminiscent of the Once Señores de Cacaxtla sculptures in form, featuring a full-figure frontally posed deities of roughly similar dimensions (fig. 5.9). Several of the figures appear to be situated within the mouths of caves (fig. 5.9a), recalling the imagery on the clay jamb from Cacaxtla's Structure A (fig. 5.3). One example from Tapijulapa is flanked by a pair of serpents and by volutes (fig. 5.9b), like the Cacaxtla sculptures, and a similar brazier from Ocosingo, Chiapas, which may date to the Postclassic, portrays a figure with an avian headdress flanked by paired volutes (fig. 5.10a). Braziers similar to those from Tapijulapa come from Palenque, including an example that portrays a seated figure wearing an avian headdress from Building 3 of Group B (fig. 5.10b). This brazier is highly reminiscent of the examples from Ocosingo (fig. 5.10a) and Xochicalco (fig. 5.7b), which similarly portray aged figures wearing avian headdresses, as well as two of the Once Señores de Cacaxtla sculptures (fig. 5.4b), although they appear to be youthful. It is tempting to suggest that

these figures represent different aspects of solar deities, as the sun ages as it journeys across the sky (see Chapter 2).

Although the murals of Cacaxtla are generally acknowledged to resemble Late Classic Maya artwork in terms of style and technique, direct comparison to extant Maya mural painting in terms of content is somewhat problematic. Of the few extant well-preserved examples of Late Classic Maya mural painting at Bonampak, Calakmul, and Xultun, subject matter varies considerably. With the exception of the Battle Mural, which decorates the lower taluds of Cacaxtla's Structure B, which may show a historical battle, Cacaxtla's murals differ from the aforementioned Maya examples in that they portray predominantly supernatural subject matter. In order to analyze Maya traits in Cacaxtla's murals, it is therefor also necessary to consider similarities to Late Classic Maya works in other media, such as sculpture and vase painting.

The distinctive pigment used liberally throughout Cacaxtla's murals, known as Maya Blue, offers the most direct evidence of intellectual and economic exchange between Cacaxtla and the Maya Lowlands. Maya Blue, which consists of palygorskite clay dyed with indigo, became widely used in the Maya region by the late fifth century (Houston, et al. 2009:78). Palygorskite is not widely available, and has been sourced to deposits in Yucatan (Arnold 2005; Arnold and Bohor 1977; Arnold, et al. 2008; Arnold, et al. 2007; Folan 1969). Thus, the use of Maya Blue in Cacaxtla's murals was a statement of wealth and far-reaching economic ties (Brittenham 2015:50). Maya Blue was also used at El Tajín and Las Higueras, although artists at those sites mixed the blue to make it lighter in hue and more opaque (Brittenham 2015:82, 159). Other pigments used in Cacaxtla's murals were sourced locally (Magaloni Kerpel, et al. 2013:167-183).

The water bands that serve as basal registers for Cacaxtla's Red Temple, Temple of Venus, and Structure A murals have most often been discussed in terms of their similarity to aquatic bands in the murals of Teotihuacan (Brittenham 2008:87-88; Foncerrada de Molina 1980:196; Kubler 1980:164; Lombardo de Ruiz 1986:237; McVicker 1985:84-85). However, as discussed in Chapter 3, Cacaxtla's aquatic borders perhaps more directly recall Classic Maya water bands. Cacaxtla's water bands repeatedly portray a shell that resembles *le* signs, which appear as a common convention in Maya water bands (Brittenham 2015:63; Martin 2013:533; Taube, et al. 2010:fig. 56). *Le* signs often signify water in Maya art, and are incorporated into the NAHB glyph, a waterlily that denotes pools of water (Houston 2010:71; Martin 2013:533; Taube 2010b:81). Maya water bands likewise form the basal registers of Classic Maya vases and stucco façades, and may be punctuated by scalloped diagonal bars, as in the water bands of Cacaxtla (Taube 2010b:206).

As noted by Andrés Santana Sandoval (1990, 2002), nearly every zoomorphic creature represented in Cacaxtla's murals, whether mammal, bird, reptile, fish, or invertebrate, living, or as a costume element or glyph, has a large crescent-shaped eyebrow, or orbital, rendered in Maya Blue (fig. 5.12). Santana Sandoval draws comparisons to Nahua conceptions of the eyebrow as a spiritual center of the body, although he does not acknowledge that blue eyebrows are a convention that similarly appears on zoomorphic representations in Late Classic Maya art. Traces of blue pigment are visible on the eyebrows of stucco centipede heads that emerge from the corners of solar cartouches in the eastern gallery of Palenque's House A (fig. 5.11a). Examples in Late Classic Maya ceramics that incorporate blue eyebrows include the avian headdress of a figurine from Palenque (fig. 5.11b), and a monkey on the lid of a vessel from Toniná (fig. 5.11c). A zoomorphic incense bag held by the seated ruler portrayed on the north wall mural of Structure 10K-2, which

may represent the head of the same simian entity on the aforementioned vessel from Toniná with a furry ruff surounding its face, half-open eyes, a similarly shaped nose, and an open fanged mouth with a protruding tongue, bears a crescent-shaped eyebrow rendered in Maya blue (see Saturno, et al. 2015), quite similar to examples in the Cacaxtla murals (fig. 5.11d).

The blue eyebrow was also present in Late Classic Gulf Coast art. Rex Koontz (2009b:261-263) notes that supernatural beings in relief sculpture of El Tajín have a "curving plate" just above the eye. While these sculptures lack pigment, it is probable that they denote the same feature, and were perhaps once painted blue. A few examples of blue eyebrows appear on Late Classic Gulf Coast murals from Tajín Chico and Las Higueras (see Morante López 2005:216, Fragmento 4944). While it is difficult to ascertain the meaning of blue eyebrows on zoomorphic figures at Cacaxtla and supernatural beings in Late Classic Gulf Coast art, it is a convention that probably originated in the Maya Lowlands as the source of Maya Blue.

The jambs of Cacaxtla's Structure A portray two life-sized painted human figures (fig. 5.12). The figure on the south jamb holds a shell from which a long-haired being emerges, a common convention in Late Classic Maya art. As Taube (pers. comm. 2015) suggests, this figure is likely a Maya wind deity (see Chapter 2). The north jamb figure cradles a Tlaloc jar in the crook of his right arm, of Central Mexican origin, and holds a serpent that has curling volutes on its body and probably represents a smoldering lightning bolt in his left hand. A flowering vine emerges from the figure's navel. While this uncommon convention appears on stelae from Early Classic Cerro de las Mesas, Veracruz (fig. 5.13a), and a fragmentary figure from the Late Preclassic Maya West Wall mural of San Bartolo that carries an infant maize god also shares this trait (fig. 5.13b), although an important

distinction is that the plants appear to emerge from the figures' belts in the latter two examples. The figure on the San Bartolo mural may be the rain god Maya rain god Chahk (Taube, et al. 2010:70), which would be consistent with the rain symbolism on the north jamb mural of Structure A. It is not clear whether the vine at Cacaxtla emulates Gulf Coast or Maya conventions, as the appearance of human figures painted on door jambs is present in the Late Classic Maya murals of Bonampak (see Miller and Brittenham 2013:239-241), and is without apparent precedent in Central Mexico. As at Bonampak, Cacaxtla's jamb figures face away from the interior of the structure.

The figures on the jamb and portico murals of Structure A adopt poses and costume elements similar to Late Classic Maya depictions of rulers on monuments. All of the figures stand frontally with out-turned feet and the head facing to the side. This method of portraying the human figure is a hallmark of Late Classic Maya art (Proskouriakoff 1950:22-23), and stands in contrast to the typical method of portraying figures from the side in the art of Teotihuacan. The figure dressed in an eagle costume on Structure A's south portico mural stands with one heel elevated, in a pose portraying dance in Late Classic Maya sculpture (Kubler 1980:166; Proskouriakoff 1950:28). In addition to their poses, the blossoms on the jambs resemble Late Classic Maya representations, as do costume elements such as the topknot of hair shown on the south jamb figure, the apron-style loincloths of the north jamb and south portico figures, the series of "penitential" triple knots that serve as loincloths on the north portico and south jamb figures, and the serpent wings on the north portico jaguar figure.

The tubular object held by the eagle figure on Structure A's south portico mural (fig. 5.14) is most often discussed as a Maya-style ceremonial bar. While ceremonial bars in general appear frequently in Maya art, the object held by the eagle figure at Cacaxtla bears a

flint blade that protrudes from the mouth of a centipede (Brittenham 2015:190-191; Helmke and Nielsen 2013b:365; Taube 2011b:9). The method of depicting the blade, as an "eccentric" with a round notch cut out of it and an undulating line down the center, is consistent with Classic Maya conventions for portraying flint (see Stone and Zender 2011:82-83).[37] Although the flint-tipped centipede lance is not shown in Central Mexican imagery prior its appearance at Cacaxtla, a number of representations of the weapon are shown in contemporaneous Late Classic Maya artwork (fig. 5.15) (see Helmke and Nielsen 2013b:364-366). At sites including Yaxchilan, Bonampak, Naranjo, and Ek' Balam, rulers are shown wielding bicephalic centipede lances with flint "tongues." Helmke and Nielsen (2013b:366) note that the majority of the representations of centipede lances that they discuss from the Maya region date between AD 746 and 840, and come from sites along the Río Usumacinta and Río Pasión. Centipedes with protruding blades appear as costume elements at Toniná, Piedras Negras, Quirigua, and Copán (Looper 2003:107). However, the centipede lance is most notably the weapon of the sun god. Yaxchilan Stela 1 (fig. 5.15f) shows a seated Classic Maya sun god with k'in signs on his body holding a bar with flint-tongued centipedes emerging from either ends, much like the example from Cacaxtla.

Supernatural serpents are widely represented in the art of the Classic Maya and at Teotihuacan. The plumed serpent that the eagle figure dances upon on the Structure A south portico mural has a flower blossom on its tail (Taube 2010a:173). This trait, which denotes the plumed serpent as a "flower road," also appears in the art of Teotihuacan, Xochicalco, and the Late Classic Maya Chenes site of Hochob, Campeche (Taube 2010a:173; 2010b:217). Although rare, the jaguar serpent that appears on Structure A's north portico

[37] Other methods for portraying flint include a pair of crossed wavy lines, and straight black bands lined on either side by rows of dots (fig. 5.15a).

mural (fig. 5.16) also has analogues in Late Classic Maya art. Taube (1994a:665-666) notes that a jaguar serpent that is similar to the example at Cacaxtla appears on the Late Classic Birth Vase. A coiled jaguar serpent also appears on the bottom of a Late Classic Codex-style bowl (Robicsek and Hales 1981:47; Taube 1994a:665). The jaguar serpent also appears on an Early Classic Maya vessel found at Teotihuacan (Taube 2011b:8-9). Taube (1994a:665-666; 2011b:8-9) observes that the Maya jaguar serpent is often juxtaposed with the Bearded Dragon, suggesting a fundamental cosmological duality that is rendered as the pairing of jaguar serpent and plumed serpent on the Cacaxtla Structure A murals.

The Battle Mural, which faces the Great Plaza of Cacaxtla and decorates the two lower taluds that flank the stairway of Structure B, depicts a gory scene of battle and sacrifice unique in Mesoamerican art, but incorporates Late Classic Maya iconographic conventions. As discussed in Chapter 4, a figure who is named 3 Deer appears twice in the mural (fig. 5.17), and wears Maya "Tlaloc" regalia, consisting of a fanged mask with bloody scrolls issuing from the mouth and a three-pronged obsidian piece set between the eyes, a balloon headdress that incorporates a trapeze-and-ray, and jaguar pelt, which is directly comparable to costumes worn by Maya figures on Aguateca Stela 2, Dos Pilas Stela 16 (fig. 5.18), and Yaxchilan Lintel 25 (fig. 5.19a). While the masks that appear on 3 Deer resemble the visage of the deity Tlaloc, the costume is of Lowland Maya origin, rather than Central Mexican (Nagao 1989:88-89). Not only are the costumes of the Maya figures in the aforementioned examples nearly identical to that worn by 3 Deer, but so is the manner in which they are depicted. The method of portraying the mask in "X-ray" view is a strongly Maya trait without precedent in Classic-period Central Mexico (Houston, et al. 2006:271-272). As previously noted, actual obsidian examples of the mask have been found at Cacaxtla and Xochicalco. In Late Classic Maya representations, additional examples of the

mask are seen at Copan and Palenque, but most examples appear at Yaxchilan. The pose of 3 Deer on the eastern talud, shown in profile holding a weapon at the ready and circular shield (fig. 5.19b), is remarkably similar to that of the figure that emerges from the maw of a serpent on Yaxchilan Lintel 25 (fig. 5.19a), suggesting that the artist that painted the figure on the Battle Mural may have been familiar with a similar image that may have circulated on pottery, painted books, or textiles, if not the original work from Yaxchilan.

As discussed in Chapter 2, the scorpion-tailed male figure painted on one of the pilasters in the Temple of Venus (fig. 5.20) is similar to certain figures in Late Classic Maya art. The male figure, and his female counterpart on the other pilaster have lobed belts that resemble star signs, and are surrounded by spoked objects that may be cross-sectioned conch shells or stars that appear in the art of Teotihuacan, the Early Classic Maya, and Late Classic Xochicalco and Maltrata (Baird 1989). A splayed figure with a star sign on the body and a pointed cranium resembling that of the Maize god has a scorpion tail (fig. 5.21a), much like the Temple of Venus figure (Brittenham 2015:103; Carlson 1991:24-25). Another similar figure with a scorpion tail and arm looped through a stellar glyph appears on the Skyband Bench from the Sepulturas Group at Copán (fig. 5.21b; Brittenham 2015:103; Šprajc 1996:96; Uriarte Castañeda and Velázquez García 2013:679). Several different deities appear with scorpion tails in both Classic Maya art and Late Postclassic Maya codices (Chinchilla Mazariegos 2005:116). As scorpion-tailed deities do not appear in the art of Teotihuacan or other Late Classic sites, the figures at Cacaxtla likely derive from the Maya region.

The Captive Stair of Cacaxtla, which shows at least three stripped and defleshed or emaciated victims painted on a stair tread (fig. 5.22), evokes Late Classic Maya conventions. Bound Maya war captives were similarly carved on the steps of Late Classic sites such as

Copán, Dos Pilas, Edzna, Tamarindito, Toniná, and Yaxchilan (Brittenham 2015:75; Helmke and Nielsen 2011:33; Miller and Martin 2004:185; Tate 1992:257). Although Maya captive stairs typically portray captives on the risers, at Yaxchilan, as at Cacaxtla, captives appear on the treads (Brittenham 2015:75; Miller 1998:203-205; Miller and Brittenham 2013:95-96). More generally speaking, standing upon captives was a convention that Late Classic Maya artists used to convey defeat and humiliation on numerous monuments. The riser of the Captive Stair is painted with no fewer than seven glyphs. Helmke and Nielsen (2011:33-34) relate the Captive Stair to hieroglyphic stairways that appear at Late Classic Maya sites, particularly around the Río Usumacinta and Río Pasión in the western Maya region. One of the glyphs, a probable toponym portraying the head of a turkey superimposed on a hill (fig. 5.23a; see discussion below), employs the "earth net" motif, consisting of a series of crossed diagonal wavy lines (Taube 2010a:149). The earth net appears in Late Classic Maya art on the shells of turtles (fig. 5.23b), which can symbolize the earth, and on lily pads (Quenon and Le Fort 1997:897-898; Taube 2010a:149). The use of the earth net on the toponym on the Captive Stair suggest that Cacaxtlans likewise related this motif to the earth, and may have also likened the surface of the earth to a turtle shell.

In terms of iconography, the Red Temple mural of Cacaxtla (fig. 5.24) offers the most direct allusion to the Maya Lowlands and perhaps the role of Cacaxtla as a Maya entrepôt. As discussed in Chapter 2, the Classic Maya merchant god, known as God L, appears carrying a pack of goods on the Red Temple mural, as first noted by Taube (1992b:85).[38] The Cacaxtla example is nearly identical to God L as he appears in Late Classic Maya imagery (figs. 5.25a-b), possessing features such as an aged, chapfallen face, a prominent

[38] Carlson (1991:44) identified the figure on the Red Temple mural as an impersonator of God L.

"Roman" nose, a squared eye with a curling pupil, a frontal topknot of hair, a patch of jaguar skin on his chin and other jaguar features (including jaguar mittens and boots in the Cacaxtla example), and symbols of wealth and power including lavish jade jewelry, a fine woven shawl, and a jaguar-skin hipcloth. God L typically has a broad, feathered sombrero topped with a "Moan bird," which is seen resting on the back of the merchant's pack in the Cacaxtla mural, although lacking the usual black-tipped feathers. As a merchant, God L may appear with a pack for carrying goods (fig. 5.25c) and may smoke cigars (figs. 5.25a, c, & d). He sometimes wears a long loincloth that is also worn by travelers (Gillespie and Joyce 1998:284-285).

In Maya representations, God L sits enthroned in a sumptuous royal palace or holding court over a retinue of Underworld deities, and he is considered to be the lord of the underworld and a god of wealth (Coe 1973:14; 1978:16). Patricia McAnany (2010:256-257) suggests that a shift toward representing the Underworld lord as a traveling merchant may indicate a change toward a more mercantile-based economy, and escalating social tension between Maya elites and a burgeoning merchant class during the Late Classic period. Taube (1992b:84-85) notes that during the Late Classic, most representations of God L appear in the economically wealthy and fertile western Maya region at sites such as Palenque (fig. 5.25d), and at sites such as Santa Rosa Xtampak, Dzehkatun, and Bakná, Campeche (fig. 5.25e). In addition to the Cacaxtla example, Taube (1992b:85, fig. 42c) draws attention to an image of God L that appears on a Rio Blanco vessel from southern Veracruz as an aged figure with a staff wearing his avian hat. The regional and temporal distribution of God L as a merchant may also indicate that long-distance mercantilism was more a key to the success of Late Classic Maya sites on the western periphery of the Lowlands than Early Classic models of divine kingship. It is highly probable that veneration of God L as patron of

merchants spread along routes of exchange between the Maya Lowlands, the Gulf Coast, and Central Mexico.

The appearance of God L in the Red Temple mural exalts the trade relations that Cacaxtla had with the Lowlands. Situated between the Gulf Coast and the Basin of Mexico, and near the pass between the imposing peaks of Popocatepetl and Iztaccihuatl, Cacaxtla occupied a strategic location for controlling the movement of goods. The scene is set within the Maya Lowlands, as denoted by a cacao plant and a quetzal in front of the deity and the plumed serpent on which he stands (Schaafsma and Taube 2006:271; Taube 2006:158). Along the stairs and above the cacao plant, corn plants grow that bears cob in the form of heads of the Maya Tonsured Maya Maize God (Carlson 1991:42; Taube 1992b:46). The journey taken by God L in the mural essentially mimics the route taken by Lowland Maya merchants to the highlands of Central Mexico.

The goods visible in God L's pack (fig. 5.24) represent important trade goods imported from the Maya Lowlands. The most apparent of these goods include a bundle of quetzal feathers and a sea turtle shell (Carlson 1991:47). The rounded, knotted bundle on the bottom of the side of the pack resembles bundles of cacao or jade that appear in Late Classic Maya court scenes (see Stuart 2006a; b:190-191). The squared bundle above the quetzal plumes could conceivably represent bundled textiles or painted books. John Carlson (1991:47-49) suggests that the egg-shaped object lashed to the top of God L's pack may be a loaf of sea salt, or perhaps rubber used to produce balls for the ballgame. Domínguez and Urcid (2013:559) view the object as a vessel that could have held a liquid, such as honey. Alternatively, the object could represent raw palygorskite clay, although it is not clear how this material was transported. All of the aforementioned items originate in the Maya Lowlands. Additionally, the items that God L wears, including jade ornaments, finely woven

textiles, and jaguar pelts, were also likely important luxury items brought from the Maya region.

Maya iconographic and artistic conventions found in Cacaxtla's murals suggest that the artists who painted them had an intimate familiarity with Maya art and symbolism, particularly from the Late Classic western Lowlands. Maya traits in the murals are not a generalized or haphazard assortment of features that simply proclaim exotic ties to distant, economically important regions, but rather present clear messages using an art style that was perhaps not foreign to those who painted them. If Cacaxtla's murals were found in the Maya Lowlands and did not include Central Mexican glyphs, there would be little cause to doubt the identities of the painters and the intended audience. Furthermore, the art of Cacaxtla shares common characteristics with specific Maya sites along the Río Usumacinta and Río Pasión whose access to these major corridors of communication and exchange were crucial to their prominence during the Late Classic period. The Usumacinta and its tributaries provided a vast network of exchange routes that linked important sites such as Yaxchilan and Piedras Negras to the coastal lowlands of Tabasco (Canter 2007; Golden, et al. 2012). It is entirely possible that a Lowland site may have established a colony in Central Mexico after the collapse of Teotihuacan in order to exercise more direct control over the distribution of goods from the Maya region to Late Classic highland sites and have greater access to Central Mexican goods, such as obsidian.

An equally viable explanation for the appearance of Maya-style traits at Cacaxtla is that the mural painters came from coastal Tabasco, the purported homeland of the Olmeca-Xicalanca. Around the time Spanish contact, Cimatan, Tabasco, and Xicalango, Campeche, were important trade centers that may have been of Nahua or Chontal (Putun) Maya affiliation (Scholes and Roys 1968:31). Located near the location where the Río Grijalva and

Río Usumacinta meet the sea, these cities were in an ideal position to mediate exchange between the Maya Lowlands and Central Mexico. There are several Nahuatl-speaking communities in coastal Tabasco, although little is known of their origins (Scholes and Roys 1968:21-24). These communities may have been established to support Toltec or Mexica economic interests in the region, or were perhaps settled earlier. Macri and Looper (2003) present evidence that suggests that there were Eastern Nahua speakers on the Gulf Coast of Veracruz and Tabasco during the Early Classic period.

Ahualulco, on the western coast of Tabasco, may have been an important trade center during the Late Classic period, although little excavation has been carried out at the site (Berlin 1953:103), and it is unclear if it was of Chontal, Zoque, or perhaps Nahua affiliation (see Scholes and Roys 1968:95). Among artifacts reported from the site are two locally made ceramic flanges of Palenque-style braziers (figs. 5.26a-b), which suggest close ties to powerful western Maya sites (Perales Vela 1990). A fragmentary flanged brazier from the site portrays a frontal anthropomorphic figure, reminiscent of examples from the Late Classic Maya and Xochicalco (figs. 5.7, 5.9 & 5.10), as well as the Los Once Señores de Cacaxtla sculptures (fig. 5.4). Furthermore, Ahualulco was situated in one of the most important and productive cacao-producing regions in Mesoamerica (fig. 5.27; Bergmann 1969:88-89; Pool 2007:85-86). The depiction of the cacao plant on the Red Temple mural of Cacaxtla, with pods growing from the trunk, and visibly accurate, although enlarged yellow flowers, suggests that the Cacaxtla artists were familiar with its cultivation. Turtle shell, shown on God L's pack, may have also been an important trade item from coastal Tabasco.[39] Arguably, the scene is set at Ahualulco or a nearby site in cacao-producing coastal Tabasco.

[39] Grijalva, who passed by but did not land at Ahualulco, reported seeing warriors on the shore bearing "tortoise-shell" shields (Díaz 1963:34; Scholes and Roys 1968:94).

The use of Central Mexican script in the Cacaxtla murals, rather than Maya glyphs, may suggest that the artists were Chontal Maya who regularly interacted with neighboring non-Maya Gulf Coast peoples, or perhaps were Zoque or Nahua with an intimate knowledge of Maya artistic conventions as major exporters of Maya goods.

Regardless of their ethnic affiliation, Ahualulco's elites were engaged in networks that extended to powerful Late Classic Maya sites such as Palenque, and they emulated their artwork. Late Classic Maya rulers were also engaged in networks of exchange and elite emulation with rulers of other sites, which served to bolster their status. Palenque's rulers, for example, took part in diplomatic relations with Tikal and possibly Yaxchilan, and shared marriage alliances with Copán, while engaging in protracted conflicts with Calakmul, Piedras Negras, and Toniná (Martin and Grube 2000:155-175). Sharing close ties with certain Maya sites, whether as a settlement for Gulf Coast or Maya Lowland merchants through which goods moved across regions, or as a peer polity with diplomatic and economic ties to the Maya Lowlands, Cacaxtla's elites were active participants in overlapping political and economic networks that extended across eastern Mesoamerica.

Art and Interaction at Xochicalco

Like that of Cacaxtla, Xochicalco's art reflects influence from distant sources. According to H.B. Nicholson (1971a:104), who sees affinities in Xochicalco sculpture to that of Teotihuacan, Monte Alban (II-IIIa-IIIb), the Ñuiñe tradition, the Lowland Maya, and Gulf Coast traditions of El Tajín and Cerro de las Mesas, Xochicalco sculpture integrates and blends earlier traditions while presenting its own distinctive style. Eduardo Noguera (1945, 1947) believed there was an exchange relationship between Xochicalco and the Guatemala's Motagua Valley. Several authors have emphasized the presence of Maya characteristics in the art of Xochicalco (e.g. Escalona Ramos 1952-53; Litvak King 1972; Seler 1991-

1998:II:76). However, unlike the art of Cacaxtla which reflects a number of explicit Lowland Maya iconographic and stylistic conventions, Maya influence at Xochicalco, though present, appears more vague and generalized (Sanders 1989:215).

Pietro Márquez (1804) first noted the similarities between Xochicalco's art and architecture and that of El Tajín (Hirth 2000:34-35). Although talud-tablero is ultimately of Teotihuacano origin, the use of a flaring cornice at Xochicalco is indeed most similar to that of El Tajín (Escalona Ramos 1952-53:358; Litvak King 1972:59-60; Sáenz 1967b:10, 19). The sharply flaring cornices of Xochicalco and El Tajín are also similar to those visible at Plazuelas, Guanajuato. Xochicalco relief sculptures share curvilineality and a double outline with Classic Veracruz sculpture (Nicholson 1971a:104, footnote 109; Proskouriakoff 1954:84), which is also present in the art of Cotzumalhuapa and Tonala, Chiapas (Parsons 1969:165-166), and on the arm and leg of the seated figure on the clay jamb relief from Cacaxtla's Structure A (fig. 5.3).

Maya influence in Xochicalco sculpture is most apparent on the relief-carved façade of the Pyramid of the Plumed Serpents. The resemblance of seated figures on the lower talud of the structure (fig. 5.28) to Late Classic Maya renderings of seated lords (Seler 1991-1998:II:76), especially those that appear on Nebaj-style jade pendants that were widely distributed throughout Mesoamerica during the Late and Terminal Classic, is widely acknowledged by scholars (fig. 5.29). The "Mayoid" figures on the Pyramid of the Plumed Serpents façade sit among the undulating bodies of feathered serpents. The long pliant feathers emerging from the nostrils and covering the bodies of the serpents are another referent to the Maya region and the long-distance exchange of quetzal feathers. Ceremonial bars that vertically divide the frieze and bear woven mat motifs are also likely Maya-derived traits (Taube 2005b:43). On the tablero, a series of seated figures hold copal bags or

handled vessels, and wear eye goggles and trapeze and ray headdresses. The postures of the figures recall Maya imagery. The bags, goggles, and headdresses appear in the art of Teotihuacan and the Late Classic Maya, and while Xochicalco artists may have emulated either source, it seems probable that they also refer to Late Classic Maya costume (see Stone 1989). The overall arrangement may recall a Maya *popol nah* ("council house") scene, or other Late Classic Maya monument type, such as the arrangement of seated ancestors around Copán's Altar Q. Jiménez Moreno (1966:60) also compared the Pyramid of the Plumed Serpents to Altar Q, although he believed both monuments portrayed meetings of astronomers. On the Pyramid of the Plumed Serpents' fragmentary upper talud, seated figures holding darts and shields wear balloon headdresses, another Late Classic Maya costume element derived from Teotihuacan.

Several monuments suggest intellectual exchange between Xochicalco and southern coastal Chiapas, Guatemala, and the site of Copán. As discussed in Chapter 4, Xochicalco and the Late Classic site of Copán share macaw imagery in association with the ballgame, an observation noted by other scholars (e.g. Escalona Ramos 1952-53:357; Litvak King 1972:62; Noguera 1945:134). The large *hacha*-shaped macaw ballcourt marker from Xochicalco, along with other smaller examples from the same site (fig. 5.30), recall the supernatural macaw rendered in stucco at Copán's ballcourt, as well as other smaller tenoned macaw heads from the site (fig. 5.31). Significantly, the large macaw sculpture from Xochicalco (fig. 5.30a) was also directly associated with the ballgame, as it was found in the site's South Ballcourt (Solís 1991:72, cited in Nagao 2014:fn. 317). Beyond Copán, further evidence of macaw imagery in ballcourts has not been identified in the Maya region (Fash, et al. 2004:82). However, macaw imagery does appear along the southern Pacific coast of Guatemala and Chiapas at Kaminaljuyú and Cerro Bernal, which show marked Teotihuacan

influence (García-Des Lauriers 2005:4; Paulinyi 2014:42). Nagao (2014:136-137) relates the Xochicalco ballcourt marker to Gulf Coast *hachas* that take the form of macaw heads, although macaw *hachas* appear frequently in southern coastal Guatemala as well (see Shook and Marquis 1996:161-167). As noted by Eduardo Noguera (1945:133), the principal ballcourt of Copán and the West Ballcourt of Xochicalco share similar dimensions. Furthermore, I argue in Chapter 3 that a bat with crossed bones on its wings carved on Xochicalco's Eastern Ballcourt (fig. 5.32) is highly reminiscent of Late Classic Maya examples, particularly those that appear on Chama-style pottery (fig. 5.33a). Nagao (2014:150) also notes that the ceramic sculpture known as "El Creador" (fig. 5.34a) possess several Late Classic Maya iconographic traits, such as distinctive knots associated with autosacrifice. In Chapter 2, I argued that the sculpture represents the same supernatural howler monkey, draped in cacao-sprouting vines, represented on Copán's Reviewing Stand (fig. 5.34b) and a vessel from Toniná (fig. 5.11c), among other examples.

Large felines are among the most widely represented animals in Mesoamerican art. Two ceramic examples from Xochicalco, including a large freestanding puma found on Xochicalco's acropolis (fig. 5.35a; Garza Tarazona 2010) and others modeled on the sides of a flanged brazier (fig. 5.35b), wear knotted scarves. A knotted cord and two feline legs are visible on a ceramic plaque that is likely from Teotenango (fig. 5.35c). The pumas resemble similar Zapotec examples, including one excavated by Alfonso Caso which also shares similar dimensions (fig. 5.35d), as well as Early Postclassic pumas and jaguars with knotted cords around their necks from Tula (fig. 5.35e) and Chichén Itzá (Nagao 2014:138-139). It is unclear whether Central Mexican examples represent warrior orders or animals destined for sacrifice (Nagao 2014:139-140).

At least three broken feline sculptures with ropes around their necks and displaying exposed ribs and spinal columns (fig. 5.36) have been found at various locations within Xochicalco (Molina and Kowalski 1999:159). Although Nagao (2014:140-142) considers the felines to be emaciated, it is perhaps more probable that they are skeletal, given the detail with which their bones are rendered, and their fleshless appearance, particularly around the eyes. The sculptures may relate to a feline from Teotenango that wears a knotted scarf, like the aforementioned examples, but has a femur superimposed on its thigh (fig. 5.37). Although rare, skeletal felines do appear elsewhere in Mesoamerican art. In the Maya region, a skeletal jaguar appears on a stucco frieze at Balamk'u, Campeche (fig. 5.38a). Skeletal or partially skeletalized jaguars also occur on Late Classic Maya vessels as a *wahy* figures (figs. 5.38b). An Aztec sculpture portrays a jaguar with an exposed spine and ribs (fig. 5.38c), and a jaguar with a skeletal jaw, limbs, and spine appears on page 29 of the Mixtec Codex Zouche-Nuttall (fig. 5.38d). Perhaps showing greater affinities with the Xochicalco examples, several Late Classic *hachas* from southern Guatemala likely represent skeletalized jaguars, showing empty eye sockets, joint articulations, exposed tooth sockets, and lolling tongues, which may indicate death (fig. 5.39).

The undulating serpents on the façade of the Pyramid of the Plumed Serpents at Xochicalco have cross-sectioned conch shells (fig. 5.40), a widely occurring motif in Mesoamerican art (Houston and Taube 2011), among the feathers on their bodies. Plumed serpents appear with conch shells on their bodies also appear at the earlier Maya-style murals of the Tetitla compound of Teotihuacan (Taube 2001:111). Several other objects from Xochicalco incorporate cross-sectioned conch shells, including the aforementioned brazier with a frontal human figure carrying a copal bag (fig. 5.7a-b), and three objects that may be almenas (figs. 5.41a-b, 5.42), or perhaps functioned in concert with braziers, as I

have argued for the Once Señores de Cacaxtla sculptures. Two of the objects represent descending quetzal birds (figs. 5.41a-b), denoted by the long tail feathers, and are surrounded by conjoined conch shells that are strongly reminiscent of those that flank the Once Señores de Cacaxtla figures, and may likewise represent wind, clouds, or smoke (fig. 5.4). The element that appears on the backs of the quetzals is probably a cross-sectioned conch, and a similar form appears at the base of the tail on a descending quetzal painted on a *tecali* bowl from Xochicalco (fig. 5.41c). A third similar object portrays a descending creature with feathers similar to those on the quetzal examples, although it is much less clear what this being represents (fig. 5.42). It has fleshless, exposed teeth, suggesting that it is skeletal, deceased being. The bulging eyes and curling emanations from the snout are perhaps suggestive of a butterfly with a proboscis, and it is possible that this being could represent a deceased inhabitant of Flower World (see Chapter 3).

The cornice of the Pyramid of the Plumed Serpents is carved with a band of cross-sectioned conch shells (fig. 5.43), which also appear at Xochicalco as ceramic almenas (fig. 5.44a). Jaime Litvak King (1972:67) notes the similarities between the cut conch shells at Xochicalco and on the Early Postclassic Coatepantli behind Tula's Pyramid B (fig. 5.44d). Several additional examples decorated structures at Late Classic Plazuelas, Guanajuato (fig. 5.44b), Early Postclassic El Cerrito, Queretaro (fig. 5.44c) and Chichén Itzá (fig. 5.44e), and Late Postclassic Aztec Templo Mayor (fig. 5.44f) indicating widespread adoption of this feature. In addition to several stone conch shell almenas recovered at Plazuelas, the site also yielded several stone Xi-shaped almenas (fig. 45b), a form that denotes fire and turquoise (Taube 2012). The juxtaposition of the Xi and conch shell is also manifest in the ballcourt markers of Plazuelas (fig. 5.86), discussed in Chapter 3. With crenulations on the back of its head and a basal knot on the bottom face, the War Serpent ballcourt marker takes the form

of a zoomorphic Xi glyph. The eastern butterfly ballcourt marker has a cross-sectioned conch shell at the base of its wing. Xi almenas have been found at Classic-period Teotihuacan (fig. 5.45a) and Early Postclassic sites such as Tlapizahuac, Estado de Mexico (fig. 5.45c), Tula (fig. 5.45d), and Chichén Itzá (fig. 5.45e), as well as at Late Postclassic Templo Mayor (fig. 5.45f), and they appear on top of buildings in the art of Teotihuacan (fig. 5.46a), Xochicalco (fig. 5.46b), and El Tajín (fig. 5.46c). A mural fragment from Chichén Itzá shows a besieged temple compound that is surrounded by a wall lined with Xi almenas, perhaps enclosing and demarcating the ceremonial precinct (fig. 5.46d). The juxtaposition of Xi and conch shell almenas appears to have been adopted by the Aztecs, as they decorate the roofs of the twin shrines of Templo Mayor in Early Colonial representations (fig. 5.47).

Xochicalco's sphere of interaction was by no means limited to distant regions such as the Bajío and southern coastal Guatemala. A probable set of local relationships in indicated by a specific toponym appears at both Xochicalco and Cacaxtla, and the common symbol could refer to the same location. On the aforementioned glyph from the Captive Stair of Cacaxtla (fig. 5.23a), the head of a turkey is superimposed on a stepped triangular glyph decorated with a cross-hatched "earth net," suggests that may refer to the conquest of a location known as "Hill of the Turkey." A strikingly similar glyph occurs at Xochicalco on Stela 2, as well as on the 13-Reed Stone and the Palace Stone from Xochicalco, which may also depict the same toponym. Silvia Garza Tarazona (2002:57) suggests that the glyph may refer to Xochicalco. Alternatively, the glyph may refer to a modern location that retains its pre-Hispanic name, as toponyms tend to be conservative in Mesoamerica (Angulo 1972:45). Helmke and Nielsen (2013a:25) identify a modern Totoltepec de la Paz ("Turkey Mountain Place") 56 km west of Xochicalco, and a San Juan Totolac ("Turkey Water Place") 12 km northwest of Cacaxtla. A similar place sign appears on a monument from Monte Albán that

dates to AD 600-800, which may refer to the sign at Cacaxtla and Xochicalco, or may refer to a more local Oaxacan site (Pohl 2005:90, footnote 18), as a Hill of the Turkey may be located in Oaxaca near Mitla or Nochixtlan (Pohl 2005:86-87).

Late Classic Trends in Figural Sculpture

There are widespread and noteworthy trends in figural sculpture during the Late Classic period. A pair of monuments from Xochicalco and nearby Miacatlan that represent anthropomorphic figures holding disks at their waists (fig. 5.48) are part of a regional style that extends to the Basin of Mexico, Puebla, and Tlaxcala during the Late Classic. The figures from the Xochicalco region represent women, given their skirts and the visible contours of breasts on the Miacatlan figure, and they wear War Serpent headdresses. In a study of a male and female pair of Aztec wooden sculptures, which similarly held disks, Nicholson and Berger (1968) suggest that the disks may have held precious stone inlay, or more likely pyrite mirrors, an observation affirmed by Taube (1992c:75-78). A rare Classic Maya wooden sculpture similarly represents a figure holding a disk, which contains pieces of polished hematite which formed the mirror's surface (see Reents-Budet 1994:fig. 3.17b), and some female Jaina-style figurines hold a disk at their abdomens (see Corson 1976:17c). Nicholson and Berger (1968:17-19) relate the Aztec wooden sculptures to additional examples from Cerro Colhua, Puebla (fig. 5.49a), Tlahuililpa, Hidalgo (fig. 5.49b), an example from near Tlaxcala (fig. 5.49c), another from Ixtacamaxtitlan, Tlaxcala (fig. 5.49d), and an example in the Diego Rivera collection (fig. 5.49e). All of the cited examples wear War Serpent headdresses or trapeze and ray headdresses. Taube (1992a:177-178; 1992c:75-78) notes that similar earlier figures come from Classic-period Monte Alban and Teotihuacan.

Several additional cylindrical sculptures representing figures holding mirrors resemble examples discussed by Nicholson and Berger (1968). Of two examples in the

Museo Regional de Tlaxcala, one wears a trapeze and ray headdress (fig. 5.50a), and another wears a War Serpent headdress (fig. 5.50b). One example was recently found on the eastern edge of Cacaxtla's acropolis (Goñi Motilla 2011:9-10). The Cacaxtla example has an elaborate headdress with a curling proboscis, reminiscent of headdresses worn by two of the Once Señores de Cacaxtla sculptures, which likely represent a variety of the War Serpent, and the disk on the figure's abdomen contains a Reptile Eye glyph (fig. 5.50c). Two additional examples were found at Santa Isabel Tetlatlahuca (figs. 5.50d-e; José Eduardo Contreras Martínez, pers. comm. 2014), a Late Classic hilltop site near Cacaxtla (see Contreras Martínez 1992). An example from the Cholula site museum (fig. 5.50f) lacks a War Serpent or trapeze and ray headdress, unlike other examples, and may be later, or may be a regional variant. Most examples wear similar collars. An example from the Museo Frida Kahlo (fig. 5.51) lacks provenience, but has a glyphic inscription carved on its back which may represent a numerical coefficient of 7 and the head of the rain god Tlaloc (fig. 5.51b). Two sculptures from Tlaxcala resemble the cylindrical sculptures in form and dimension and share similar costumes with the other examples, but lack mirrors. An example in Cacaxtla's site museum (fig. 5.52a) is carved on a rectangular block and has a trapeze and ray headdress and a collar resembling those on the aforementioned examples. The abdomen of the figure is rough, and the sculpture may be unfinished or effaced. A sculpture in the Parroquia de San José in the city of Tlaxcala has been reused as a holy water font (fig. 5.52b-c). There may have once been a mirror on the figure's abdomen, which has been shortened and polished. The figure wears a War Serpent helmet, and the figure's face, though polished, resembles other examples from Late Classic Tlaxcala (figs. 5.50a, 5.50d, & 5.52a).

Other sculptural examples of figures holding mirrors are tabular in form, more closely resembling stelae. A fragmentary example from the Colección Stavenhagen in Tlatelolco portrays a figure with a trapeze and ray headdress and holding a mirror on the front, and a pair of glyphs, likely Reptile Eye and Glyph A, with numerical coefficients (fig. 5.53). A Late Classic monument reported to come from Xico by Eduard Seler (1991-1998:II:89) may also belong to this class of monuments, as it bears a figure wearing a *quechquemitl* and a trapeze and ray headdress on the front, along with a circular disk on the abdomen, from which probable flints protrude (fig. 5.54). However, the monument differs in that the figure is not static, as in other examples in which figures hold mirrors. A calendrical day sign is on the back of the monument (fig. 5.54b). The figure with feline feet and hands on the Teotenango-style Nevado de Toluca Stela has a spoked solar disk on its abdomen (fig. 5.55a). The placement of the figure's hands near the disk is reminiscent of that of figures holding mirrors. Furthermore, the disk is reminiscent the example on the Xico stela. Both examples recall Bilbao Monument 3, a stela which portrays a probable solar deity with a flaming disk pectoral descending from a reptilian maw (fig. 5.55b). Mirrors may metaphorically represent the sun in a number of Mesoamerican traditions (Taube 1992a:192-194). A sculpture found at El Corral, Tula, demonstrates that the tradition of carving monuments with figures holding mirrors and wearing War Serpent helmets continued into the Early Postclassic (fig. 5.56).

Nicholson and Berger (1968:18-19) relate mirror-bearing sculptures to a jade plaque excavated by Jorge Acosta in Tula's Palacio Quemado, which similarly portrays a figure similarly holding a round object at his abdomen (fig. 5.57a). Similar jade plaques with figures holding circular objects have been found at Monte Alban, Palenque, and in Guerrero (Solar Valverde 2002:43-44). With a tabular form, Late Classic rectangular monuments may

derive inspiration from jade plaques that circulated widely during the Late Classic period. Jade plaques frequently portray frontal images of figures wearing War Serpent headdresses. Although carved of greenish alabaster, rather than jade, the Ixtapaluca Plaque, found near Chalco (fig. 5.57b), may have also served as a precursor to stelae that portray figures holding mirrors. The plaque likely dates to just prior to the collapse of Teotihuacan. Like Teotihuacan-style stelae, the plaque resembles a rectangular shield (Taube 2011a:100-102). Esther Pasztory (1993a) relates the figure on the Ixtapaluca Plaque to the problematic "Great Goddess" of Teotihuacan, although the figure has the stepped face paint worn by the Teotihuacan macaw solar deity (see Chapter 2), a butterfly nose plaque, and a War Serpent headdress. Much like the cylindrical figure excavated from Cacaxtla (fig. 5.50c), which has a Reptile Eye glyph in place of a mirror and seven circular jades, which may be numerical coefficients, the Ixtapaluca figure has a 7 Reptile Eye glyph on its abdomen.

It is unclear whether the figures holding mirrors represent deities or historical personages. Nagao (2014:254) notes that, like the aforementioned plaque from Tula (fig. 5.57a), many of the figures on jade plaques appear to have closed eyes and slack mouths, and may represent deceased personages. Compact in form, the aforementioned cylindrical sculptures resemble mortuary bundles, and several of the examples from Tlaxcala have faces that resemble Teotihuacano stone masks that may have served as funerary adornments. Glyphs that appear on the monuments could be calendrical dates or names of the figures represented, although the occurrence of two glyphs on the Stavenhagen monument suggests that they may be dates that refer to historical events, or perhaps the name of a deceased figure and the date on which they died. Although they don't appear to portray specific personages, Teotihuacan theater-style incensarios, which likely represent deceased warriors as mortuary bundles (Berlo 1983; Headrick 2007; Taube 2000b), often

appear with Reptile Eye glyphs in the center of mirrors on their chests (Taube 1992a:178), much like the figure on the Ixtapaluca Plaque (fig. 5.57b) and the cylindrical sculpture from Cacaxtla (fig. 5.50c).

Two sculptures that resemble the aforementioned mirror-bearing figures portray the rain god Tlaloc. A Late Classic stone monument from La Morelia, Guatemala (fig. 5.58a) bears the goggles, fangs, and curling lip of Tlaloc and has two undulating lightning serpents, as well as a disk on his abdomen and a War Serpent headdress (Taube 1992c:78). A sculpture of Tlaloc from Cacaxtla (fig. 5.58b), reported by Pedro Armillas (1995 [1941]), lacks a mirror, but strongly resembles cylindrical sculptures from Late Classic Puebla and Tlaxcala in form. According to José Eduardo Contreras Martínez (pers. comm. 2014), the two aforementioned cylindrical sculptures from Santa Isabel Tetlatlahuca (figs. 5.50d-e) were found together with a third cylindrical sculpture resembling Tlaloc. This trio of sculptures recalls the Xochicalco Stela triad (fig. 5.59), which portrays two anthropomorphic figures wearing War Serpent headdresses, and a third that represents Tlaloc. Furthermore, the name or date of 7 Reptile Eye, which appears on the Ixtapaluca Plaque (fig. 5.57b) and possibly the cylindrical sculpture recently excavated from Cacaxtla's acropolis (fig. 5.50c), also appears on Xochicalco Stela 1 (fig. 5.59a). While the meaning of the Xochicalco Stela triad remains elusive due to limitations in understanding the Central Mexican writing system, it is possible that they are closely associated with and perhaps more elaborate versions of jade plaques and sculptures that portray figures holding mirrors.

While figures on cylindrical sculptures may represent mortuary bundles in Puebla and Tlaxcala, another Late Classic tradition that extends along southern coastal Mesoamerica appears to portray deceased personages with arms crossed over the chest.

Noting the widespread occurrence of such sculptures, Carlos Navarrete (1979:31; Navarrete, et al. 1993:105-107), who considers the crossed arms to be a reverential pose, discusses a "complejo de brazos cruzados" that extends from a core area down the Grijalva Basin from the site of San Antonio, Chiapas to Chaculá, Guatemala (fig. 5.60a), including major Maya sites such as Toniná (fig. 5.60b) and Tenam Rosario (fig. 5.60c), and along the Pacific Coast from Chiapas to El Salvador.[40] At Cotzumalhuapa, several monuments portray figures with crossed arms (fig. 5.61), a likely manifestation of this complex (Navarrete 1979:37). Other similar Late Classic sculptures with crossed arms appear in Oaxaca (fig. 5.62), Teotenango (fig. 5.63a) and nearby Calimaya (fig. 5.63b) in Estado de México, and the Gulf Coast, and the tradition continues at Early Postclassic Tula (fig. 5.63c; Navarrete 1979:41-43). Navarrete (1979:45-47) relates the spread of the complex to Late Classic Pipil migrations, but it is perhaps more plausible that the complex spread through contact along important exchange routes.

Rather than simply a "reverential pose," the crossed arms on figural sculptures is a likely indicator that they represent deceased personages. As Oswaldo Chinchilla Mazariegos (2012:68-69) observes, the figures on El Baúl Monument 25 (fig. 5.61a) may represent mortuary bundles, given their posture and compact form. Furthermore, he suggests that the flowering vines that come out of the figure's hands and crossed arms on Bilbao Monument 7 (fig. 5.61b) may denote that "he or she is a denizen of the Flower World" (Chinchilla Mazariegos 2013:84-85). As discussed in Chapter 3, Flower World is a realm inhabited by the souls of certain deceased personages. Javier Urcid (1993:148) argues that a series of

[40] Contrarily, examples from Toniná may represent captives, as the display of captives is a major focus of art at the site, but I will argue that examples from southern coastal Chiapas and Guatemala represent deceased ancestors.

Late Classic sculptures portraying figures with crossed arms from Nopala, Oaxaca represent revered ancestors based on their similarity to certain figurines from Monte Alban. Several of the given examples appear to have closed eyes (figs. 5.60a, 5.60d, 5.61c, & 5.62c), a common artistic device denoting lifelessness in Mesoamerican art. Furthermore, the lower ribs of the figure on the monument from Juchitán, Oaxaca (fig. 5.62b) are visible, suggesting an advanced state of decay.

At the site of San Miguel Ixtapan, in southwestern Estado de México, several large, tabular sculptures portraying figures with crossed arms have been recovered, averaging around 1 meter in height (fig. 5.64). In addition to the larger figures, several similar but smaller stone figurines were also found (fig. 5.65). In the Recinto de las Esculturas located near the summit of Mound 2, two roughly life-sized figural sculptures were found upright *in situ* in front of two large stone plaques (5.66; Limón Boyce 2008:254). The sculptures differ in form, and may represent a royal couple. The slightly smaller sculpture has two breasts visible near the hands, and has a circular disk on her stomach, which could denote pregnancy (Limón Boyce 2008:255), or could relate the aforementioned sculptures that display circular mirrors on their abdomens. The masculine figure apparently has an image of Tlaloc carved on its back (Limón Boyce 2008:255; Reyna Robles 2006:127), although it is not visible as the sculpture is displayed. The sculptures are carved in a greenish stone, possibly schist, as are several others found at the site. In form, treatment, and material, although not scale, the San Miguel Ixtapan sculptures are remarkably similar to Mezcala-style figurines from Guerrero. The site also has a corbelled vault, more typical of sites in Guerrero (Rodríguez García 2009:10). San Miguel Ixtapan may mark a northern boundary of the Late Classic Mezcala tradition (Reyna Robles 2006), and is considered by Rosa María Reyna Robles (2006:129) to be the "sitio gemelo" of La Organera-Xochipala, Guerrero, one

of the principal sites of the Late Classic Mezcala culture. As a major salt-producing site (Limón Boyce 2008:252), San Miguel Ixtapan was likely engaged in exchange with larger Late Classic sites such as Teotenango and Xochicalco.

Figures with crossed arms also appear in the art of Xochicalco and Cacaxtla. Among the objects excavated by César Sáenz in the Cámara de las Ofrendas at Xochicalco were Spondylus shells from the Pacific Coast, and a Mezcala-style figurine (fig. 5.67; Sáenz 1962:27). Greenstone yokes found on the floor of the Cámara de las Ofrendas, or at least the stone to make them, may have also come from Guerrero. The serpentine figurine has crossed arms and accompanied a burial in the chamber, however the skeleton was found in a flexed position and it is unclear whether the arms were crossed (Sáenz 1962:27). A figure that appears on the western talud of the Battle Mural of Cacaxtla's Structure B also has crossed arms (fig. 5.68a). The figure stands in front of a white border decorated with cross-sectioned conch shells or stars (Baird 1989:113-114), and wears a triangular *quechquemitl*, possibly identifying the figure as a woman (McCafferty and McCafferty 1994), or as a feminized conquered enemy (Urcid 2007:117). The figure is generally considered to appear again on the eastern talud of the mural (fig. 5.68b), although certain details of the costumes differ between the two representations, such as the sandals, designs on the skirts and *quechquemitl*s, ear ornaments, and the presence of long hair decorated with jade beads on the eastern figure. The crossed arms of the figure on the western talud, along with the shell-lined white border, may indicate the death of a prominent ruler of the opposing force that is

defeated in the mural. However, another possibility is that the crossed arms, in this instance, indicate that the figure has been taken as a captive and bound.[41]

Art and Interaction at Teotenango

The art of Teotenango resembles shares common characteristics with that of Cacaxtla and Xochicalco, but does not display distinct foreign traits as readily as the latter two sites. Maya and Gulf Coast traits that appear in Teotenango's art may be filtered through contact with Xochicalco. However, located near the headwaters of the Río Lerma, Teotenango likely occupied an important strategic position for exchange with the Bajío and West Mexico, and may be in part responsible for the spread of Late Classic artistic conventions to those regions. Teotenango's influence may have extended to other sites located around Nevado de Toluca, and may have been in a privileged location for the import of goods such as Ucareo obsidian and turquoise.

Some artistic conventions at Teotenango appear widely in Late Classic Central Mexico. The aforementioned feline petroglyph from Teotenango holds a heart between its paws, which it appears to devour (fig. 5.69a). The relief carving has been interpreted as a commemoration of a solar eclipse (Piña Chán 1973:19), but this interpretation is highly unlikely, as the object that the feline devours is clearly not the sun. Javier Romero Quiroz (1963:92) notes the similarity of the imagery to relief sculptures of jaguars devouring hearts at Chichén Itzá (fig. 5.69c). Other similar examples of felines devouring hearts appear in Zapotec (fig. 5.69b) and Teotihuacan art. The heart on the Teotenango example is strikingly similar to glyphic representations in the Cacaxtla murals (fig. 5.70a; Berlo

[41] Rex Koontz (2009) interprets this sequence as an inversion of a Gulf Coast royal investiture scene, as a scene from the Mound of the Building Columns at El Tajín depicts the investiture of a high-status personage with crossed arms wearing a *quechquemitl*.

1989b:41), at Xochicalco (fig. 5.70b), and in earlier murals at Teotihuacan (fig. 5.70c), which is likely the common source for Late Classic use of the symbol. The use of a similar symbol, consisting only of gouts of blood, in on the Pacific coast of Oaxaca and Guerrero during the Late Classic suggests contact with Teotenango, Xochicalco, or Cacaxtla, as the sign was not commonly used by the Zapotecs (Urcid 1993:156). As previously noted, the feline wears what appears to be a scarf around its neck, a convention that also appears in Xochicalco, Zapotec, Classic Maya, and Toltec imagery (fig. 5.35). Toltec examples occur alongside coyotes and eagles devouring hearts on the façade of Pyramid B at Tula, and the relief at Teotenango may convey a similar theme, which recalls Teotihuacano military orders, and may prefigure Aztec eagle and jaguar warrior orders. Felines devouring hearts that are portrayed at Chichén Itzá and Teotihuacan may represent versions of the same entity. The petroglyph is accompanied by a 2 Rabbit glyph, which also appears next to a feline carved on one of the faces of the Trapezoidal Stone from Teotenango (fig. 5.71a). While 2 Rabbit could represent a calendrical date, it could also be the name of the feline.[42]

A fragmentary stone plaque found near Teotenango (fig. 5.72) shares characteristics with art of the Late Classic Maya and Xochicalco. The plaque portrays an animal with a knot at its neck, and a spear. The knot is strongly reminiscent of sacrificial knots that appear in Late Classic Maya art and the Cacaxtla murals. The figure on the Nevado de Toluca Stela (fig. 5.55a) wears a similar series of knots on its legs. While it is difficult to determine the type of animal represented on the plaque, it may be a coyote, given its long ears, and similarity to coyotes that wear similar knots around their necks on plaques that decorate the back of

[42] Helmke and Nielsen (2011) consider the 2 Rabbit glyph on the petroglyph to represent the year 2 Rabbit. What they interpret as a looped cord, I consider the left ear of the rabbit, visible behind the cartouche, as it is roughly the same shape as the right ear. Looped cords, denoting yearbearers in the Late Classic Central Mexican writing system, generally appear on the side or corner of a cartouche.

Pyramid B of Tula (fig. 5.73a). Similar long ears appear on coyotes on the façade of the Pyramid of the Plumed Serpents at Xochicalco (fig. 5.73b) and on Monument 3 of Piedra Labrada, Guerrero (fig. 5.73c), as well as on a probable coyote headdress worn by a figure on a mold of unknown provenience (fig. 5.73d), given similarities in conventions such as speech scrolls with pendent feathers. Although it lacks pigment, the "eyebrow" or orbital above the eye of the creature on the Teotenango plaque is similar in shape to the aforementioned blue eyebrows that appear on animals in Late Classic Maya art and in the Cacaxtla murals (figs. 5.11, 5.12, 5.14, 5.16, 5.23a & 5.24). Similarly shaped eyebrows appear on the feline petroglyph from Teotenango (fig. 69a), and the butterfly, feline and accompanying Rabbit glyph on the Trapezoidal Stone (fig. 5.71). In the art of Xochicalco, some figures appear with large eyebrows that terminate in volutes, which may be a variation of the style in which they are depicted at Cacaxtla and Teotenango (fig. 5.74).

Teotenango shares other characteristics with Xochicalco. As discussed in Chapter 4, ballcourts at the sites share similar dimensions. A large serpent head was found at the base of the Pyramid of the Serpent at Teotenango (fig. 5.75a). Striations behind the serpent's head suggest a feather-covered body. It is possible that the pyramid had plumed serpent balustrades, similar to the Pyramid of the Plumed Serpents at Xochicalco (fig. 5.75b), and other Mesoamerican pyramids. Ceramic and stone representations of starfish from Xochicalco (fig. 5.76a) reflect efforts of the land-locked site to evoke the sea, or perhaps the watery underworld, in its public ceremonial architecture. A tenoned stone object from Teotenango that likely decorated the façade of a building may also represent a starfish (fig. 5.76b), although it is decidedly more stylized than examples from Xochicalco.

Late Classic sites around Valle de Bravo, Estado de México, located to the west of Nevado de Toluca, have received little scholarly attention. La Peña and La Palma, which

were part of the same site located in Valle de Bravo, and Cerro de las Tapazones (also known as Cerro del Tepalcate), near the modern town of Ixtapan del Oro, were strategically located between Michoacán (and the important Ucareo obsidian source), the Bajío region (to the northwest), San Miguel Ixtapan (to the south), and Teotenango. Although the sites have been heavily looted, they have nonetheless yielded several sculptures that share similarities with the art of Teotenango and the Late Classic Bajío. Of the sites under discussion, La Peña has received the most investigation, via brief excavation and survey during the 1970s and salvage archaeology during the 1990s. La Peña's earlier phases yielded Teotihuacan-style pottery, giving way to types found at Teotenango, such as Rojo Bayo (Coyotlatelco), and other varieties that show similarities to styles found in Morelos during the Late Classic (Hernández 1994; Reinhold 1981). The site is located on and around the large rock formation known as "La Peña," and consisted of several mounds and a rectangular plaza, which separated the mounds from the large structure referred to as "La Palma" (Hernández 1994:60). Much of the site was likely destroyed or covered by the modern town of Valle de Bravo. Cerro de las Tapazones has not been excavated or adequately surveyed.

Several large tenoned stone serpent heads come from La Peña. A total of six serpent heads are now located in the Museo Arqueológico de Valle de Bravo (four of which are illustrated in Figure 5.77), and two probable examples from La Peña are displayed in the Denver Art Museum (fig. 5.78). All of the heads differ, but fall into two basic categories: those that are more stylized with facial features formed of large volutes (figs. 5.77a-c), and others that are more naturalistic (figs. 5.77c & 5.78). The three more naturalistic examples display conch-shaped volutes emanating from their mouths and the tops of their heads, likely referring to breath and wind (see Taube 2001). The other, more stylized, examples

(figs. 5.77a-c) resemble Aztec "archaizing" fire serpent sculptures (fig. 5.79; see González López 2015; Umberger 1987a), and may represent the War Serpent, the precursor to the Late Postclassic Xiuhcoatl. A curious feature of these examples is a rectangular basin on the top of the head, which may have served as a recipient or brazier, although the context and function of these sculptures is unknown. A feature common to the stone tenoned serpent heads is recurved *S*-shaped fangs, which appears widely in Late Classic representations of serpents (fig. 5.80) and other supernatural creatures (fig. 5.86). In addition to *S*-shaped fangs, Late Classic serpents also tend to have non-naturalistic mammalian dentition in the form of blunt and rounded incisors. The prolate spheroid-shaped eyes of the serpents, with heavy upper and lower lids, are likely a marker of a style local to Valle de Bravo. Reyna Robles (2013:148) notes that the serpent heads from Valle de Bravo are similar to an example from La Casa Enterrada, a site in the Sierra Madre del Sur of Guerrero, and to examples from Piedra Labrada from the Costa Chica of Guerrero.

Another tenoned head from La Peña differs from the aforementioned examples (fig. 5.81). With goggle-like eyes, a catlike snout, and a feathery fringe around the eyes, the sculpture likely represents a War Serpent headdress, much like examples carried on the tails of plumed serpents on the earlier façade of the Temple of Quetzalcoatl of Teotihuacan (fig. 5.82; see Taube 1986, 1992c). The War Serpent headdress, which is common in art of the Late Classic Maya and Late Classic Central Mexico, also appears on a monument from Cerro de las Tapazones, Estado de México (fig. 5.83). This sculpture, which is set in the main plaza of the town of Ixtapan del Oro, portrays a face with a lipless mouth and exposed teeth, and sunken eyes, likely indicating that the figure is skeletal, within the maw of the War Serpent. A unique series of disks on the back of the headdress may represent jade jewels, or perhaps cascading blood or water, which may hint at the function of the rectangular basins

carved into the tops of tenoned stone serpent heads from La Peña. Faces emerge the mouths of probable War Serpents in art from other Late Classic sculptures, including an example from Xochicalco (fig. 5.84a), and unprovenanced examples from Morelos (fig. 5.84b) and from Michoacán (fig. 5.84c), the latter of which may derive from a tradition related to that of Cerro de las Tapazones. A stone plaque from San Miguel Ixtapan (fig. 5.85), located to the south of Valle de Bravo, portrays a skeletal figure holding a copal bag and wearing a War Serpent headdress. It may portray the same entity as the monument from Cerro de las Tapazones, or could likewise represent a deceased ruler or warrior. The *S*-shaped volutes around the figure on the plaque from San Miguel Ixtapan may represent smoke or clouds, and could relate to figures surrounded by volutes from Xochicalco and Cacaxtla (figs. 5.4 & 5.7).

The sites around Valle de Bravo may link Central Mexican sites such as Teotenango to the Bajío region of Michoacán, Guanajuato, Queretaro, and Jalisco, which was a highly populated area during the Late Classic period, prior to devastating droughts near the onset of the Early Postclassic period that likely led to its decline. The relationship of the recently-excavated site of Plazuelas, Guanajuato to sites such as Xochicalco and Teotenango, located to the southeast, has not been fully explored or defined. Plazuelas shares features typical of Late Classic Bajío sites, such as ceremonial architecture that consists of sunken patios containing central altars or pyramids (Brambila and Castañeda 1993). However, features such as *I*-shaped ballcourts with associated sweatbaths (see Chapter 4; see Castañeda López and Quiroz Rosales 2004:156), architectural *maquetas* (see Chapter 4; see Castañeda López 2007:37), and the "killing" of decommissioned sculptures by painting them red (see Aramoni Burguete 2004:175; López Luján 1995:62) are features shared almost exclusively by Teotenango, Xochicalco, and Plazuelas. Furthermore, specific types of sculptural

decoration on buildings, such as Xi and conch shell almenas (figs. 5.44b & 5.45b) also suggest ties between Plazuelas and Late Classic Central Mexican sites (Aramoni Burguete 2004:174). As previously discussed, the opposed tenoned ballcourt markers of Plazuelas (fig. 5.86) represent a butterfly (with a conch on its wing) and a War Serpent with a Xi-shaped crest on the back of its head, echoing the opposition between conch and Xi almenas. A ballcourt marker from the nearby poorly known site of Zaragoza, Michoacán (fig. 5.87), resembles the butterfly from Plazuelas, suggesting a regional trend shared with other sites.

Plazuelas was likely situated on an important trade route linking Central Mexico to regions to the north, and it may have served as an important distribution hub for obsidian from Ucareo, Michoacán, one of the most important Late Classic sources (Healan 1997). Significantly, turquoise objects have been excavated at Plazuelas (Castañeda López 2007:35; 2008:44), including a necklace with beads in the form of Xi signs, a symbol that can represent fire and turquoise (Taube 2012). Although the importation of turquoise into Mesoamerica does not occur on a large scale until the Early Postclassic period, turquoise beads have been found at Xochicalco (Hirth 2000:202), and fragments of turquoise mosaic were excavated at Cacaxtla (López de Molina and Molina Feal 1986:74). Plazuelas is roughly equidistant between Central Mexico and two important Late Classic trade centers, Alta Vista and La Quemada, which share similar ceramics and architectural features with the Bajío (Braniff C. 2000:39; Jiménez Betts and Darling 2000:163; Nelson 2004:69), but are located farther north in modern Zacatecas. Alta Vista had the largest-known turquoise workshop during the Late Classic (Kelley 1980; Weigand and Harbottle 1993:173), and it obtained turquoise locally and from the American Southwest (Weigand 1968). The appearance of turquoise from the Southwest at La Quemada and Alta Vista around AD 600 coincides with the introduction of Ucareo obsidian at La Quemada (Jiménez Betts and Darling 2000:178),

suggesting an overland trade route connecting the Bajío to Zacatecas, and ultimately to the Southwestern United States. The headwaters of the Río Lerma are situated near Teotenango, and the extensive river system may have served as an important conduit between Central Mexico and the Bajío, placing Late Classic sites of Central Mexico and the Bajío at the center of an exchange network that ultimately extended from the Maya region to the American Southwest.

Conclusion

Through examination of specific traits in Late Classic Central Mexican artwork that are shared with other regions, several noteworthy patterns of interaction emerge. Cacaxtla appears to have had the most direct relationship with the Maya Lowlands. While it is difficult to trace certain stylistic elements in the Cacaxtla murals, such as the treatment of the body, the use of line, and foreshortening to specific sites or subregions within the Maya Lowlands, specific iconographic traits, such as centipede lances, Tlaloc masks, and the appearance of God L as a traveling merchant are most closely associated with sites nearer to the Gulf Coast, and along the Río Usumacinta and Río Pasión. The Once Señores de Cacaxtla sculptures, I argue, share a number of traits with braziers from the western Maya frontier. Based on their intimate familiarity with certain specific Late Classic Maya traits, I suggest that the painters of the murals may come from a site in western Maya Lowlands, or an adjacent area in the cacao-producing region of western coastal Tabasco, such as Ahualulco. It seems likely that the painters belonged to a group that settled Cacaxtla, as ethnohistoric sources indicate, but it is important to note that the commissioners of the murals belonged to a web of interaction that extended to some of the most powerful Late Classic Maya sites, likely including Yaxchilan and Palenque. The tradition of carving sculptures of figures

holding mirrors indicates that Cacaxtla's elites were engaged in more local traditions as well, that encompassed nearby Puebla, the Basin of Mexico, and Xochicalco.

Xochicalco's ties to the Maya region do not appear to have been as direct as Cacaxtla's, although there are some striking parallels with the art and architecture of Copán. Xochicalco and Copán share similar ballcourt architecture, and certain sculptures from Xochicalco are quite similar to sculptures located in and around Copán's ballcourt, including macaws and an anthropomorphic howler monkey. One might expect that ballcourt features would be emulated between sites that shared diplomatic or economic ties, as the ballcourt was a highly visible feature and a focal point of public spectacle. With seated Maya-style lords that resemble those on Nebaj-style jade plaques, the Pyramid of the Plumed Serpents may exalt foreign contacts and access to exotic goods, and present a model for elite identity. The construction of this monument was no doubt intended to be an enduring expression of power and prestige that solidified the elevated status of Xochicalco's elites. Macaw and skeletal feline imagery also appear in regions along the southern coast of Chiapas and Guatemala, suggesting that Xochicalco made use of what was likely an important southern trade route for high-status goods such as jade and cacao, perhaps in part because Cacaxtla monopolized access from northern coastal route that extended from Tabasco to the Central Mexican highlands. Sculptures of deceased figures with crossed arms, which also appear in highland Chiapas, are prevalent along this exchange route, although they do not appear at Xochicalco, with the exception of imported Mezcala-style figurines. Xochicalco's artwork also resembles art from El Tajín, Oaxaca, and highland and coastal Guerrero, from which goods such as greenstone figures and spondylus shell arrived, suggesting additional networks of interaction.

Based on current evidence, it is difficult to argue that Teotenango had direct ties to the Maya region, although it was located in a strategic location that provided westward access to important resources from the Bajío region. Maya-style traits in Teotenango's art, which include crescent-shaped eyebrows, reminiscent of the blue eyebrow that appears at Cacaxtla and in Late Classic Maya art, and sacrificial knots, may evoke trends at Xochicalco and Cacaxtla, rather than at a particular Lowland Maya site or sites. Teotenango's sphere of influence may have extended to the western side of Nevado de Toluca, to the sites of La Peña and Cerro de las Tapazones, which were in closer proximity to San Miguel Ixtapan, at the northern extent of the Mezcala cultural region, and eastern Michoacán and the Bajío. Artwork and features at Late Classic sites in the Bajío, particularly at Plazuelas, show distinct similarities to that of Teotenango and Xochicalco, suggesting that Bajío elites leveraged power by maintaining relationships with Central Mexico, while establishing exchange networks that led to important sites in Zacatecas, such as Altavista and La Quemada, which imported turquoise from the American Southwest.

The artwork of Cacaxtla, Xochicalco, Teotenango, as well as that of sites in Late Classic Valle de Bravo and the Bajío share several characteristics. Traits that are likely derived from the Maya region and appear at multiple sites include crescent-shaped eyebrows on zoomorphic figures, sacrificial knots, and figures surrounded by conch-shaped volutes. *S*-shaped fangs on serpents and other creatures appears to be a hallmark of Late Classic Central Mexican art. Double-outlined figures appear at El Tajín, Xochicalco, and Cacaxtla. Cross-sectioned conch shells appear in both Early Classic Maya art and that of Teotihuacan, while the Xi sign is likely of Teotihuacano origin. Stylized hearts appear widely during the Late Classic, and are undoubtedly derived from Teotihuacan imagery. Since these traits do not appear at all of the sites in question, it may not be appropriate to consider

them as part of a unified art style, although artistic developments and the merging of different artistic traditions may have ultimately given rise to Postclassic International Styles (Boone and Smith 2003:189), with the Olmeca-Xicalanca as key instigators of this process (Lind 1994:98; Nicholson 1960:616; Pohl 2003a:201-202; Pohl, et al. 2012; Taube 2010a:148-149). International styles promoted the exchange of portable luxury items across regions. Certain Late Classic Central Mexican conventions appear in Late Postclassic International Style artwork, such as distinctive butterfly imagery (see Chapter 3), the "earth net" (fig. 5.88; Taube 2010a:149), and blue eyebrows (fig. 5.89).

The Maya region was an important source of prestige goods that bolstered the status of elites in Late Classic Central Mexico. Emergent rulers likely attempted to monopolize the import of jade, cacao, rubber, and quetzal feathers from the Maya region, as well as Ucareo obsidian and possibly turquoise from West Mexico. In addition to Ucareo, Pachuca, and Otumba obsidian, Central Mexican elites may have exported perishable goods and raw materials that leave little imprint in the archaeological record to far-off regions. Litvak King (1970:139) suggests that cotton was one of Xochicalco's key exports. Luxurious textiles and animal pelts and feathers may have also been carried by Central Mexican merchants in exchange for foreign goods.

Rulers at Cacaxtla, Xochicalco, and Teotenango used foreign art styles, especially from the Maya region, to solidify exchange networks and construct archetypes of cross-cultural elite identity. Shared elite identity is a potent means of monopolizing imports and distinguishing elites from the rest of the population (Schortman, et al. 2001; Schortman and Nakamura 1991). Interactions between elites of Late Classic Central Mexico and Lowland Maya sites were undoubtedly dialectical in nature, and it may be worth investigating which components of Central Mexican elite identity became incorporated into that of Maya rulers.

However, the shared visual language of power, economic prestige, and rulership of Late Classic Central Mexico drew upon other sources as well, including Oaxaca, Guerrero, and West Mexico, hinting at complex and overlapping webs of interaction that occurred at multiple scales and intensities. These traditions also drew upon prior styles, conventions, and institutions of Teotihuacan, likely to invoke a sense of continuity with the past. The "eclecticism" in the art of Cacaxtla, Xochicalco, and Teotenango reflects a series of relationships and individual choices that worked in concert to establish and maintain power among elites following the collapse of Teotihuacan.

Chapter 6: Conclusion

This study has identified and traced similarities in shared religious beliefs and deity pantheons, ritual practices, and art styles and iconographic themes, which demonstrate that Cacaxtla, Xochicalco, and Teotenango took part in webs of interaction that linked them to other sites and regions across Late Classic Mesoamerica. These shared characteristics are not purely attributable to migration, invasion, or cultural diffusion, but rather reflect a series of strategically motivated choices. Social actors from Cacaxtla, Xochicalco, and Teotenango incorporated and promoted "foreign" elements, likely as a means of signaling and fostering common affiliation with potential allies and partners in exchange, and they used foreign ties to achieve and maintain political and economic power after the fragmentation of Teotihuacan's extensive exchange network. Contacts with foreign powers provided a model for elite identity and access to the trappings necessary to maintain elevated status. The integration of foreign styles into local systems may have also been used to create a sense of unity or corporate identity among ethnically diverse populations. Shared art styles, religious systems, and ritual practices also facilitated and promoted long-distance commerce as well as the local production of goods that emulate foreign monuments and luxury items.

Chapter 2 examined the deities of Late Classic Central Mexico and placed them into an organized scheme based on H.B. Nicholson's (1971b) categorization of Late Postclassic deities of Central Mexico into "deity complexes," which consist of groups of deities whose cult veneration and basic attributes follow similar trends. Although not all deities are present, predecessors of many of the major Late Postclassic deities acquire recognizable

form in the Late Classic period. Several deities clearly derive from Teotihuacan, and show virtually seamless continuity into the Late Classic period. In particular, Late Classic Huehueteotl effigies are remarkably similar to sculptures from Teotihuacan. It is likely that the similarity was deliberate, and a direct reference to the antiquity of veneration of the deity, and to the old age of the deity himself. The rain god Tlaloc is also widespread during the Late Classic period, and is similar in appearance to Early Classic manifestations of the deity. The so-called Fat God of the Late Classic period is also similar to earlier examples, although the deity does not appear to have survived as a recognizable form into the Late Classic period.

A number of deities appear in the Maya Lowlands, Gulf Coast, and Central Mexico during the Late Classic period. Large quantities of similarly rendered figurines representing women or goddesses with distinct headdresses and their arms raised have been found at Late Classic Xochitecatl, and in the Nopiloa and "Jaina" traditions of the Gulf Coast and coastal Tabasco and Campeche. The distribution of these figurines may follow what was an important trade route that linked the Maya Lowlands to the Central Mexican highlands. A Late Classic form of Xochipilli, a deity of the east and the dawning sun, also appears with frequency along this corridor. The duck-billed wind god, a prominent deity in the Maya Lowlands and Gulf Coast, was present in the Ñuiñe region and perhaps Central Mexico. As a probable Lowland Maya entrepôt, Cacaxtla, located next to Xochitecatl, shows distinct connections to the Maya Lowlands in terms of deities that appear in its artwork. The Maize God, nocturnal and diurnal solar deities, scorpion-tailed stellar deities, a long-haired wind god, and most notably the Merchant God, God L, appear in Cacaxtla's murals. The Maya God L may have served as the prototype for the Late Postclassic Central Mexican merchant god, Yacatecuhtli. Xochicalco also appears to share some deities with the Maya Lowlands, such as

the solar macaw and a supernatural monkey draped in cacao-sprouting vines. These beings may have arrived at Xochicalco via contact through an established trade route along the Pacific coast to Chiapas, Guatemala, and Honduras.

Several deities that were important in Late Postclassic pantheons were notably absent from those of Late Classic Central Mexico. Although skeletal death deities are not apparent in the art of Cacaxtla, Xochicalco, or Teotenango, they are prominent in the art of adjacent regions, including the Gulf Coast, at both El Tajín and El Zapotal, and San Miguel Ixtapan in the Mezcala region. Skeletal death deities also appear frequently in the art of Cotzumalhuapa, suggesting a possible pattern of interaction that extends across the Isthmus of Tehuantepec and along the Pacific coast of southern Mesoamerica. Not surprisingly, tutelary deities of specific Late Postclassic ethnic groups, such as Huitzilopochtli, Camaxtli, and Mixcoatl, do appear in Late Classic art in any immediately recognizable form. Although Ringle, Bey, and Gallareta Negron (1998) argue that a pan-Mesoamerican cult devoted to Quetzalcoatl was a unifying religious movement in Late Classic Mesoamerica, I do not find conclusive evidence of the presence of the anthropomorphic wind deity and culture hero in Late Classic art. Plumed serpents are ubiquitous in Mesoamerican art, but the fusion of this entity with Topiltzin Quetzalcoatl, the legendary ruler of Tula, and with the wind god Ehecatl, appears to be a Postclassic phenomenon. Furthermore, key figures from the Topiltzin Quetzalcoatl saga, Tezcatlipoca and Tlahuizcalpantecuhtli, are also ostensibly absent during the Late Classic, but appear in the Early Postclassic period.

In Chapter 3, I argued that religious and cosmological beliefs concerning the Flower World, an aesthetic and spiritual realm, were widespread in Late Classic Mesoamerica. From the perspective of Central Mexico, the Lowland Maya region to the east was the verdant place of the dawning sun, and a source of wealth in the form of jade, quetzal

feathers, and cacao. The Flower World complex, likely inherited from Teotihuacan (see Taube 2005a, 2006), reified cosmological beliefs concerning the east, and served to reinforce and legitimize elite status. In Central Mexican Flower World ideology, deceased ancestors and warriors are apotheosized as nectar-drinking birds and insects that inhabit an eastern solar paradise of jewels and flowers. The glorification of deceased warriors may have promoted military expansion. The Flower World complex also provided a model of shared elite identity, likely based upon Maya divine kingship and association with the sun and wealth. This ideology promoted the exchange of certain luxury goods, such as jade and cacao, and control over such imports and feasting in honor of elite ancestors reinforced the status of rulers.

There is ample evidence of the Flower World complex in the art of Cacaxtla, Xochicalco, and Teotenango. Distinct imagery concerning butterflies, quetzals, and feathered serpents becomes more standardized at these sites and recognizable as forms that were adopted into Postclassic international art styles. Late Classic Central Mexican Flower World imagery appears on both monumental artwork and portable objects, and the spread of the Flower World complex during the Late Classic period may account for the widespread appearance of deities such as Xochipilli. Widely distributed goods, such as flower-decorated Coyotlatelco pottery, likely used in feasting and to accompany the deceased in burials, and jade pendants that portray deceased rulers may have been objects associated with Flower World. This religious complex, which promoted exchange and interaction across Mesoamerica, likely functioned similarly to the Quetzalcoatl cult proposed by Ringle and colleagues (1998), and is a more plausible alternative as a Late Classic "world religion," given the apparent lack of well-developed Quetzalcoatl (as divine culture hero and archetypical ruler) symbolism prior to the Postclassic. In fact, the

promotion of Topiltzin Quetzalcoatl, a Toltec ruler and culture hero, and the spread of his veneration may have been an outgrowth of the Flower World complex during the Early Postclassic period, as the Quetzalcoatl saga and Flower World religion both emphasize concepts such as divine kingship and fiery immolation and subsequent apotheosis.

Chapter 4 discussed material and iconographic evidence of shared ritual practices in Late Classic Mesoamerica. Widely shared public rituals served several practical purposes during the Late Classic period. Public rituals are a means by which practitioners can display power and privileged access to divine forces, thus promoting and reinforcing social order. Elites may also demonstrate their patronage by hosting rituals in the form of public spectacle, such as ballgames. Shared ritual practice may also signal allegiance to visitors from other cities or regions, or may instill a sense of unity and social cohesion among ethnically diverse populations. Rituals also tend to be anachronistic in nature, and derive legitimacy through reference to the past. Widespread forms of Late Classic ritual discussed in this study include rituals that involve the manipulation of vital fluids, the ballgame, human sacrifice, and fire-related rituals.

Water-related rituals were of central importance during the Late Classic period. The use of elaborate stone *maquetas*, over which liquids were likely poured, is a trend shared by Xochicalco, Teotenango, San Miguel Ixtapan, and Plazuelas, although analogous *maquetas* and other ceremonial objects with ballcourt-shaped depressions appear in the Maya Lowlands. As noted by Karl Taube (2013a), an important ritual function of the ballgame was to evoke rainfall. The proliferation and elaboration of ballcourt architecture during the Late Classic period, as well as the large number of ballcourts at sites such as El Tajín and Cantona may reflect heightened concerns over precipitation, as well as increased emphasis on public spectacle and perhaps conflict resolution. Stone effigy ballgame equipment, most closely

associated with the Gulf Coast and Cotzumalhuapa, was also widely distributed during the Late Classic period, and imagery depicting ballgame-related sacrifice was also a major theme in the art of both regions.

Human sacrifice was an important element of Late Classic ceremonialism. Although practices such as ritual decapitation and display of skulls on skull racks, flaying, and heart sacrifice are often considered Late Classic innovations, these practices are demonstrably present in prior traditions. The chacmool, an iconic sacrificial altar in the form of a deceased warrior, may originate in the Late Classic period, as imagery portraying deceased reclining figures appears at Xochicalco, Cacaxtla, El Tajín, Tula Chico, and in the Maya Lowlands. While Late Classic polities do not appear to have introduced novel forms of human sacrifice, they may have become more institutionalized during this time, and were important means of publically displaying power.

Across Late Classic Mesoamerica fire ceremonies marked significant calendrical events, the founding of settlements, and the accession of rulers. For the Late Postclassic Aztecs, the New Fire ceremony at Cerro de la Estrella was one of the most important public rituals, and was the culminating event of the 52-year cycle. This ritual may have originated in the Late Classic period, or perhaps at Early Classic Teotihuacan, although there is no direct evidence of fire rituals in relation to period-ending events at the latter site. Fire-related ritual at Cerro de la Estrella appears to have predated the Aztecs.

Chapter 5 addressed the issue of "eclecticism" in the art of Cacaxtla, Xochicalco, and Teotenango, and argued that the adoption of foreign art styles and iconographic themes reflects deliberate efforts to establish and maintain relationships with foreign powers. This process was selective, and rather than adopting generalized traits, Late Classic artists in Central Mexico incorporated specific motifs, perhaps with the aim of signaling allegiance to

foreign visitors, producing goods with greater appeal to foreign markets, or creating a visual language that was relevant and legible to multi-ethnic populations. My contention is that foreign traits in the artwork of Cacaxtla, Xochicalco, and Teotenango reflect intimate knowledge of art styles, practices, and beliefs from other regions, and this knowledge was gained through cross-polity relationships and cross-regional networks of interaction populated by social agents that shared mutual interests.

The general "Maya" appearance in the murals of Cacaxtla is widely acknowledged and a subject of much debate. However, close examination of iconographic motifs in the murals and comparison to Lowland Maya examples demonstrates that Cacaxtla's artists were not vaguely familiar with Maya art, but rather were intimately knowledgeable of specific conventions from certain Late Classic Maya polities. Traits such as blue eyebrows on zoomorphic figures, the centipede lance wielded by rulers and solar deities, the Tlaloc mask, and God L and other deities link Cacaxtla's murals to the artistic traditions of major Late Classic Maya sites such as Palenque, Yaxchilan, and Copán. Furthermore, Maya characteristics are not limited to Cacaxtla's mural programs, but also appear in other media such as portable objects and stucco sculpture. Cacaxtla took part in networks of interaction with Lowland Maya cities, which in turn were linked to other Maya and non-Maya cities. Cacaxtla's art most closely resembles that of cities from the western Maya Lowlands and the Usumacinta corridor. I suggest that Chontal Maya, Zoque, or Nahua from Ahualulco or another city in the cacao-producing region of western Tabasco may have settled at Cacaxtla, which is consistent with ethnohistoric sources that place the Olmeca-Xicalanca in Cacaxtla during the Late Classic period. Cacaxtla's artwork also reflects more local patterns of interaction with Xochicalco, the Basin of Mexico, El Tajín, and other cities.

Xochicalco's relationship to the Maya Lowlands is not as clear as Cacaxtla's, although the city's artwork and architecture suggests notable patterns of interaction. In particular, certain traits revolving around the ballgame at Xochicalco are particularly similar to those of Copán, such as macaw sculptures, a probable supernatural simian draped with cacao pods, and ballcourt dimensions. Other Maya-style traits in Xochicalco's artwork include the seated lords that resemble Maya figures on "Nebaj-style" jade pendants on the lower talud of the Pyramid of the Plumed Serpents, a possible *popol nah* scene on the structure's tablero, and a supernatural bat that resembles examples on Chama-style pottery. Imported goods found at Xochicalco indicate that the site's more immediate sphere of interaction included the Mezcala region of Guerrero and the Pacific coast. Cacaxtla and Xochicalco may well have been rival cities, and patterns of obsidian distribution suggest that Xochicalco was not allied with the Basin of Mexico. Whereas Cacaxtla took advantage of a major trade and communication network along the Gulf Coast toward the Usumacinta corridor, Xochicalco's network may have extended south to the Pacific coast and ultimately toward the Soconusco, thus avoiding Central Mexican rivals, but providing access to luxury goods from the Maya Lowlands.

Teotenango's exchange networks may not have reached the Maya Lowlands directly, but it likely interacted with Xochicalco and sites around Nevado de Toluca, such as La Peña and San Miguel Ixtapan, and was probably a major importer of Ucareo obsidian from Michoacán. Teotenango was likely involved in exchange along the Río Lerma, perhaps with sites in the Bajío region, such as Plazuelas, Guanajuato. Although the Bajío region is often considered to be on or beyond the periphery of Mesoamerica, Plazuelas shares several characteristics with other Late Classic Central Mexican sites, especially Xochicalco and Teotenango, including stone *maquetas*, prominent Flower World imagery in the form of War

Serpent and Butterfly ballcourt markers, Xi and cross-sectioned conch almenas, and a flaring cornice similar to examples from Xochicalco and El Tajín. Plazuelas' networks likely extended north into the Chalchihuites region, from where it imported turquoise, an exchange good of paramount economic and ritual importance in later centuries.

Cacaxtla, Xochicalco, and Teotenango were not directly involved in all of the major networks of cross-regional interaction in Late Classic Mesoamerica. For instance, there was likely a cross-isthmian network that linked El Tajín to Cotzumalhuapa, which has received little scholarly attention. Wigberto Jiménez Moreno (1966:65) noted the similar distribution of stone effigy ballgame equipment in the two regions and concluded that it was evidence of a Pipil migration following the collapse of Teotihuacan. Migration may not necessarily explain the phenomenon, although other evidence suggests that the two regions interacted closely. The art of El Tajín and Cotzumalhuapa share several distinct characteristics, such as a double outline around the bodies of figures (also seen at Xochicalco and Cacaxtla), an emphasis on imagery pertaining to ballgame sacrifice and other rituals performed by figures in ballgame equipment, and the prominence of skeletal death deities.

The strategic synthesis of art styles, religious themes, and iconographic motifs during the Late Classic period reflects commercial and political efforts to appeal to foreign partners in exchange, but may also indicate intentions to instill corporate identities among ethnically diverse populations that resulted from migrations and displacement of peoples following the collapse of Teotihuacan. Late Classic art in both Maya Lowlands and Central Mexico tends to be less stylized and abstract than prior visual systems of Teotihuacan and Early Classic Maya. The resulting blend of more representational art styles and standardized iconographic motifs in service of commerce and broad legibility ultimately led to the creation of the Early Postclassic Maya-Toltec International Style, and the origins of

the Late Postclassic International Style may be found in the Late Classic period. Common shared iconographic conventions in Late Classic art, many of which were incorporated into Postclassic international art styles, include excised hearts, cross-sectioned conch shells, the Xi sign, butterflies with curling proboscises, blue eyebrows, the earth net, and *S*-shaped fangs.

A shift toward more mercantile-based economies following the collapse of Teotihuacan and the disbursal of power of major Maya city-states such as Tikal and Calakmul influenced patterns of interaction across Mesoamerica. In Late Classic Mesoamerica, power appears to have been distributed among a greater number of smaller cities, rather than concentrated among few larger metropolises during the Early Classic period. Defensive architecture and martial imagery suggests that competition was fierce among Cacaxtla, Xochicalco, Teotenango, and other Late Classic polities. As these smaller polities emerged and vied for power, they adopted new artistic and religious strategies in order to buttress their claims to authority. Rulers of Cacaxtla, Xochicalco, and Teotenango sought and maintained networks of exchange and political alliance with distant foreign powers, as indicated through analysis of art, religion, and ritual practices in Late Classic Central Mexico.

Bibliography

Acosta Saignes, Miguel

1945 *Los pochteca: Ubicación de los mercaderes en la estructura social tenochca*. Acta Antropológica 1. Sociedad de Alumnos de la Escuela Nacional de Antropología, México D.F.

Adams, Richard E. W.

1999 *Río Azul: An Ancient Maya City*. University of Oklahoma Press, Norman.

Agüero, Adriana and Annick Daneels

2009 Playing Ball: Competition as a Political Tool. In *Blood and Beauty: Organized Violence in the Art and Archaeology of Mesoamerica and Central America*, edited by H. Orr and R. Koontz, pp. 117-138. Cotsen Institute of Archaeology Press, Los Angeles.

Aguilera, Carmen

2004 Xochipilli dios solar. *Estudios de Cultura Náhuatl* 35:69-74.

2008 La lápida de Itzpapálotl. *Arqueología Mexicana* 16(93):16-17.

Alva Ixtlilxóchitl, Fernando de

1952 *Obras históricas de Don Fernando de Alva Ixtlilxóchitl, editadas y anotadas por Alfredo Chavero*. Editora Nacional. 2 vols, México, D.F.

Álvarez A., Carlos

1975 Petroglifos y esculturas. In *Teotenango: El antiguo lugar de la muralla*, edited by R. Piña Chán, pp. 267-307. vol. 1. Dirección de Turismo, Gobierno del Estado de México, México, D.F.

1982 Maquetas de piedra de Teotenango. In *Las representaciones de la arquitectura en la arqueología de América (Mesoamérica)*, edited by D. Schavelson, pp. 339-358. vol. I. UNAM, México, D.F.

1983 Las Esculturas de Teotenango. *Estudios de Cultura Náhuatl* 16:233-264.

Angulo, Jorge

1972 Reconstrucción etnográfica a través de la pintura. In *Teotihuacan: XI mesa redonda*, pp. 43-68. Sociedad Mexicana de Antropología, México, D.F.

Apostolides, Alex
1987 Chalcatzingo Painted Art. In *Ancient Chalcatzingo*, edited by D. C. Grove, pp. 171-199. University of Texas Press, Austin.

Aramoni Burguete, María Elena
2004 Dioses y símbolos mesoamericanos en Plazuelas. In *Tradiciones arqueológicas*, edited by E. Cárdenas García, pp. 161-179. Colegio de Michoacán/Gobierno del Estado de Michoacán, Zamora.

2014 *El mundo prehispánico de Guanajuato: Plazuelas, lugar de la serpente de fuego*. Instituto Nacional de Antropología e Historia, México, D.F.

Armillas, Pedro
1946 Los olmeca-xicalanca y los sitios arqueológicos del suroeste de Tlaxcala. *Revista Mexicana de Estudios Antropológicos* 8:137-145.

1969 The Arid Frontier of Mexican Civilization. *Transactions of the New York Academy of Sciences* 31(6):697-704.

1995 [1941] Informe del levantamiento topográfico de la zona arqueológica de Cacaxtla. In *Antología de Cacaxtla*, edited by A. García Cook and B. L. Merino Carrión, pp. 49-67. vol. 1. Instituto Nacional de Antropología e Historia, México, D.F.

Arnold, Dean E.
2005 Maya Blue and Palygorskite: A second possible pre-Columbian source. *Ancient Mesoamerica* 16(01):51-62.

Arnold, Dean E. and Bruce F. Bohor
1977 An Ancient Clay Mine at Yo' K'at, Yucatan. *American Antiquity* 42(4):575-582.

Arnold, Dean E., Jason R. Branden, Patrick Ryan Williams, Gary M. Feinman and J. P. Brown
2008 The first direct evidence for the production of Maya Blue: rediscovery of a technology. *Antiquity* 82(315):151-164.

Arnold, Dean E., Hector Neff, Michael D. Glascock and Robert J. Speakman
2007 Sourcing the Palygorskite Used in Maya Blue: A Pilot Study Comparing the Results of INAA and LA-ICP-MS. *Latin American Antiquity* 18(1):44-58.

Arnold, Philip J. III and Robert S. Santley
2008 Classic Currents in the West-Central Tuxtlas. In *Classic Period Cultural Currents in Southern and Central Veracruz*, edited by P. J. I. Arnold and C. A. Pool, pp. 293-321. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Ashmore, Wendy
1991 Site-Planning Principles and Concepts of Directionality Among the Ancient Maya. *Latin American Antiquity* 2(3):199-226.

Aveni, Anthony F. and Sharon L. Gibbs
1976 On the Orientation of Precolumbian Buildings in Central Mexico. *American Antiquity* 41(4):510-517.

Baddeley, Oriana
1983 The Relationship of Ancient American Writing Systems to the Visual Arts. In *Text and Image in Pre-Columbian Art: Essays on the Interrelationship of the Visual and Verbal Arts*, edited by J. C. Berlo, pp. 55-77. BAR International Series No. 180. Oxford University Press, Oxford.

Baird, Ellen T.
1989 Stars and War at Cacaxtla. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 105-122. Dumbarton Oaks Research Library and Collection, Washington D.C.

Barba de Piña Chán, Beatríz
1956 *Tlapacoya: Un sitio preclásico de transición*. Departamento de Turismo, Toluca, Mexico.

Bardawil, Lawrence W.
1976 The Principal Bird Deity in Maya Art - An Iconographic Study of Form and Meaning. In *The Art, Iconography, & Dynastic History of Palenque Part III. Proceedings of the Segunda Mesa Redonda de Palenque, December 14-21, 1974 - Palenque*, edited by M. G. Robertson, pp. 195-209. Pre-Columbian Art Research and The Robert Louis Stevenson School, Pebble Beach, CA.

Barker, Alex W., Craig E. Skinner, M. Steven Shackley, Michael D. Glascock and J. Daniel Rogers
2002 Mesoamerican origin for an obsidian scraper from the Precolumbian southeastern United States. *American Antiquity* 67(1):103-108.

Barrera Rodríguez, Raúl, Roberto Martínez Meza, Rocío Morales Sánchez and Lorena Vázquez Vallin

2012 Espacios rituales frente al Templo Mayor de Tenochtitlan. *Arqueología Mexicana* XIX(116):18-23.

Baus de Czitrom, Carolyn

1986 Apendice 2: La escritura y el calendario en las pinturas. In *Cacaxtla: El lugar donde muere la lluvia en la tierra*, edited by S. Lombardo de Ruiz, D. López de Molina and D. Molina Feal, pp. 509-527. Secretaria de Educación Pública/INAH, México, D.F.

1995 El Culto de Venus en Cacaxtla. In *Antología de Cacaxtla*, edited by L. Mirambell Silva, pp. 331-357. vol. II. Instituto Nacional de Antropología e Historia and Gobierno del Estado de Tlaxcala, México, D.F.

Beacham, Richard C.

1999 *Spectacle Entertainments of Early Imperial Rome*. Yale University Press, New Haven and London.

Beekman, Christopher S. and Alexander F. Christensen

2003 Controlling for Doubt and Uncertainty Through Multiple Lines of Evidence: A New Look at the Mesoamerican Nahua Migrations. *Journal of Archaeological Method and Theory* 10(2):111-164.

2011 Power, Agency, and Identity: Migration and Aftermath in the Mezquital Area of North-Central Mexico. In *Rethinking Anthropological Perspectives on Migration*, edited by G. S. Cabana and J. J. Clark, pp. 147-171. University Press of Florida, Gainesville.

Bell, Catherine

1992 *Ritual Theory, Ritual Practice*. Oxford University Press, New York.

1997 *Ritual: Perspectives and Dimensions*. Oxford University Press, Oxford.

Benson, Elizabeth P.

1988 The Maya and the Bat. *Latin American Indian Literatures Journal* 4(2):99-124.

Berdan, Frances F.

1986 Enterprise and Empire in Aztec and Early Colonial Mexico. In *Economic Aspects of Prehispanic Highland Mexico*, edited by B. L. Isaac, pp. 281-302. Research in Economic Anthropology, Supplement 2. JAI Press, Greenwich, CT.

Bergmann, John F.
1969 The Distribution of Cacao Cultivation in Pre-Columbian America. *Annals of the Association of American Geographers* 59(1):85-96.

Berlin, Heinrich
1953 *Archaeological Reconnaissance in Tabasco*. Current Reports No. 7. Carnegie Institution, Washington, D.C.

Berlin, Heinrich and David H. Kelley
1961 The 819-Day Count and Color-Direction Symbolism Among the Classic Maya. In *Middle American Research Institute Publication 26*, pp. 9-20. Tulane University, New Orleans.

Berlo, Janet Catherine
1983 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 J. C. Berlo, pp. 79-117. BAR International Series No. 180. Oxford University Press, Oxford.

1989a The Concept of the Epiclassic: A Critique. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 209-210. Dumbarton Oaks Research Library and Collection, Washington D.C.

1989b Early Writing in Central Mexico: *In Tlilli, In Tlapalli* before A.D. 1000. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 19-47. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Berryman, Carrie Ann
2007 Captive Sacrifice and Trophy Taking Among the Ancient Maya: An Evaluation of the Bioarchaeological Evidence and Its Sociopolitical Implications. In *The Taking and Displaying of Human Body Parts as Trophies by Amerindians*, edited by R. J. Chacon and D. H. Dye, pp. 377-399. Springer, New York.

Beyer, Hermann
1969 [1918] La piedra de sacrificios (*Techcatl*) del Museo Nacional de Arqueología, Historia y Etnología de México. In *"El Mexico Antiguo": Revista Internacional de Arqueología, Etnología, Folklore, Historia, Historia Antigua y Lingüistica Mexicanas*, pp. 331-341. Tomo XI. Sociedad Alemana Mexicanista, México, D.F.

Bierhorst, John
1992 *History and Mythology of the Aztecs: The Codex Chimalpopoca*. University of Arizona Press, Tucson.

Blake, Michael
2011 Building History in Domestic and Public Space at Paso de la Amada: An Examination of Mounds 6 and 7. In *Early Mesoamerican Social Transformations: Archaic and Formative Lifeways in the Soconusco Region*, edited by R. G. Lesure, pp. 97-118. University of California Press, Berkeley and Los Angeles.

Blanton, Richard E.
1972 *Prehispanic Settlement Patterns of the Ixtapalapa Peninsula Region of Mexico*. Occasional Papers in Anthropology. Department of Anthropology, The Pennsylvania State University, University Park, Pennsylvania.

Boone, Elizabeth Hill
1983 *The Codex Magliabechiano*. University of California Press, Berkeley, Los Angeles, and London.

2000 *Stories in Red and Black: Pictorial Histories of the Aztecs and Mixtecs*. University of Texas Press, Austin.

Boone, Elizabeth Hill and Michael E. Smith
2003 Postclassic International Styles and Symbol Sets. In *The Postclassic Mesoamerican World*, edited by M. E. Smith and F. F. Berdan, pp. 186-193. The University of Utah Press, Salt Lake City.

Borhegyi, Stephan F. de
1967 Miniature "Thin Stone Heads" and Other Pre-Columbian Miniature Stone Objects from Mesoamerica. *American Antiquity* 32(4):543-546.

1980 *The Pre-Columbian Ballgames: A Pan-Mesoamerican Tradition*. Contributions in Anthropology and History 1. Milwaukee Public Museum, Milwaukee.

Brambila, Rosa and Carlos Castañeda
1993 Los basamentos con espacios hundidos. *Cuadernos de Arquitectura Mesoamericana* 25:73-78.

Brambila, Rosa and Ana María Crespo
2005 Desplazamientos de poblaciones y creación de territorios en el Bajío. In *Reacomodos demográficos del Clásico al Posclásico en el centro de México*,

edited by L. Manzanilla, pp. 155-174. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, México, D.F.

Braniff, Beatriz and Marie-Areti Hers
1998 Herencias chichimecas. *Arqueología* 19:55-80.

Braniff C., Beatriz
2000 A Summary of the Archaeology of North-Central Mesoamerica: Guanajuato, Querétaro, and San Luis Potosí. In *Greater Mesoamerica: The Archaeology of West and Northwest Mexico*, edited by M. S. Foster and S. Gorenstein, pp. 35-42. The University of Utah Press, Salt Lake City.

2005 Los chichimecas a la caída de Teotihuacan y durante la conformación de la Tula de Hidalgo. In *Reacomodos demográficos del Clásico al Posclásico en el centro de México*, edited by L. Manzanilla, pp. 45-56. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, México, D.F.

Braswell, Geoffrey E. (editor)
2003 *The Maya and Teotihuacan: Reinterpreting Early Classic Interaction*. University of Texas Press, Austin.

Brittenham, Claudia
2008 The Cacaxtla Painting Tradition: Art and Identity in Epiclassic Mexico. Doctoral dissertation, Art History, Yale University, New Haven.

2009 Style and Substance, or Why the Cacaxtla Paintings Were Buried. *Res: Anthropology and Aesthetics* 55/56:135-155.

2011 About Time: Problems of Narrative in the Battle Mural at Cacaxtla. *Res: Anthropology and Aesthetics* 59/60:74-92.

2013 Los pintores de Cacaxtla. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 267-361. vol. II. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México, D.F.

2015 *The Murals of Cacaxtla: The Power of Painting in Ancient Central Mexico*. University of Texas Press, Austin.

Brittenham, Claudia and Debra Nagao
2014 Cacaxtla Figural Ceramics. *Anales del Instituto de Investigaciones Estéticas* XXXVI(104):55-96.

Browder, Jennifer Kathleen
2005 Place of the High Painted Walls: The Tepantitla Murals and the Teotihuacan Writing System. Dissertation, Anthropology, University of California, Riverside, Riverside.

Brumfiel, Elizabeth M.
1996 Figurines and the Aztec State: Testing the Effectiveness of Ideological Domination. In *Gender and Archaeology*, edited by R. P. Wright, pp. 143-166. University of Pennsylvania Press, Philadelphia.

2008 Aztec Women: Capable Partners and Cosmic Enemies. In *The Aztec World*, edited by E. M. Brumfiel and G. M. Feinman, pp. 87-104. Abrams, New York.

Burkert, Walter
1983 *Homo Necans: The Anthropology of Greek Sacrificial Ritual and Myth*. Translated by P. Bing. University of California Press, Berkeley.

Burkhart, Louise M.
1992 Flowery Heaven: The Aesthetic of Paradise in Nahuatl Devotional Literature. *Res: Anthropology and Aesthetics* 21:88-109.

Cabrera Castro, Rubén
1982 Un centro ceremonial grabado en roca de Zaragoza, Michoacán. In *Las representaciones de la arquitectura en la arqueología de América (Mesoamérica)*, edited by D. Schavelson, pp. 327-333. vol. I. UNAM, México, D.F.

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 K. Berrin and E. Pasztory, pp. 100-107. Thames and Hudson, New York.

1996 Figuras glíficas de La Ventilla, Teotihuacan. *Arqueología* 15:27-40.

Campbell, Roderick (editor)
2014 *Violence and Civilization: Studies of Social Violence in History and Prehistory*. Oxbow Books, Oxford, UK and Oakville, CT.

Canter, Ronald L.
2007 Rivers Among the Ruins: The Usumacinta. *The PARI Journal* 7(3):1-24.

Carballo, David M.
2007 Effigy Vessels, Religious Integration, and the Origins of the Central Mexican Pantheon. *Ancient Mesoamerica* 18:53-67.

Carlson, John B.
1991 *Venus-regulated Warfare and Ritual Sacrifice in Mesoamerica: Teotihuacan and the Cacaxtla "Star Wars" Connection*. Center for Archaeoastronomy Technical Publication, College Park, MD.

Caso, Alfonso
1937 ¿Tenían los teotihuacanos conocimientos del tonalpohualli? *El México antiguo* 4:131-143.

1967 *Los calendarios prehispánicos*. Instituto de Investigaciones Históricas, Universidad Nacional Autónoma de México, México D.F.

Caso, Alfonso and Ignacio Bernal
1952 *Urnas de Oaxaca*. Memorias del Instituto Nacional de Antropología e Historia vol. 2. INAH, México, D.F.

Caso, Alfonso, Ignacio Bernal and Jorge R. Acosta
1967 *La cerámica de Monte Albán*. Memorias del Instituto Nacional de Antropología e Historia, No. 13, México, D.F.

Castañeda López, Carlos
2007 Plazuelas, Pénjamo. In *Zonas arqueológicas en Guanajuato*, pp. 21-67. Fideicomiso de Administración e Inversión para la Realización de las Actividades de Rescate y Conservación de Sitios Arqueológicos en el Estado de Guanajuato, Guanajuato.

2008 Plazuelas, Guanajuato. *Arqueología Mexicana* 16(92):44-47.

Castañeda López, Carlos and Jorge Quiroz Rosales
2004 Plazuelas y la tradición Bajío. In *Tradiciones arqueológicas*, edited by E. Cárdenas García, pp. 141-159. Colegio de Michoacán/Gobierno del Estado de Michoacán, Zamora.

Chadwick, Robert E.L.
2013 *The Olmeca-Xicallanca of Teotihuacan, Cacaxtla, and Cholula: An archaeological, ethnohistorical, and linguistic synthesis*. BAR International Series 2488, Paris Monographs in American Archaeology 30. Archaeopress, Oxford.

Chinchilla Mazariegos, Oswaldo

1998 A Corpus of Cotzumalhuapa-Style Sculpture, Guatemala. Report submitted to the Foundation for the Advancement of Mesoamerican Studies, Inc., http://www.famsi.org/reports.

2002 Los barrigones del sur de Mesoamérica: The Potbellies of Southern Mesoamerica. *Precolombart* 4/5:8-23.

2005 Cosmos and Warfare on a Classic Maya Vase. *Res: Anthropology and Aesthetics* 47:107-134.

2009 Games, Courts, and Players at Cotzumalhuapa, Guatemala. In *Blood and Beauty: Organized Violence in the Art and Archaeology of Mesoamerica and Central America*, edited by H. Orr and R. Koontz, pp. 139-160. Cotsen Institute of Archaeology Press, Los Angeles.

2010 La vagina dentada: Una interpretación de la Estela 25 de Izapa y las guacamayas del juego de pelota de Copán. *Estudios de Cultura Maya* XXXVI:117-144.

2011 The Flowering Glyphs: Animation in Cotzumalhuapa Writing. In *Their Way of Writing: Scripts, Signs, and Pictographies in Pre-Columbian America*, pp. 43-75. Dumbarton Oaks Research Library and Collection, Washington D.C.

2012 *Cotzumalguapa: La ciudad arqueológica El Baúl - Bilbao - El Castillo*. F & G Editores, Guatemala City.

2013 The Flower World of Cotzumalhuapa. In *The Maya in a Mesoamerican Context: Comparative Approaches to Maya Studies. Proceedings of the 16th European Maya Conference, Copenhagen, December 5-10, 2011*, edited by J. Nielsen and C. Helmke, pp. 79-92. Acta Mesoamericana Volume 26. Verlag Anton Saurwein, Markt Schwaben, Germany.

2014 Flaying, Dismemberment, and Ritual Human Sacrifice on the Pacific Coast of Guatemala. *The PARI Journal* 14(3):1-12.

2015 Sounds in Stone: Song, Music, and Dance on Monument 21 from Bilbao, Cotzumalguapa, Guatemala. *The PARI Journal* XVI(1):1-12.

Chinchilla Mazariegos, Oswaldo, Frederick J. Bove and José Vicente Genovez

2009 La cronología del período Clásico en la costa sur de Guatemala y el fechamiento del estilo escultórico de Cotzumalguapa. In *V coloquio Pedro*

Bosch Gimpera, edited by A. Daneels, pp. 435-471. Universidad Nacional Autónoma de México, México, D.F.

Chinchilla, Oswaldo, Ronald L. Bishop, M. James Blackman, Erin L. Sears, José Vicente Genovez and Regina Moraga

2005 Intercambio de cerámica a larga distancia en Cotzumalguapa: Resultados del análisis por activación de neutrones. In *XVIII Simposio de Investigaciones Arqueológicas en Guatemala*, edited by J. P. Laporte, B. Arroyo and H. Mejía, pp. 983-991. Museo Nacional de Arqueología y Etnología, Guatemala.

Clark, John E.

1999 A New Artistic Rendering of Izapa Stela 5: A Step toward Improved Interpretation. *Journal of Book of Mormon Studies* 8(1):22-33, 77.

Coe, Michael D.

1973 *The Maya Scribe and His World*. The Grolier Club, New York.

1978 *Lords of the Underworld: Masterpieces of Classic Maya Ceramics*. Princeton University Press, Princeton.

Coggins, Clemency Chase

1984 The Cenote of Sacrifice: Catalogue. In *Cenote of Sacrifice: Maya Treasures from the Sacred Well at Chichén Itzá*, edited by C. C. Coggins and O. C. Shane III, pp. 23-176. 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*, pp. 427-482. Universidad Nacional Autónoma de México, México, D.F.

Coggins, Clemency Chase and John M. Ladd

1992 Copal and Rubber Offerings. In *Artifacts from the Cenote of Sacrifice, Chichen Itza, Yucatan*, edited by C. C. Coggins, pp. 345-357. Memoirs of the Peabody Museum of Archaeology & Ethnology, Harvard University. Vol. 10, No. 3. Harvard University Press, Cambridge, MA.

Cohodas, Marvin

1975 The Symbolism and Ritual Function of the Middle Classic Ball Game in Mesoamerica. *American Indian Quarterly* 2(2):99-130.

1989 The Epiclassic Problem: A Review and Alternative Model. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 219-240. Dumbarton Oaks, Washington D.C.

1991 Ballgame Imagery of the Maya Lowlands: History and Iconography. In *The Mesoamerican Ballgame*, edited by V. L. Scarborough and D. R. Wilcox, pp. 251-288. University of Arizona Press, Tucson.

Contreras Martínez, José Eduardo
1992 El Proyecto Tetlatlahuca. *Notas Mesoamericanas* 13:83-92.

2007 Representaciones del cacao en la zona arqueológica de Cacaxtla, Tlax. In *Memorias del Primer Coloquio Internacional Cacaxtla a sus treinta años de investigación*, pp. 530-543. Centro Regional INAH-Tlaxcala, Tlaxcala.

Cook de Leonard, Carmen
1955 Una maqueta prehispánica. *El México Antiguo* 8:169-191.

Corona-M., Eduardo
2014 Relieves con motivos zoomorfos en Xochicalco, Morelos. *Revista Archaeobios* 8(1):17-25.

Corson, Christopher
1976 *Maya Anthropomorphic Figurines from Jaina Island, Campeche*. Studies in Mesoamerican Art, Archaeology, and Ethnology, No. 1. Ballena Press, Ramona, CA.

Covarrubias, Miguel
1946 El arte 'Olmeca' o de La Venta. *Cuadernos Americanos* 28:153-179.

1957 *Indian Art of Mexico and Central America*. Alfred A. Knopf, New York.

Cowgill, George L.
1992 Teotihuacan Glyphs and Imagery in the Light of Some Early Colonial Texts. In *Art, Ideology, and the City of Teotihuacan*, edited by J. C. Berlo, pp. 231-246. Dumbarton Oaks Research Library and Collection, Washington D.C.

1997 State and Society at Teotihuacan, Mexico. *Annual Review of Anthropology* 26:129-161.

2013 Possible Migrations and Shifting Identities in the Central Mexican Epiclassic. *Ancient Mesoamerica* 24:131-149.

Crider, Destiny
2011 Epiclassic and Early Postclassic Interaction in Central Mexico As Evidenced by Decorated Pottery. Doctoral dissertation, School of Human Evolution & Social Change, Arizona State University, Tempe.

Crider, Destiny, Deborah L. Nichols, Hector Neff and Michael D. Glascock
2007 In the Aftermath of Teotihuacan: Epiclassic Pottery Production and Distribution in the Teotihuacan Valley, Mexico. *Latin American Antiquity* 18(2):123-143.

Crown, Patricia L. and W. Jeffrey Hurst
2009 Evidence of Cacao Use in the Prehispanic American Southwest. *Proceedings of the National Academy of Sciences of the United States of America* 106(7):2110-2113.

Cuevas García, Martha
2007 *Los incensarios efigie de Palenque: diedades y rituales mayas*. Universidad Nacional Autónoma de México & Instituto Nacional de Anthroplogía e Historia, México D.F.

Cyphers, Ann
2000 Cultural Identity and Interregional Interaction during the Gobernador Phase: A Ceramic Perspective. In *The Xochicalco Mapping Project*, edited by K. Hirth, pp. 11-16. Archaeological Research at Xochicalco. vol. 2. The University of Utah Press, Salt Lake City.

Cyphers, Ann and Kenneth G. Hirth
2000 Ceramics of Western Morelos: The Cañada through Gobernador Phases at Xochicalco. In *The Xochicalco Mapping Project*, edited by K. Hirth, pp. 102-135. Archaeological Research at Xochicalco. vol. 2. The University of Utah Press, Salt Lake City.

Dakin, Karen and Søren Wichmann
2000 Cacao and Chocolate: A Uto-Aztecan Perspective. *Ancient Mesoamerica* 11(1):55-75.

Davies, Nigel
1984 Human Sacrifice in the Old World and the New: Some Similarities and Differences. In *Ritual Human Sacrifice in Mesoamerica*, edited by E. H. Boone, pp. 211-226. Dumbarton Oaks Research Library and Collection, Washington, D.C.

DeBoer, Warren R.
2005 Colors for a North American Past. *World Archaeology* 37(166-91).

Delgadillo Torres, Rosalba and Andrés Santana Sandoval
1990 Ofrendas y practicas funerarias. In *Cacaxtla: Proyecto de Investigación y Conservación*, pp. 47-51. Gobierno del Estado de Tlaxcala and Instituto Nacional de Antropología e Historia Centro Regional Tlaxcala, México, D.F.

1995 Los enterramientos humanos de Cacaxtla, Tlaxcala. In *Antología de Cacaxtla*, edited by L. Mirambell Silva, pp. 56-77. vol. II. Instituto Nacional de Antropología e Historia and Gobierno del Estado de Tlaxcala, México, D.F.

DeMarrais, Elizabeth Castillo, Luis Jaime Castillo and Timothy Earle
1996 Ideology, Materialization, and Power Strategies. *Current Anthropology* 37(1):15-31.

Di Peso, Charles C.
1974 *Casas Grandes: A Fallen Trading Center of the Gran Chichimeca (vols. 1-3)*. Amerind Foundation Publication No. 9. The Amerind Foundation, Inc. and Northland Press, Dragoon and Flagstaff, AZ.

Di Peso, Charles C., John B. Rinaldo and Gloria J. Fenner
1974 *Casas Grandes: A Fallen Trading Center of the Gran Chichimeca (vols. 4-8)*. Amerind Foundation Publication No. 9. Northland Press, Flagstaff, AZ.

Díaz, Bernal
1963 *The Conquest of New Spain*. Translated by J. M. Cohen. Penguin Books Ltd, London.

Diehl, Richard A.
1983 *Tula: The Toltec Capital of Ancient Mexico*. Thames and Hudson Ltd, London.

1989 A Shadow of Its Former Self: Teotihuacan during the Coyotlatelco Period. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 9-18. Dumbarton Oaks Research Library and Collection, Washington D.C.

Diehl, Richard A. and Janet Catherine Berlo
1989 Introduction. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 1-6. Dumbarton Oaks Research Library and Collection, Washington D.C.

Digby, Adrian
1972 *Maya Jades*. Revised ed. British Museum Publications Ltd, London.

Domínguez, Elba and Javier Urcid
2013 El ascenso al poder del señor 4 Perro: las pinturas murales del Conjunto 2-sub en Cacaxtla. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 547-607. vol. III. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México, D.F.

Douglas, Peter M.J., Mark Pagani, Marcello A. Canuto, Mark Brenner, David A. Hodell, Timothy I. Eglinton and Jason H. Curtis
2015 Drought, agricultural adaptation, and sociopolitical collapse in the Maya Lowlands. *Proceedings of the National Academy of Sciences of the United States of America* 112(18):5607-5612.

Dumond, D. E. and Florencia Muller
1972 Classic to Postclassic in Highland Central Mexico. *Science* 175(4027):1208-1215.

Duncan, William N., Christina Elson, Charles S. Spencer and Elsa M. Redmond
2009 A Human Maxilla Trophy from Cerro Tilcajete, Oaxaca, Mexico. *Mexicon* 31(5):108-113.

Durán, Fray Diego
1971 *Book of the Gods and Rites and the Ancient Calendar*. Translated by F. Horcasitas and D. Heyden. University of Oklahoma Press, Norman.

Ekholm, Gordon F.
1949 Palmate Stones and Thin Stone Heads: Suggestions on Their Possible Use. *American Antiquity* 15(1):1-9.

Elson, Christina M. and Michael E. Smith
2001 Archaeological Deposits from the Aztec New Fire Ceremony. *Ancient Mesoamerica* (12):157-174.

Escalante Gonzalbo, Pablo
2002 Allegory in the Cacaxtla Murals. *Voices of Mexico* 61:73-77.

Escalona Ramos, Alberto
1952-53 Xochicalco en la cronología de la América Medía. *Revista Mexicana de Estudios Antropológicos* XIII(2 & 3):351-369.

Estrada Reynoso, José Luis
2009 Visage de la Mort. In *Teotihuacan: Cité des Dieux*, edited by F. Solís. Somogy éditions d'art, Paris.

Fash, William L.
1991 *Scribes, Warriors and Kings: The City of Copán and the Ancient Maya*. Thames and Hudson, London and New York.

Fash, William L. and Barbara W. Fash
2000 Teotihuacan and the Maya: A Classic Heritage. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by D. Carrasco, L. Jones and S. Sessions, pp. 433-463. University Press of Colorado, Boulder.

Fash, William L., Barbara W. Fash and Karla Davis-Salazar
2004 Setting the Stage: Origins of the Hieroglyphic Stairway Plaza on the Great Period Ending. In *Understanding Early Classic Copán*, edited by E. E. Bell, M. A. Canuto and R. Sharer, pp. 65-83. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

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 Kindgoms Represented Themselves in Architecture and Imagery*, edited by W. L. Fash and L. López Luján, pp. 201-229. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Fenton, William N.
1949 Collecting Materials for a Political History of the Six Nations. *Proceedings of the American Philosophical Society* 93(3):233-238.

Fernández-Villanueva Medina, Eugenia
2004 Evidencias de una tradición mesoamericana en Zaragoza. In *Tradiciones arqueológicas*, edited by E. Cárdenas García, pp. 291-305. Colegio de Michoacán/Gobierno del Estado de Michoacán, Zamora.

Fogelin, Lars
2007 The Archaeology of Religious Ritual. *Annual Review of Anthropology* 36:55-71.

Folan, W. J.
1969 Sacalum, Yucatan: A Pre-Hispanic and Contemporary Source of Attapulgite. *American Antiquity* 34(2):182-183.

Foncerrada de Molina, Marta
1980 Mural Painting in Cacaxtla and Teotihuacán Cosmopolitism. In *Third Palenque Round Table, 1978, Part 2*, edited by M. G. Robertson, pp. 183-198. University of Texas Press, Austin.

1982 Signos glíficos relacionados con Tláloc en los murals de la batalla en Cacaxtla. *Anales de Instituto de Investigaciones Estéticas* XIII Tomo 1(50):23-33.

1993 *Cacaxtla: La iconografía de los Olmeca-Xicalanca*. Universidad Nacional Autónoma de México, México, D.F.

Ford, Richard I.
1994 Corn Is Our Mother. In *Corn and Culture in the Prehistoric New World*, edited by S. Johannessen and C. A. Hastorf, pp. 513-525. Westview Press, Boulder.

Fournier, Patricia and Victor H. Bolaños
2007 The Epiclassic in the Tula Region beyond Tula Chico. In *Twin Tollans: Chichén Itzá, Tula, and the Epiclassic to Early Postclassic Mesoamerican World*, edited by J. K. Kowalski and C. Kristan-Graham, pp. 481-529. Dumbarton Oaks Research Library and Collection, Washington D.C.

Fournier, Patricia and Rocio Vargas Sanders
2002 En busca de los "dueños del silencio": cosmovisión y ADN antiguo de las poblaciones otomíes epiclásicas de la región de Tula. *Estudios de Cultura Otopame* 3:37-75.

Fox, John Gerard
1996 Playing with Power: Ballcourts and Political Ritual in Southern Mesoamerica [and Comments and Reply]. *Current Anthropology* 37(3):483-509.

Franco, Jose Luis
1968 *Objetos de Hueso de la Epoca Precolombina*. Cuadernos del Museo Nacional de Antropología. INAH, México, D.F.

Freidel, David A., Linda Schele and Joy Parker
1993 *Maya Cosmos: Three Thousand Years on the Shaman's Path*. William Morrow & Company, Inc., New York.

Galindo Trejo, Jesús
2013 Una visión celeste de Cacaxtla: Estudios arqueoastronómicos de su pintura mural. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 111-145. vol. II. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México D.F.

Gallegos Gómora, Miriam Judith
2011 Las jóvenes oradoras: participación de la mujer prehispánica en la religión Maya. In *Las Mujeres Mayas en la Antigüedad*, edited by M. J. Rodríguez-Shadow and M. López Hernández, pp. 41-70. Centro de Estudios de Antropología de la Mujer, México D.F.

Gann, Thomas
1900 Mounds in Northern Honduras. In *Nineteenth Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution 1897-98 by J.W. Powell, Director, in Two Parts -- Part 2*, pp. 655-692. Government Printing Office, Washington D.C.

García Cook, Angel
2003 Cantona: The City. In *El Urbanismo en Mesoamérica/Urbanism in Mesoamerica*, edited by W. T. Sanders, A. G. Mastache and R. H. Cobean, pp. 311-343. vol. 1. Instituto Nacional de Antropología e Historia and Pennsylvania State University, México, D.F. and University Park, PA.

2004 Cantona: ubicación temporal y generalidades. *Arqueología* 33:91-108.

García Cook, Angel and Beatriz Leonor Merino Carrión
1998 Cantona: Urbe Prehispanica en el Altiplano Central de Mexico. *Latin American Antiquity* 9(3):191-216.

García Cook, Angel and Leonor Merino Carrión
1996 Investigación arqueológica en Cantona, Puebla. *Arqueología* 15:55-78.

García-Des Lauriers, Claudia
2005 La iconografía y simbolismo de la escultura de Cerro Bernal, Chiapas. In *Iconografía y escritura teotihuacana en costa sur de Guatemala y Chiapas*, edited by O. Chinchilla Mazariegos and B. Arroyo, pp. 1-16. Utz´ib Series Reports Vol.1, No.5. Asociación Tikal, Guatemala City.

Garza Gómez, Isabel
1996 Evidencias de sacrificio humano en Xochicalco, Morelos. In *Memoria III Congreso Interno del Centro INAH Morelos*, pp. 59-64. Centro INAH Morelos, Cuernavaca.

Garza Tarazona, Silvia
2002 El Nombre de Xochicalco antes del siglo XVI: ¿Totolhualco? *Arqueología Mexicana* Vol. X(55):56-57.

2010 Esculturas de cerámica de Xochicalco. *Arqueología Mexicana* 17(103):18-23.

Garza Tarazona, Silvia and Claudia Alvarado León
2007 ¿Parentesco cultural entre Cacaxtla y Xochicalco? In *Memorias del Primer Coloquio Internacional Cacaxtla a sus treinta años de investigación*, pp. 252-265. Centro Regional INAH-Tlaxcala, Tlaxcala.

Garza Tarazona, Silvia and Norberto González Crespo
1995 Xochicalco. In *La acrópolis de Xochicalco*, pp. 89-143. Instituto de Cultura de Morelos, México, D.F.

Garza Tarazona, Silvia and Pablo Mayer Guala
2005 Arquitectura: Materiales y sistemas constructivos en Xochicalco. In *IV Coloquio Pedro Bosch Gimpera: El occidente y centro de México*, edited by E. Vargas Pacheco, pp. 349-383. Instituto de Investigaciones Antropológicas, UNAM, México D.F.

Gillespie, Susan D.
1989 *The Aztec Kings: The Construction of Rulership in Mexica History*. University of Arizona Press, Tucson.

1991 Ballgames and Boundaries. In *The Mesoamerican Ballgame*, edited by V. L. Scarborough and D. R. Wilcox, pp. 317-345. University of Arizona Press, Tucson.

2000 Maya "Nested Houses": The Ritual Construction of Place. In *Beyond Kinship: Social and Material Reproduction in House Societies*, edited by R. A. Joyce and S. D. Gillespie, pp. 135-160. University of Pennsylvania Press, Philadelphia.

Gillespie, Susan D. and Rosemary A. Joyce
1998 Deity Relationships in Mesoamerican Cosmologies: The case of the Maya God L. *Ancient Mesoamerica* 9:279-296.

Golden, Charles and Andrew K. Scherer
2013 Territory, Trust, Growth, and Collapse in Classic Period Maya Kingdoms. *Current Anthropology* 54(4):397-435.

Golden, Charles, Andrew Scherer, A. René Muñoz and Zachary Hruby
2012 Polities, Boundaries, and Trade in the Classic Period Usumacinta River Basin. *Mexicon* 34(1):11-19.

Goñi Motilla, Guillermo
2011 *Cacaxtla Temporada 2010: Informe general*. INAH Tlaxcala, Tlaxcala.

González López, Ángel
2015 The Epiclassic from the Mexica Perspective: Stone Sculpture Evidence. Paper presented at the Society for American Archaeology 80th Annual Meeting, San Francisco, California, April 16.

Graulich, Michel
1997 *Myths of Ancient Mexico*. Translated by B. R. Ortiz de Montellano and T. Ortiz de Montellano. University of Oklahoma Press, Norman and London.

1998 El rey solar en Mesoamérica. *Arqueología Mexicana* 32:14-21.

2001 El simbolismo de Templo Mayor de México y sus relaciones con Cacaxtla y Teotihuacan. *Anales de Instituto de Investigaciones Estéticas* XXIV(79):5-28.

Grove, David C.
1984 *Chalcatzingo: Excavations on the Olmec Frontier*. Thames and Hundon, Ltd, London.

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, Vol. 4*, edited by B. McLeod and J. Kerr, pp. 686-715. Kerr Associates, New York.

Gutiérrez, Gerardo and Jamie E. Forde
2015 The Cohimbre Stela: Death, Sacrifice, and Political Ideology on the Guerrero Coast. *Mexicon* XXXVII:19-26.

Gutiérrez Mendoza, Gerardo
2007 *Catálogo de sitios arqueológicos de las regiones Mixteca-Tlapaneca-Nahua y Costa Chica de Guerrero* 1. Centro de Investigaciones y Estudios Superiores en Antropología Social, México D.F.

Gutiérrez Solana, Nelly
1983 *Objetos ceremoniales en piedra de la cultura mexica*. Universidad Nacional Autónoma de México, México, D.F.

Hamann, Byron
2002 The Social Life of Pre-sunrise Things: Indigenous Mesoamerican Archaeology. *Current Anthropology* 43(3):351-382.

Harrison-Buck, Eleanor, Patricia A. McAnany and Rebecca Storey
2007 Empowered and Disempowered During the Late to Terminal Classic Transition: Maya Burial and Termination Rituals in the Sibun Valley, Belize In *New Perspectives on Human Sacrifice and Ritual Body Treatments in Ancient Maya Society*, edited by V. Tiesler and A. Cucina, pp. 74-101. Springer, New York.

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):1-37.

2000 The Flower World in Prehistoric Southwest Material Culture. In *The Archaeology of Regional Interaction: Religion, Warfare, and Exchange Across the American Southwest and Beyond*, edited by M. Hegmon, pp. 411-428. University Press of Colorado, Boulder.

Headrick, Annabeth
2007 *The Teotihuacan Trinity: The Sociopolitical Structure of an Ancient Mesoamerican City*. University of Texas Press, Austin.

Healan, Dan M.
1989 The Central Group and West Group. In *Tula of the Toltecs: Excavations and Survey*, edited by D. M. Healan, pp. 97-148. University of Iowa Press, Iowa City.

1997 Pre-Hispanic Quarrying in the Ucareo-Zinapecuaro Obsidian Source Area. *Ancient Mesoamerica* 8(01):77-100.

Hellmuth, Nicholas M.
1975 The Escuintla Hoards: Teotihuacan Art in Guatemala. *F.L.A.A.R. Progress Reports* 1(2).

1978 Teotihuacan Art in the Escuintla, Guatemala Region. In *Middle Classic Mesoamerica: A.D. 400-700*, edited by E. Pasztory, pp. 71-85. Columbia University Press, New York.

Helmke, Christophe and Jesper Nielsen
2011 *The Writing System of Cacaxtla, Tlaxcala, Mexico*. Boundary End Archaeology Research Center, Barnardsville, NC.

2013a La escritura jeroglifica de Cacaxtla, Tlaxcala, México. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 383-425. vol. II. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México D.F.

2013b La iconografía de Cacaxtla bajo la influencia maya: Identidad, procedencia y datación. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 363-381. vol. II. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México D.F.

Helmke, Christophe, Jesper Nielsen, Cecilia Leni and Amisadaí Navarrete Campos
2013 The Carved Monuments of Cerro Xoconoch, Teotihuacan Valley, Mexico. *Mexicon* 35:90-95.

Helmke, Christophe and Dorie Reents-Budet
2008 A Terminal Classic Molded-Carved Ceramic Type of the Eastern Maya Lowlands. *Research Reports in Belizean Archaeology* 5:37-49.

Henderson, Lucia
2007 *Producer of the Living, Eater of the Dead: Revealing Tlaltecuhtli, the Two-Faced Aztec Earth*. BAR International Series. Archaeopress, Oxford, England.

2014 Donde Hay Humo, Hay Fuego: la Búsqueda de la Imaginería de Volcanes en las Tierras Altas y la Costa Sur. Paper presented at the XXVIII Simposio de Investigaciones Arqueológicas de Guatemala.

Hernández, Concepción
1994 Secuencia cronológica preliminar de "La Peña" en Valle de Bravo, Estado de México, México. In *Matices y alcanes: Investigaciones recientes en Salvamento Arqueológico*, pp. 57-71. Instituto Nacional de Antropología e Historia, Subdirección de Salvamento Arqueológico, México, D.F.

Hernández Rivero, José
2009 Descripción de las maquetas prehispánicas monolíticas de Tejupilco, Estado de México. Análisis de su contexto geográfico y representación ritual. *Cuadernos de Trabajo, Centro INAH Estado de México* 5(10):14-28.

Hers, Marie-Areti
1989 *Los toltecas en tierras chichimecas*. Cuadernos de Investigaciones Estéticas No. 35. Instituto de Investigaciones Estéticas, Universidad Nacional Autónoma de México, México, D.F.

Heyden, Doris
1972 Xiuhtecuhtli: investidor de soberanos. *Boletín INAH* II(3):3-10.

Hill, Jane H.
1992 The Flower World of Old Uto-Aztecan. *Journal of Anthropological Research* (48):117-144.

Hirth, Kenneth G.
1984 Xochicalco: Urban Growth and State Formation in Central Mexico. *Science* 225(4662):579-586.

1989 Militarism and Social Organization at Xochicalco, Morelos. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 69-81. Dumbarton Oaks Research Library and Collection, Washington D.C.

1995 Urbanism, Militarism, and Architectural Design: An Analysis of Epiclassic Sociopolitical Structure at Xochicalco. *Ancient Mesoamerica* 6:237-250.

2000 *Ancient Urbanism at Xochicalco: The Evolution and Organization of a Pre-Hispanic Society*. Archaeological Research at Xochicalco 1. University of Utah Press, Salt Lake City.

2005 Obsidian Craft Production at Cacaxtla-Xochitécatl, Tlaxcala. FAMSI Reports, http://www.famsi.org/reports/03062/.

2013 The Merchant's World: Commercial Diversity and the Economics of Interregional Exchange in Highland Mesoamerica. In *Merchants, Markets, and Exchange in the Pre-Columbian World*, edited by K. G. Hirth and J. Pillsbury, pp. 85-112. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Hirth, Kenneth G., Gregory Bondar, Michael D. Glascock, A.J. Vonarx and Thierry Daubenspeck
2006 Supply-Side Economics: An Analysis of Obsidian Procurement and the Organization of Workshop Provisioning. In *Obsidian Craft Production in*

Ancient Central Mexico: Archaeological Research at Xochicalco, edited by K. G. Hirth, pp. 115-136. The University of Utah Press, Salt Lake City.

Houston, Stephen, John Baines and Jerrold Cooper
2003 Last Writing: Script Obsolescence in Egypt, Mesopotamia, and Mesoamerica. *Society for Comparative Studies in Society and History* 45(3):430-479.

Houston, Stephen, Claudia Brittenham, Cassandra Mesick, Alexandre Tokovinine and Christina Warinner
2009 *Veiled Brightness: A History of Ancient Maya Color*. University of Texas Press, Austin.

Houston, Stephen D.
1983 A Reading for the Flint Shield Glyph. In *Contributions to Maya Hieroglyphic Decipherment 1*, edited by S. D. Houston, pp. 13-25. Human Relations Area Files, Inc., New Haven.

1996 Symbolic Sweatbaths of the Maya: Architectural Meaning in the Cross Group at Palenque, Mexico. *Latin American Antiquity* 7(2):132-151.

1998 Classic Maya Depictions of the Built Environment. In *Function and Meaning in Classic Maya Architecture*, edited by S. D. Houston, pp. 333-372. Dumbarton Oaks Research Library and Collection, Washington, D.C.

2004 Writing in Early Mesoamerica. In *The First Writing: Script Invention as History and Process*, edited by S. D. Houston, pp. 274-309. Cambridge University Press, Cambridge.

2010 Living Waters and Wonderous Beasts. In *Fiery Pool: The Maya and the Mythic Sea*, edited by D. Finamore and S. D. Houston, pp. 66-79. Yale University Press, New Haven.

Houston, Stephen D. and Peter Mathews
1985 *The Dynastic Sequence of Dos Pilas, Guatemala*. Monograph 1. Pre-Columbian Art Research Institute, San Francisco.

Houston, Stephen D., David Stuart and Karl A. Taube
2006 *The Memory of Bones: Body, Being, and Experience among the Classic Maya*. University of Texas Press, Austin.

Houston, Stephen and Karl Taube
2000 An Archaeology of the Senses: Perception and Cultural Expression in Ancient Mesoamerica. *Cambridge Archaeological Journal* 10(02):261-294.

2008 Meaning in Early Maya Imagery. In *Iconography Without Texts*, edited by P. Taylor, pp. 127-144. The Warburg Institute and Nino Aragno Editore, London and Turin.

2011 The Fiery Pool: Water and Sea among the Classic Maya. In *Ecology, Power, and Religion in Maya Landscapes: Proceedings of the 11th European Maya Conference, Malmö, December 2006*, edited by C. Isendahl and B. L. Persson, pp. 11-30. Verlag Anton Saurwein, Markt Schwaben, Germany.

Inomata, Takeshi
2001 The Power and Ideology of Artistic Creation: Elite Craft Specialists in Classic Maya Society. *Current Anthropology* 42(3):321-349.

Inomata, Takeshi and Daniela Triadan
2005 El espectáculo de la muerte en las Tierras Bajas mayas. In *Antropología de la eternidad: La muerte en la cultura maya*, edited by A. Ciudad Ruíz, M. Humberto Ruz and M. J. Iglesias Ponce de Leon, pp. 195-207. UNAM and Sociedad Española de Estudios Mayas, México, D.F. and Madrid.

Jiménez Betts, Peter F. and J. Andrew Darling
2000 Archaeology of Southern Zacatecas: The Malpaso, Juchipila, and Valparaiso-Bolaños Valleys. In *Greater Mesoamerica: The Archaeology of West and Northwest Mexico*, edited by M. S. Foster and S. Gorenstein, pp. 155-180. The University of Utah Press, Salt Lake City.

Jiménez Moreno, Wigberto
1959 Síntesis de la historia pretolteca de Mesoamérica. In *El Esplendor del México Antiguo*, edited by C. Cook de Leonard, pp. 1009-1108. vol. 2. Centro de Investigaciones Antropológicas de México, México, D.F.

1966 Mesoamerica before the Toltecs. In *Ancient Oaxaca: Discoveries in Mexican Archeology and History*, edited by J. Paddock, pp. 1-82. Stanford University Press, Stanford.

Jiménez Ovando, Roberto
1995 Entierros humanos prehispánicos de la zona arqueológica de Cacaxtla, Tlaxcala. In *Antología de Cacaxtla*, edited by L. Mirambell Silva, pp. 122-137. vol. II. Instituto Nacional de Antropología e Historia and Gobierno del Estado de Tlaxcala, México, D.F.

Jordan, Keith
2008 Stone Trees Transplanted?: Central Mexican Stelae of the Epiclassic and Early Postclassic and the Question of Maya "Influence". Doctoral dissertation, Art History, The City University of New York, New York.

Juárez Cossio, Daniel
1999 Exploraciones en San Juan el Alto, municipio de Pénjamo, Guanajuato. *Arqueología* 22:41-68.

Kampen, Michael E.
1972 *The Sculptures of El Tajín, Veracruz, Mexico*. University of Florida Press, Gainesville.

1978 Classic Veracruz Grotesques and Sacrificial Iconography. *Man* 13(1):116-126.

Kelley, Ellen Abbot
1978 The Temple of the Skulls at Alta Vista, Chalchihuites. In *Across the Chichimec Sea: Papers in Honor of J. Charles Kelley*, edited by C. L. Riley and B. C. Hedrick, pp. 102-126. Southern Illinois University Press, Carbondale.

Kelley, J. Charles
1980 Alta Vista, Chalchihuites: "Port of Entry" on the Northwestern Frontier of Mesoamerica. In *Rutas de Intercambio en Mesoamerica y el Norte de Mexico: XVI Reunion de Mesa Redonda, Saltillo, Coahuila, del 9 al 14 de septiembre de 1979*, pp. 53-64. Sociedad Mexicana de Antropología, Saltillo.

Knauth, Lothar
1961 El juego de pelota y el rito de la decapitación. *Estudios de Cultura Maya* 1:183-198.

Koontz, Rex
1994 The Iconography of El Tajín, Veracruz, Mexico. Doctoral dissertation, Art History, University of Texas at Austin, Austin.

2009a Investiture and Violence at El Tajín and Cacaxtla. In *Blood and Beauty: Organized Violence in the Art and Archaeology of Mesoamerica and Central America*, edited by H. Orr and R. Koontz, pp. 73-95. Cotsen Institute of Archaeology Press, Los Angeles.

2009b Social Identity and Cosmology at El Tajín. In *The Art of Urbanism: How Mesoamerican Kingdoms Represented Themselves in Architecture and Imagery*,

edited by W. L. Fash and L. López Luján, pp. 260-289. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Kowalski, Jeff Karl

1991 The Ballcourt at Uxmal, Yucatan, Mexico: A Summary of Its Chronological Placement and Mythic Significance. In *The Mesoamerican Ballgame: Papers presented at the International Colloquium 'The Mesoamerican Ballgame 2000 BC - AD 2000' Leiden, June 30th - July 3rd, 1988*, edited by G. W. van Bussel, P. L. F. van Dongen and T. J. J. Leyenaar, pp. 81-90. Rijksmuseum voor Volkenkunde, Leiden.

Krickeberg, Walter

1966 El juego de pelota mesoamericano y su simbolismo religioso. In *Traducciones mesoamericanistas I*, pp. 191-313. Sociedad Mexicana de Antropología, México D.F.

Kristan-Graham, Cynthia

1989 Art, Architecture, and the Mesoamerican Body Politic at Tula and Chichen Itza. Doctoral dissertation, Art History, UCLA, Los Angeles.

1999 The Architecture of the Tula Body Politic. In *Mesoamerican Architecture As a Cultural Symbol*, edited by J. K. Kowalski, pp. 162-175. Oxford University Press Inc., London.

2011 Structuring Identity at Tula: The Design and Symbolism of Colonnaded Halls and Sunken Spaces. In *Twin Tollans: Chichén Itzá, Tula, and the Epiclassic to Early Postclassic Mesoamerican World*, edited by J. K. Kowalski and C. Kristan-Graham, pp. 429-467. 2nd ed. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Kubler, George

1961 Chichén-Itzá y Tula. *Estudios de Cultura Maya* 1:47-80.

1967 *The Iconography of the Art of Teotihuacán*. Dumbarton Oaks Trustees for Harvard University, Washington, D.C.

1980 Eclecticism at Cacaxtla. In *Third Palenque Round Table, 1978, Part 2*, edited by M. G. Robertson, pp. 163-172. University of Texas Press, Austin.

1982 Serpent and Atlantean Columns: Symbols of Maya-Toltec Polity. *The Journal of the Society of Architectural Historians* 41(2):93-115.

1985a On the Colonial Extinction of the Motifs of Precolumbian Art. In *Studies in Ancient American and European Art: The Collected Essays of George Kubler*, edited by T. F. Reese, pp. 66-74. Yale University Press, New Haven.

1985b Renascence and Disjunction in the Art of Mesoamerican Antiquity. In *Studies in Ancient American and European Art: The Collected Essays of George Kubler*, edited by T. F. Reese, pp. 351-359. Yale University Press, New Haven.

Ladrón de Guevara, Sara

2012 La Mixtequilla: Hombres de piedra, mujeres de barro. In *Culturas del Golfo*, edited by S. Ladrón de Guevara, pp. 75-101. Editoriale Jaca Book SpA, Milan.

Lagunas R., Zaid and Ma. Patricia Zacarías B.

1973 Los enterramientos en Teotenango. In *Teotenango, segunda informe de exploraciones arqueológicas*, edited by R. Piña Chán, pp. 31-50. Dirección de Turismo del Gobierno del Estado de México, México, D.F.

Langley, James C.

1986 *The Symbolic Notation of Teotihuacan: Elements of Writing in a Mesoamerican Culture of the Classic Period*. B.A.R. International Series No. 313. British Archaeological Reports, Oxford.

1991 The Forms and Usage of Notation at Teotihuacan. *Ancient Mesoamerica* 2(02):285-298.

1992 Teotihuacan Sign Clusters: Emblem or Articulation? In *Art, Ideology, and the City of Teotihuacan*, edited by J. C. Berlo, pp. 247-280. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1993 Symbols, Signs, and Writing Systems. In *Teotihuacan: Art from the City of the Gods*, edited by K. Berrin and E. Pasztory, pp. 128-139. Thames and Hudson, London and New York.

2002 Teotihuacan notation in a Mesoamerican context: likeness, concept and metaphor. In *Ideología y política a través de materials, imágenes y símbolos: Memoria de la Primera Mesa Redonda de Teotihuacan*, edited by M. E. Ruiz Gallut, pp. 275-301. CONACULTA/INAH, México, D.F.

Lee, Thomas A. Jr.

1978 The Origin and Development of Plumbate Pottery. *Revista Mexicana de Estudios Antropológicos* 24(3):287-300.

León Velasco, Zula Elena
2009 Ligature des Années. In *Teotihuacan: Cité des Dieux*, edited by F. Solís, pp. 326. Somogy Éditions d'Art, Paris.

Lesure, Richard G.
2011 Paso de la Amada as a Ceremonial Center. In *Early Mesoamerican Social Transformations: Archaic and Formative Lifeways in the Soconusco Region*, edited by R. G. Lesure, pp. 119-145. University of California Press, Berkeley and Los Angeles.

Leyenaar, Ted J. J. and Lee A. Parsons
1988 *Ulama: The Ballgame of the Mayas and Aztecs, 2000 BC - AD 2000, from Human Sacrifice to Sport*. Spruyt, Van Mantgem & De Does bv, Leiden.

Liebsohn, Dana
2009 *Script and Glyph: Pre-Hispanic History, Colonial Bookmaking, and the Historia Tolteca-Chichimeca*. Dumbarton Oaks, Washington D.C.

Limón Boyce, Morrison
2008 De amistad y de nostalgia: El sitio arqueológico de San Miguel Ixtapan y su "maqueta". In *Tributo a Jaime Litvak King*, edited by P. Schmidt Schoenberg, E. Ortiz Díaz and J. Santos Ramírez, pp. 249-266. Universidad Nacional Autónoma de México, México, D.F.

Lind, Michael D.
1994 Cholula and Mixteca Polychromes: Two Mixteca-Puebla Regional Sub-Styles. In *Mixteca-Puebla: Discoveries and Research in Mesoamerican Art and Archaeology*, edited by H. B. Nicholson and E. Quiñones Keber, pp. 79-100. Labyrinthos, Culver City, CA.

2012 The Kingdom and Pilgrimmage Center of Cholula. In *Children of the Plumed Serpent: The Legacy of Quetzalcoatl in Ancient Mexico*, edited by V. M. Fields, J. M. D. Pohl and V. I. Lyall, pp. 89-93. Scala Publishers Limited and Los Angeles County Museum of Art, London and Los Angeles.

Linné, Sigvald
2003 [1934] *Archaeological Researches at Teotihuacan, Mexico*. University of Alabama Press, Tuscaloosa and London.

Litvak King, Jaime
1970 Xochicalco en la caída del clásico: una hipótesis. *Anales de Antropología* 7:131-144.

1972 Las relaciones externas de Xochicalco: Una evaluación de su possible significado. *Anales de Antropología* 9:49-77.

1982 [1965] Una maqueta de piedra de Xochicalco. In *Las representaciones de la arquitectura en la arqueología de América (Mesoamérica)*, edited by D. Schavelson, pp. 319-321. vol. I. UNAM, México, D.F.

Lombardo de Ruiz, Sonia

1986 La pintura. In *Cacaxtla: El lugar donde muere la lluvia en la tierra*, edited by S. Lombardo de Ruiz, D. López de Molina and D. Molina Feal, pp. 209-500. Secretaria de Educación Pública/INAH, México, D.F.

Looper, Matthew G.

2003 *Lightning Warrior: Maya Art and Kingship at Quirigua*. University of Texas Press, Austin.

López Austin, Alfredo and Leonardo López Luján

2000 The Myth and Reality of Zuyuá: The Feathered Serpent and Mesoamerican Transformations from the Classic to the Postclassic. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by D. Carrasco, L. Jones and S. Sessions, pp. 21-84. University of Colorado Press, Boulder.

2001 El *chacmool* mexica. *Caravelle* 76-77:59-84.

López de Molina, Diana and Daniel Molina Feal

1986 Arqueología. In *Cacaxtla: El lugar donde muere la lluvia en la tierra*, edited by S. Lombardo de Ruiz, D. López de Molina and D. Molina Feal, pp. 11-209. Secretaria de Educación Pública/INAH, México, D.F.

López Luján, Leonardo

1995 Xochicalco: El lugar de la casa de las flores. In *Xochicalco y Tula*, pp. 15-141. Jaca Book SpA, Milan.

Lothrop, Samuel K.

1923 Stone Yokes from Mexico and Central America. *Man* 23(97-98).

Luna Erreguerena, Pilar

2000 El Nevado de Toluca: Sitio de veneración prehispánica. *Arqueología Mexicana* 8(43):47-49.

Lyall, Victoria I.
2012 Bright, Shiny, and New: Plumbate Pottery and the Emergence of Early Postclassic Exchange Networks. In *Children of the Plumed Serpent: The Legacy of Quetzalcoatl in Ancient Mexico*, edited by J. M. D. Pohl, V. M. Fields and V. I. Lyall, pp. 59-77. Scala Publishers Limited and Los Angeles County Museum of Art, London and Los Angeles.

Lyman, R. Lee and Michael J. O'Brien
2001 The Direct Historical Approach, Analogical Reasoning, and Theory in Americanist Archaeology. *Journal of Archaeological Method and Theory* 8(4):303-342.

Macri, Martha J. and Matthew G. Looper
2003 Nahua in Ancient Mesoamerica: Evidence from Maya Inscriptions. *Ancient Mesoamerica* 14(02):285-297.

Magaloni Kerpel, Diana Isabel, Claudia Brittenham, Rodorico Giorgi Baglioni and Lorenza Bernini
2013 Cacaxtla, la elocuencia de los colores. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 147-197. vol. II. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México D.F.

Manzanilla, Linda
2002 Houses and Ancestors, Altars and Relics: Mortuary Patterns at Teotihuacan, Central Mexico. In *The Space and Place of Death*, edited by H. Silverman and D. B. Smalls, pp. 55-65. Archaeological Papers of the American Anthropological Association Number 11.

2003 The Abandonment of Teotihuacan. In *The Archaeology of Settlement Abandonment in Middle America*, edited by T. Inomata and R. W. Webb, pp. 91-102. The University of Utah Press, Salt Lake City.

Manzanilla, Linda, Claudia López and AnnCorinne Freter
1996 Dating Results from Excavations in Quarry Tunnels behind the Pyramid of the Sun at Teotihuacan. *Ancient Mesoamerica* 7:245-266.

Manzanilla López, Rubén
2008 *La región arqueológica de la Costa Grande de Guerrero: Su definición a través de la organización social y territorialidad prehispánicas*. Instituto Nacional de Antropología e Historia, México, D.F.

Marcus, Joyce
1976 The Origins of Mesoamerican Writing. *Annual Review of Anthropology* 5:35-67.

1989 From Centralized Systems to City-States: Possible Models for the Epiclassic. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 201-208. Dumbarton Oaks Research Library and Collection, Washington D.C.

1992 *Mesoamerican Writing Systems: Propaganda, Myth, and History in Four Ancient Civilizations*. Princeton University Press, Princeton.

Márquez, Pietro
1804 *Due antichi monumenti di architettura Messicana illustrati da D. Pietro Marquez*. Presso il Salomoni, Rome.

Martin, Simon
2006 Cacao in Ancient Maya Religion: First Fruit from the Maize Tree ad Other Tales from the Underworld. In *Chocolate in Mesoamerica: A Cultural History of Cacao*, edited by C. L. McNeil, pp. 155-183. University Press of Florida, Gainesville.

2013 El Templo Rojo y los mayas: Arte, mitología y contactos culturales en las pinturas de Cacaxtla. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 529-545. vol. III. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México D.F.

Martin, Simon and Nikolai Grube
2000 *Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya*. Thames & Hudson Ltd, London.

Martínez Lara, Mario Raúl
2013 Interpretación Iconográfica de los Once Señores de Cacaxtla. Tesis licenciado, Facultad de Antropología, Universidad Veracruzana, Xalapa, Veracruz.

Martínez López, Cira, Robert Markens, Marcus Winter and Michael D. Lind
2000 *Cerámica de la fase Xoo (epoca Monte Albán IIIB-IV) del Valle de Oaxaca*. Contribución No. 8 del Proyecto Especial Monte Albán 1992-1994. Centro INAH Oaxaca, Oaxaca.

Massey, Virginia K. and D. Gentry Steele
1997 A Maya Skull Pit from the Terminal Classic Period, Colha, Belize. In *Bones of the Maya: Studies of Ancient Skeletons*, edited by S. L. Whittington and D. M. Reed, pp. 62-77. Smithsonian Institution Press, Washington, D.C.

Mastache, Alba Guadalupe and Robert H. Cobean
1989 The Coyotlatelco Culture and the Origins of the Toltec State. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 49-67. Dumbarton Oaks, Washington D.C.

Mastache, Alba Guadalupe, Robert H. Cobean and Dan M. Healan
2002 *Ancient Tollan: Tula and the Toltec Heartland*. University Press of Colorado, Boulder.

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 Urbanisim: How Mesoamerican Kingdoms Represented Themselves in Architecture and Imagery*, edited by W. L. Fash and L. López Luján, pp. 290-328. Dumbarton Oaks Research Library and Collection, Washington D.C.

Mathiowetz, Michael D.
2011 The Diurnal Path of the Sun: Ideology and Interregional Interaction in Ancient Northwest Mesoamerica and the American Southwest. Doctoral dissertation, Anthropology, University of California, Riverside.

Matos Moctezuma, Eduardo
1987 Symbolism of the Templo Mayor. In *The Aztec Templo Mayor*, edited by E. H. Boone, pp. 185-209. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Matthews, Jennifer P. and James F. Garber
2004 Models of Cosmic Order: Physical expression of sacred space among the ancient Maya. *Ancient Mesoamerica* 15:49-59.

Mayer, Karl Herbert
2010 Maya hieroglyphic inscriptions from Nohpat, Yucatan, Mexico. *Mexicon* XXXII(1):9-13.

McAnany, Patricia A.
2010 *Ancestral Maya Economies in Archaeological Perspective*. Cambridge University Press, New York.

2013 Artisans, *Ikatz*, and Statecraft: Provisioning Classic Maya Royal Courts. In *Merchants, Markets, and Exchange in the Pre-Columbian World*, edited by K. G. Hirth and J. Pillsbury, pp. 229-253. Dumbarton Oaks Research Library and Collection, Washington, D.C.

McCafferty, Geoffrey G.
1996a The Ceramics and Chronology of Cholula, Mexico. *Ancient Mesoamerica* 7(2):299-323.

1996b Reinterpreting the Great Pyramid of Cholula, Mexico. *Ancient Mesoamerica* 7(01):1-17.

2007 So What Else Is New? A Cholula-Centric Perspective on Lowland/Highland Interaction during the Classic/Postclassic Transition. In *Twin Tollans: Chichén Itzá, Tula, and the Epiclassic to Early Postclassic Mesoamerican World*, edited by J. K. Kowalski and C. Kristan-Graham, pp. 449-479. Dumbarton Oaks Research Library and Collection, Washington, D.C.

McCafferty, Sharisse D. and Geoffrey G. McCafferty
1994 The Conquered Women of Cacaxtla. *Ancient Mesoamerica* 5(02):159-172.

McVicker, Donald
1985 The "Mayanized" Mexicans. *American Antiquity* 50(1):82-101.

McVicker, Donald and Joel W. Palka
2001 A Maya Carved Shell Plaque from Tula, Hidalgo, Mexico. *Ancient Mesoamerica* 12(02):175-197.

Medina-Elizalde, Martín and Eelco J. Rohling
2012 Collapse of Classic Maya Civilization Related to Modest Reduction in Precipitation. *Science* 335(6071):956-959.

Mendoza, Ruben G.
2007 The Divine Gourd Tree: Tzompantli Skull Racks, Decapitation Rituals, and Human Trophies in Ancient Mesoamerica. In *The Taking and Displaying of Human Body Parts as Trophies by Amerindians*, edited by R. J. Chacon and D. H. Dye, pp. 400-443. Springer, New York.

Milbrath, Susan
1999 *Star Gods of the Maya: Astronomy in Art, Folklore, and Calendars*. University of Texas Press, Austin.

Miller, Mary
1998 A Design for Meaning in Maya Architecture. In *Function and Meaning in Classic Maya Architecture*, edited by S. D. Houston, pp. 187-222. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Miller, Mary and Claudia Brittenham
2013 *The Spectacle of the Late Maya Court: Reflections on the Murals of Bonampak*. University of Texas Press, Austin.

Miller, Mary Ellen
1985 A Re-examination of the Mesoamerican Chacmool. *The Art Bulletin* 67(1):7-17.

Miller, Mary Ellen and Stephen D. Houston
1987 The Classic Maya Ballgame and Its Architectural Setting: A Study of Relations between Text and Image. *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 and Thames & Hudson, San Francisco and New York.

Miller, Mary and Marco Samayoa
1998 Where Maize May Grow: Jade, Chacmools, 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*. Thames and Hudson Limited, London.

Miller, Virginia E.
1989 Star Warriors at Chichen Itza. In *Word and Image in Maya Culture: Explorations in Language, Writing, and Representation*, edited by W. F. Hanks and D. S. Rice, pp. 287-305. University of Utah Press, Salt Lake City.

1999 The Skull Rack in Mesoamerica. In *Mesoamerican Architecture As a Cultural Symbol*, edited by J. K. Kowalski, pp. 340-360. Oxford University Press Inc., London.

2007 Skeletons, Skulls, and Bones in the Art of Chichén Itzá. In *New Perspectives on Human Sacrifice and Ritual Body Treatments in Ancient Maya Society*, edited by V. Tiesler and A. Cucina, pp. 165-189. Springer, New York.

Millon, Clara
1973 Painting, Writing, and Polity in Teotihuacan, Mexico. *American Antiquity* 38(3):294-314.

1988a Coyotes and Deer. In *Feathered Serpents and Flowering Trees: Reconstructing the Murals of Teotihuacan*, edited by K. Berrin, pp. 219-221. The Fine Arts Museum of San Francisco, San Francisco.

1988b A Reexamination of the Teotihuacan Tassel Headdress Insignia. In *Feathered Serpents and Flowering Trees: Reconstructing the Murals of Teotihuacan*, edited by K. Berrin, pp. 114-134. The Fine Arts Museums of San Francisco, San Francisco.

Millon, René
1988 Where *Do* They All Come From? The Provenance of the Wagner Murals from Teotihuacan. In *Feathered Serpents and Flowering Trees: Reconstructing the Murals of Teotihuacan*, edited by K. Berrin, pp. 78-113. The Fine Arts Museum of San Francisco, San Francisco.

Millon, René and Bruce Drewitt
1961 Earlier Structures within the Pyramid of the Sun at Teotihuacan. *American Antiquity* 26(3):371-380.

Mills, Barbara J.
2004 The Establishment and Defeat of Hierarchy: Inalienable Possessions and the History of Collective Prestige Structures in the Pueblo Southwest. *American Anthropologist* 106(2):238-251.

Mock, Shirley Boteler
1998 The Defaced and the Forgotten: Decapitation and Flaying/Mutilation as a Termination Event at Colha, Belize. In *The Sowing and the Dawning: Termination, Dedication, and Transformation in the Archaeological and Ethnographic Record of Mesoamerica*, edited by S. B. Mock, pp. 112-123. University of New Mexico Press, Albuquerque.

Moguel Cos, María Antonieta and Sergio Arturo Sánchez Correa
1989 El Cobre Guanajuato: Una maqueta tallada en la roca. *Arqueología* 2:95-99.

Moholy-Nagy, Hattula and John M. Ladd
1992 Objects of Stone, Shell, and Bone. In *Artifacts from the Cenote of Sacrifice, Chichen Itza, Yucatan*, edited by C. C. Coggins, pp. 99-152. Memoirs

of the Peabody Museum of Archaeology & Ethnology, Harvard University. Vol. 10, No. 3. Harvard University Press, Cambridge, MA.

Molina, Augusto and Jeff Karl Kowalski
1999 Public Buildings and Civic Spaces at Xochicalco, Morelos. In *Mesoamerican Architecture As a Cultural Symbol*, edited by J. K. Kowalski, pp. 140-161. Oxford University Press, Inc., London.

Montero García, Ismael Arturo
2009 Arqueoastronomía. In *Las Aguas Celestes: Nevado de Toluca*, edited by P. Luna, A. Montero and R. Junco, pp. 69-79. Instituto Nacional de Antropología e Historia, Arqueología Subacuática, México D.F.

Morales Gómez, David A.
1999 Rescate de las esculturas de los Once Señores de Cacaxtla, en San Miguel del Milagro, Tlaxcala. *Arqueología* 22:157-163.

Morante López, Rubén
2005 *La pintura mural de Las Higueras, Veracruz*. Universidad Veracruzana, Xalapa.

Morehart, Christopher T., Abigail Meza Peñaloza, Carlos Serrano Sánchez, Emily McClung de Tapia and Emilio Ibarra Morales
2012 Human Sacrifice during the Epiclassic Period in the Northern Basin of Mexico. *Latin American Antiquity* 23(4):426-448.

Moreno Juárez, Luz María
2006 El Templo de Venus, un recinto de fertilidad humana y de la tierra. *La Pintura Mural Prehispánica en México Boletín Informativo* 24-25:27-41.

Moser, Christopher L.
1973 *Human Decapitation in Ancient Mesoamerica*. Studies in Pre-Columbian Art and Archaeology, No. 11. Dumbarton Oaks, Washington, D.C.

1977 *Ñuiñe Writing and Iconography of the Mixteca Baja*. Publications in Anthropology No. 19. Vanderbilt University, Nashville.

Mountjoy, Joseph
1987 The Collapse of the Classic at Cholula as Seen from Cerro Zapotecas. *Notas Mesoamericanas* 10(119-151).

Muñoz Camargo, Diego
1972 [1892] *Historia de Tlaxcala*. Edmundo Aviña Levy, México, D.F.

Nagao, Debra
1989 Public Proclamation in the Art of Cacaxtla and Xochicalco. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 83-104. Dumbarton Oaks Research Library and Collection, Washington D.C.

2014 An Interconnected World? Evidence of Interaction in the Arts of Epiclassic Cacaxtla and Xochicalco, Mexico. Doctoral dissertation, Art History, Columbia University, New York.

Nájera Coronado, Martha Ilia
2013 Un acercamiento al simbolismo del simio entre los grupos mayas. In *Fauna fantástica de Mesoamérica y los Andes*, edited by L. Millones and A. López Austin, pp. 211-252. Universidad Nacional Autónoma de México and Instituto de Investigaciones Antropológicas, México D.F.

Nash, June
1978 The Aztecs and the Ideology of Male Dominance. *Signs* 4:349-362.

Navarrete, Carlos
1979 *Las Esculturas de Chaculá, Huehuetenango, Guatemala*. Universidad Nacional Autónoma de México, México, D.F.

Navarrete, Carlos, Thomas A. Lee Jr. 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, México, D.F.

Neff, Hector and Ronald L. Bishop
1988 Plumbate Origins and Development. *American Antiquity* 53(3):505-522.

Nelson, Ben A.
2004 Elite Residences in West Mexico. In *Palaces of the Ancient New World*, edited by S. T. Evans and J. Pillsbury, pp. 59-81. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Nelson, Ben A. and Destiny Crider
2005 Posibles pasajes migratorios en el Norte de México y el Suroeste de Los Estados Unidos durante el Epiclásico y el Postclásico. In *Reacomodos demográficos del Clásico al Posclásico en el centro de México*, edited by L. Manzanilla, pp. 75-102. Instituto de Investigaciones Antropológicas, Universidad Nacional Autónoma de México, México, D.F.

Nichols, Deborah L.
2013 Merchants and Merchandise: The Archaeology of Aztec Commerce at Otumba, Mexico. In *Merchants, Markets, and Exchange in the Pre-Columbian World*, edited by K. G. Hirth and J. Pillsbury, pp. 49-83. Dumbarton Oaks Research Library and Collection, Washington, D.C.

2015 Teotihuacan. *Journal of Archaeological Research*:1-74.

Nicholson, H.B. and Rainer Berger
1968 *Two Aztec Wood Idols: Iconographic and Chronologic Analysis*. Studies in Pre-Columbian Art and Archaeology Number Five. Dumbarton Oaks and Trustees for Harvard University, Washington, D.C.

Nicholson, Henry B.
1960 The Mixteca-Puebla Concept in Mesoamerican Archaeology: A Re-examination. In *Men and Cultures: Selected Papers from the Fifth International Congress of Anthropological and Enthnological Sciences, Philadelphia, September 1–9, 1956*, edited by A. F. C. Wallace, pp. 612-617. University of Pennsylvania Press, Philadelphia.

1966 The Significance of the "Looped Cord" Year Symbol in Pre-Hispanic Mexico: An Hypothesis. *Estudios de Cultura Náhuatl* No. 6:135-148.

1971a Major Sculpture in Pre-Hispanic Central Mexico. In *Handbook of Middle American Indians*, edited by R. Wauchope, pp. 92-134. vol. 10, part 1. University of Texas Press, Austin.

1971b Religion in Pre-Hispanic Central Mexico. In *Handbook of Middle American Indians*, edited by R. Wauchope, pp. 395-446. vol. 10. University of Texas Press, Austin.

2001 *Topiltzin Quetzalcoatl: The Once and Future Lord of the Toltecs*. The University Press of Colorado, Boulder.

Nielsen, Jesper and Christophe Helmke
2008 Spearthrower Owl Hill: A Toponym at Atetelco, Teotihuacan. *Latin American Antiquity* 19(4):459-474.

Noguera, Eduardo
1945 Exploraciones en Xochicalco. *Cuadernos Americanos* 19:119-157.

1947 Cerámica de Xochicalco. *México Antiguo* 6:273-300.

1972 Antigüedad y significado de los relieves de Acalpixcan D. F. *Anales de Antropología* IX:77-94.

O'Mack, Scott
1991 Yacateuctli and Ehecatl-Quetzalcoatl: Earth-Divers in Aztec Central Mexico. *Ethnohistory* 38:1-33.

Olivier, Guilhem
2007 Sacred Bundles, Arrows, and New Fire: Foundation and Power in the *Mapa de Cuauhtinchan No. 2.* In *Cave, City, and Eagle's Nest: An Interpretive Journey through the Mapa de Cuauhtinchan No. 2*, edited by D. Carrasco and S. Sessions, pp. 281-313. Translated by S. Sessions. University of New Mexico Press, Albuquerque.

Orr, Heather
2003 *Stone Balls and Masked Men: Ballgame as Combat Ritual, Dainzú, Oaxaca*. Ancient America 5. Center for Ancient American Studies, Barnardsville, NC.

Ortíz, 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: Social Complexity in the Formative Period*, edited by J. E. Clark and M. Pye, pp. 74-93. National Gallery of Art, Washington, D.C.

Ovando-Shelly, Efraín and Linda Manzanilla
1997 An Archaeological Interpretation of Geotechnical Soundings under the Metropolitan Cathedral, Mexico City. *Archaeometry* 39(1):221-235.

Paddock, John
1965 Current Research: Western Mesoamerica. *American Antiquity* 31(1):133-136.

1966 Oaxaca in Ancient Mesoamerica. In *Ancient Oaxaca: Discoveries in Mexican Archeology and History*, edited by J. Paddock, pp. 83-242. Stanford University Press, Stanford.

1983 The Rise of the Ñuiñe Centers in the Mixteca Baja. In *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations*, edited by K. V. Flannery and J. Marcus, pp. 208-211. Academic Press, Inc., New York.

Panofsky, Erwin
1960 *Renaissance and Renascences in Western Art*. Almqvist & Wiksell, Stockholm.

Parsons, Elsie Clews
1936 *Mitla: Town of Souls*. The University of Chicago Press, Chicago and London.

Parsons, Lee A.
1969 *Bilbao, Guatemala: An Archaeological Study of the Pacific Coast Cotzumalhuapa Region*. Publications in Anthropology 12 vol. 2. Milwaukee Public Museum, Milwaukee.

1986 *The Origins of Maya Art: Monumental Stone Sculpture of Kaminaljuyu, Guatemala, and the Southern Pacific Coast*. Studies in Pre-Columbian Art and Archaeology Number Twenty-Eight. Dumbarton Oaks Research Library and Collection, Washington D.C.

Pascual Soto, Arturo
2009 *El Tajín: Arte y Poder*. UNAM and INAH, México D.F.

Pasztory, Esther
1974 *The Iconography of the Teotihuacan Tlaloc*. Studies in Pre-Columbian Art and Archaeology Number Fifteen. Dumbarton Oaks, Washington, D.C.

1993a Plaque of the Goddess with the Reptile-Eye Glyph. In *Teotihuacan: Art from the City of the Gods*, edited by K. Berrin and E. Pasztory, pp. 274. Thames and Hudson, New York.

1993b Teotihuacan Unmasked: A View through Art. In *Teotihuacan: Art from the City of the Gods*, edited by K. Berrin and E. Pasztory, pp. 44-63. Thames and Hudson, New York.

Pauketat, Timothy R. and Susan M. Alt
2004 The Making and Meaning of a Mississippian Axe-Head Cache. *Antiquity* 78(302):779-797.

Pauketat, Timothy R. and Thomas E. Emerson
1991 The Ideology of Authority and the Power of the Pot. *American Anthropologist* 93(4):919-941.

Paulinyi, Zoltán

1991 Una imagen del dios de la lluvia en Cacaxtla y la iconografía teotihuacana. *Boletín del Museo Chileno de Arte Precolombino* 5:53-66.

1997 El rayo del dios de la lluvia: Imágenes de serpientes ígneas en el arte teotihuacano. *Mexicon* 19(2):27-33.

2014 The Butterfly Bird God and His Myth at Teotihuacan. *Ancient Mesoamerica* 25:29-48.

Perales Vela, Rebeca

1990 La posible extensión de braseros "tipo palencano" hacia la costa de Tabasco. *Tierra y Agua: La Antropología en Tabasco* 1:15-21.

Pérez Negrete, Miguel

2004 El Cerro de la Estrella: unidades políticas de la cuenca de México, periféricas a Teotihuacan y la transición al Epiclásico. *Arqueología* 34:38-61.

Pickering, Robert B.

1985 Human Osteological Remains from Alta Vista, Zacatecas: An Analysis of the Isolated Bone. In *The Archaeology of West and Northwest Mesoamerica*, edited by M. S. Foster and P. C. Weigand, pp. 289-325. Westview Press, Inc., Boulder, CO.

Piña Chán, Román

1972 *Teotenango, primer informe de exploraciones arqueológicas*. Dirección de Turismo del Gobierno del Estado de México, México, D.F.

1973 *Teotenango, segunda informe de exploraciones arqueológicas*. Dirección de Turismo del Gobierno del Estado de México, México, D.F.

1975 Acerca de los Matlatzincas y su cultura. In *Teotenango: El antiguo lugar de la muralla*, edited by R. Piña Chán, pp. 541-568. vol. 2. Dirección de Turismo, Gobierno del Estado de México, México, D.F.

1977 *Quetzalcoatl: Serpiente emplumada*. Fondo de Cultura Económica, México, D.F.

1998 *Cacaxtla: Fuentes históricas y pinturas*. Fondo de Cultura Económica, México, D.F.

2000 Teotenango. *Arqueología Mexicana* 8(43):38-43.

Piña Chán, Román and Patricia Castillo Peña
2001 *Tajín: La ciudad del dios Huracán*. 2nd ed. Fondo de Cultura Económica, México, D.F.

Pohl, John M. D.
1998 Themes of Drunkenness, Violence, and Factionalism in Tlaxcalan Altar Painting. *Res: Anthropology and Aesthetics* (33):184-207.

2001 Chichimecatlalli: Strategies for Cultural and Commercial Exchange between Mexico and the American Southwest, 1100-1521. In *The Road to Aztlan: Art from a Mythic Homeland*, edited by V. M. Fields and V. Zamudio-Taylor, pp. 86-101. Los Angeles County Museum of Art, Los Angeles.

2003a Ritual and Iconographic Variability in Mixteca-Puebla Polychrome Pottery. In *The Postclassic Mesoamerican World*, edited by M. E. Smith and F. F. Berdan, pp. 201-206. The University of Utah Press, Salt Lake City.

2003b Ritual Ideology and Commerce in the Southern Mexican Highlands. In *The Postclassic Mesoamerican World*, edited by M. E. Smith and F. Berdan, pp. 172-177. The University of Utah Press, Salt Lake City.

2005 The Griffin Fragment: A Mixtec Drinking Vessel Portraying the Place Sign for "Hill of the Turkey". *Record of the Art Museum, Princeton University* 64:81-90.

2007 *Sorcerers of the Fifth Heaven: Nahua Art and Ritual of Southern Mexico*. PLAS Cuadernos Number 9, Princeton.

Pohl, John M. D., Virginia M. Fields and Victoria I. Lyall
2012 Children of the Plumed Serpent: The Legacy of Quetzalcoatl in Ancient Mexico. In *Children of the Plumed Serpent: The Legacy of Quetzalcoatl in Ancient Mexico*, edited by V. M. Fields, J. M. D. Pohl and V. I. Lyall, pp. 15-49. Scala Publishers Limited and Los Angeles County Museum of Art, London and Los Angeles.

Pool, Christopher A.
2007 *Olmec Archaeology and Early Mesoamerica*. Cambridge University Press, New York.

Proskouriakoff, Tatiana
1950 *A Study of Classic Maya Sculpture*. Publication 593. Carnegie Institution of Washington, Washington, D.C.

1954 *Varieties of Classic Veracruz Sculpture*. Carnegie Institution Contributions to American Anthropoogy and History no. 58. Carnegie Institution, Washington, D.C.

1971 Classic Art of Central Veracruz. In *Handbook of Middle American Indians*, edited by R. Wauchope, pp. 558-572. vol. 11. University of Texas Press, Austin.

1974 *Jades from the Cenote of Sacrifice, Chichén Itzá, Yucatan*. Memoirs of the Peabody Museum of Archaeology and Ethnology, Vol. 10, No. 1. Harvard University, Cambridge, MA.

Pye, Mary E. and Gerardo Gutiérrez

2007 The Pacific Coast Trade Route of Mesoamerica: Iconographic Connections between Guatemala and Guerrero. In *Archaeology, Art, and Ethnogenesis in Mesoamerican Prehistory: Papers in Honor of Gareth W. Lowe*, edited by L. S. Lowe and M. E. Pye, pp. 229-246. Papers of the New World Archaeological Foundation No. 68. Brigham Young University, Provo, UT.

Quenon, Michel and Genevieve Le Fort

1997 Rebirth and Resurrection in Maize God Iconography. In *The Maya Vase Book, Vol. 5*, edited by J. Kerr, pp. 884-902. Kerr Associates, New York.

Quilter, Jeffrey

1996 Continuity and Disjunction in Pre-Columbian Art and Culture. *Res: Anthropology and Aesthetics* 29/30:303-317.

Quirarte, Jacinto

1983 Outside Influence at Cacaxtla. In *Highland-Lowland Interaction in Mesoamerica: Interdisciplinary Approaches*, edited by A. G. Miller, pp. 201-221. Dumbarton Oaks, Washington D.C.

Ramírez Acevedo, Gilberto

2003 Reporte de la exploración del sitio arqueológico en la cima del Cerro de la Estrella (Huixachtecatl): El templo pirámide del "Fuego nuevo". *Arqueología* 30:155-167.

Rattray, Evelyn Childs

1996 A Regional Perspective on the Epiclassic Period in Central Mexico. In *Arqueología Mesoamericana: Homenaje a William T. Sanders*, edited by A. G. Mastache, J. R. Parsons, R. S. Santley and M. C. Serra Puche, pp. 213-231. Instituto Nacional de Antropología y Historia, México, D.F.

Reents-Budet, Dorie
1994 *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Duke University Press, Durham, NC.

Reinhold, Manfred
1981 *Exploraciones arqueológicas en Valle de Bravo*. Biblioteca Enciclopédica del Estado de México, México D.F.

Reyes V., Virgilio
1975 Arquitectura y poblamiento. In *Teotenango: El antiguo lugar de la muralla*, edited by R. Piña Chán, pp. 117-188. vol. 1. Dirección de Turismo, Gobierno del Estado de México, México, D.F.

Reyna Robles, Rosa María
1992 La Cultura Mezcala: su caracterización perliminar a través del análisis cerámico en la Organera-Xochipala, Guerrero. *Arqueología* 7:9-27.

2006 *La cultura arqueológica Mezcala*. Colección Científica, Serie Arqueología no. 487. Instituto Nacional de Antropología e Historia, México, D.F.

2013 Inspección arqueológica en la Alta Sierra Madre del Sur de Guerrero. *Arqueología* 46:137-152.

Ringle, William M., Tomás Gallareta Negrón and George J. Bey III
1998 The Return of Quetzalcoatl. *Ancient Mesoamerica* 9(02):183-232.

Rivas Castro, Francisco and Claudia Michetti Micó
2007 Iconografía y simbolismo de los once señores de Cacaxtla, Tlax. In *Memorias del Primer Coloquio Internacional Cacaxtla a sus treinta años de investigación*, pp. 441-465. Centro Regional INAH-Tlaxcala, Tlaxcala.

Rivera Guzmán, Ángel Iván
2015 Hablando sobre los Ancestros: Una Mandíbula Humana con Grabados de Estilo Ñuiñe. *Contributions in New World Archaeology* 7:141-158.

Robertson, Donald
1985 The Cacaxtla Murals. In *4th Palenque Round Table, 1980*, edited by E. P. Benson and M. G. Robertson, pp. 291-302. Pre-Columbian Art Research Institute, San Francisco.

Robicsek, Francis
1991 Three Decorated Skulls Found in the Maya Area. *Mexicon* 13(4):65-69.

Robicsek, Francis and Donald M. Hales
1981 *The Maya Book of the Dead: The Ceramic Codex*. University of Virginia Art Museum, Charlottesville.

1984 Maya Heart Sacrifice: Cultural Perspective and Surgical Technique. In *Ritual Human Sacrifice in Mesoamerica*, edited by E. H. Boone, pp. 49-90. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Rodríguez Cano, Laura, Ángel Iván Rivera Guzmán and Júpiter Martínez Ramírez
1996 Algunas reconsideraciones sobre la escritura ñuiñe. *Arqueología* 15:79-89.

Rodríguez García, Norma
2009 La riqueza arqueológica del sitio San Miguel Ixtapan, Tejupilco. *Expresión Antropológica* 36:6-17.

Rojas, Gabriel de
1927 Descripción de Cholula. *Revista Mexicana de Estudios Históricos* 1(6):158-170.

Romano P., Arturo
1975 Dolicocraneos prehispánicos de Teotenango, Mex. In *Teotenango: El antiguo lugar de la muralla*, edited by R. Piña Chán, pp. 417-463. vol. 2. Dirección de Turismo, Gobierno del Estado de México, México, D.F.

Romero Quiroz, Javier
1963 *Teotenanco y Matlatzinco (Calixtlahuaca)*. Ediciones del Gobierno del Estado de México, Toluca.

Rose, Diana C.
2007 The Mother of Corn: An Iconographical Analysis of Female Corn Deities in Mesoamerica and the American Southwest. MA thesis, Art History, University of California, Riverside.

Rosenswig, Robert M.
2003 Earliest Mesoamerican Human-duck Imagery from Cuauhtémoc, Chiapas, Mexico. *Antiquity* 77: http://antiquity.ac.uk/ProjGall/rosenswig/.

Ruiz Gallut, María Elena
2014 Tláloc en las márgenes de Mesoamérica: los ejemplos de Cihuatán y Las Marías en El Salvador. *Revista Digital Universitaria* 15(1):http://www.revista.unam.mx/vol.15/num11/art05.

Sáenz, César A.
1962 *Xochicalco Temporada 1960*. Informes No. 11. Instituto Nacional de Antropología e Historia, México, D.F.

1967a *El Fuego Nuevo*. Instituto Nacional de Antropología e Historia, México, D.F.

1967b *Nuevas Exploraciones Y Hallazgos En Xochicalco 1965-1966*. Informes No. 13. Instituto Nacional de Antropología e Historia, México, D.F.

Sahagún, Fray Bernardino de
1950-1982 *Florentine Codex: A General History of the Things of New Spain*. Translated by A. J. O. Anderson and C. E. Dibble. The School of American Research and The University of Utah, Santa Fe.

Sánchez Santiago, Gonzalo A.
2009 *Figurillas y aerófonos de cerámica de Cerro de las Minas*. Arqueología Oaxaqueña 2. Fondo Nacional para la Cultura y las Artes and Instituto Nacional de Antropología e Historia, Oaxaca.

Sanders, William T.
1989 The Epiclassic as a Stage in Mesoamerican Prehistory: An Evaluation. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 211-218. Dumbarton Oaks Research Library and Collection, Washington D.C.

Santana Sandoval, Andrés
1990 La ceja azul o elemento "C" en las pinturas murales y su significado. In *Cacaxtla: Proyecto de Investigación y Conservación*, pp. 53-65. Gobierno del Estado de Tlaxcala/INAH, Tlaxcala.

2002 The Blue Eyebrow in the Cacaxtla Murals. *Voices of Mexico* 61:78-82.

Santana Sandoval, Andrés and Rosalba Delgadillo Torres
1995 Cacaxtla durante la transición del periodo Clásico al Posclásico. In *Antología de Cacaxtla*, edited by A. García Cook, B. L. M. Carrión and L. Marambell Silva, pp. 358-368. Instituto Nacional de Antropología e Historia, México D.F.

Santley, Robert S.
1983 Obsidian Trade and Teotihuacan Influence in Mesoamerica. In *Highland-Lowland Interaction in Mesoamerica: Interdisciplinary Approaches*,

edited by A. G. Miller, pp. 69-124. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1989 Obsidian Working, Long-Distance Exchange, and the Teotihuacan Presence on the South Gulf Coast. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 131-151. Dumbarton Oaks, Washington D.C.

Santley, Robert S., Michael J. Berman and Rani T. Alexander
1991 The Politicization of the Mesoamerican Ballgame and Its Implications for the Interpretation of the Distribution of Ballcourts in Central Mexico. In *The Mesoamerican Ballgame*, edited by V. L. Scarborough and D. R. Wilcox, pp. 3-24. The University of Arizona Press, Tucson.

Saturno, William A., Karl A. 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, NC.

Saturno, William, Heather Hurst, Franco Rossi and David Stuart
2015 To Set Before the King: Residential Mural Painting at Xultun, Guatemala. *Antiquity* 89(343):122-136.

Savkić, Sanja
2014 Composition, perception and signification of the Maya Late Preclassic images on the corners of the edifices. *Matica Srpska Journal for Fine Arts* 42:13-26.

Schaafsma, Polly
1999 Tlalocs, Kachinas, Sacred Bundles, and Related Symbolism in the Southwest and Mesoamerica. In *The Casas Grandes World*, edited by C. F. Schaafsma and C. L. Riley, pp. 164-192. The University of Utah Press, Salt Lake City.

Schaafsma, Polly and Karl A. Taube
2006 Bringing the Rain: An Ideology of Rain Making in the Pueblo Southwest and Mesoamerica. In *A Pre-Columbian World*, edited by J. Quilter and M. Miller, pp. 231-285. Dumbarton Oaks Research Library & Collection, Washington, D.C.

Schavelson, Daniel
1982 Maquetas seccionales de Teotihuacán. In *Las representaciones de la arquitectura en la arqueología de América (Mesoamérica)*, edited by D. Schavelson, pp. 309-317. vol. I. UNAM, México, D.F.

Schele, Linda
1984 Human Sacrifice Among the Classic Maya. In *Ritual Human Sacrifice in Mesoamerica*, edited by E. H. Boone, pp. 7-48. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Schele, Linda and David Freidel
1990 *A Forest of Kings: The Untold Story of the Ancient Maya*. William Morrow and Company, Inc., New York.

Schele, Linda and Mary Ellen Miller
1986 *The Blood of Kings: Dynasty and Ritual in Maya Art*. George Braziller, New York.

Schellhas, Paul
1904 Representation of Deities of the Maya Manuscripts. *Papers of the Peabody Museum of American Archaeology and Ethnology* 4 (I).

Schmidt Schoenberg, Paul
1977 Rasgos característicos del área maya en Guerrero: una posible interpretación. *Anales de Antropología* 14(1):63-73.

Scholes, France V. and Ralph L. Roys
1968 *The Maya Chontal Indians of Acalan-Tixchel: A Contribution to the History and Ethnography of the Yucatan Peninsula*. University of Oklahoma Press, Norman.

Schortman, Edward M.
1989 Interregional Interaction in Prehistory: The Need for a New Perspective. *American Antiquity* 54(1):52-65.

Schortman, Edward M. and Wendy Ashmore
2012 History, networks, and the quest for power: ancient political competition in the Lower Motagua Valley, Guatemala. *Journal of the Royal Anthropological Institute* 18:1-21.

Schortman, Edward M. and Patricia A. Urban
1987 Modeling Interregional Interaction in Prehistory. *Advances in Archaeological Method and Theory* 11:37-95.

Schortman, Edward M., Patricia A. Urban and Marne Ausec
2001 Politics with Style: Identity Formation in Prehispanic Southeastern Mesoamerica. *American Anthropologist* 103(2):312-330.

Schortman, Edward and Seiichi Nakamura
1991 A Crisis of Identity: Late Classic Competition and Interaction on the Southeast Maya Periphery. *Latin American Antiquity* 2(4):311-336.

Schwartz, George and Karl A. Taube
2010 Plaque with the Warrior Sun God riding a plumed serpent. In *Fiery Pool: The Maya and the Mythic Sea*, edited by D. Finamore and S. D. Houston, pp. 190-191. Yale University Press, New Haven.

Scott, John F.
2001 Dressed to Kill: Stone Regalia of the Mesoamerican Ballgame. In *The Sport of Life and Death: The Mesoamerican Ballgame*, edited by E. M. Whittington, pp. 50-63. Thames & Hudson, Inc., New York.

2009 Human Sacrifice in the Iconography of Veracruz Ballgame Sculptures. In *Blood and Beauty: Organized Violence in the Art and Archaeology of Mesoamerica and Central America*, edited by H. Orr and R. Koontz, pp. 99-115. Cotsen Institute of Archaeology Press, Los Angeles.

Scott, Sue
1998 A continuing connection between Teotihuacan and Monte Alban. In *Rutas de intercambio en Mesoamérica: III Coloquio Pedro Bosch-Gimpera*, edited by E. C. Rattray, pp. 185-199. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, México D.F.

Séjourné, Laurette
1976 [1956] *Burning Water: Thought and Religion in Ancient Mexico*. Shambhala Publications, Inc., Berkeley, CA.

2002 [1959] *Un palacio en la ciudad de los dioses (Teotihuacán)*. Fondo de Cultura Económica, México D.F.

Seler, Eduard
1988 [1904] *Comentarios al Códice Borgia*. 3 vols. Fondo de Cultura Económica, México, D.F.

1991-1998 *Collected Works in Mesoamerican Linguistics and Archaeology*. 6 vols. Labyrinthos, Culver City, CA.

Serra Puche, Mari Carmen
2001 The Concept of Feminine Places in Mesoamerica: The Case of Xochitécatl. In *Gender in Pre-Hispanic America*, edited by C. F. Klein and J.

Quilter, pp. 255-283. Dumbarton Oaks Research Library and Collection, Washington D.C.

Serra Puche, Mari Carmen and Jesús Carlos Lazcano Arce
2011 *Vida cotidiana Xochitecatl-Cacaxtla: Días, años, milenios*. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, México, D.F.

Shook, Edwin M. and Elayne Marquis
1996 *Secrets in Stone: Yokes, Hachas, and Palmas from Southern Mesoamerica*. American Philosophical Society, Philadelphia.

Sigal, Pete
2011 *The Flower and the Scorpion: Sexuality and Ritual in Early Nahua Culture*. Duke University Press, Durham, NC.

Smith, A. Ledyard
1961 Types of Ball Courts in the Highlands of Guatemala. In *Essays in Pre-Columbian Art and Archaeology*, edited by S. K. Lothrop, pp. 100-125. Harvard University Press, Cambridge, MA.

1972 *Excavations at Altar de Sacrificios: Architecture, Settlement, Burials, and Caches*. Papers of the Peabody Museum of Archaeology and Ethnology 62(2). Harvard University, Cambridge.

1982 Major Architecture and Caches. In *Excavations at Seibal, Department of Peten, Guatemala, No. 1*, edited by G. R. Willey. Memoirs of the Peabody Museum of Archaeology and Ethnology, no. 15. Harvard University, Cambridge, MA.

Smith, A. Ledyard and Alfred V. Kidder
1951 *Excavations at Nebaj, Guatemala*. Carnegie Institution of Washington Publication 594, Washington, D.C.

Smith, Michael E.
2007 Tula and Chichén Itzá: Are We Asking the Right Questions? In *Twin Tollans: Chichén Itzá, Tula, and the Epiclassic to Early Postclassic Mesoamerican World*, edited by J. K. Kowalski and C. Kristan-Graham, pp. 579-617. Dumbarton Oaks Research Library and Collection, Washington D.C.

Smith, Michael E. and Michael D. Lind
2005 Xoo-Phase Ceramics from Oaxaca Found at Calixtlahuaca in Central Mexico. *Ancient Mesoamerica* 16(02):169-177.

Smith, Robert E.
1958 The Place of Fine Orange Pottery in Mesoamerican Archaeology. *American Antiquity* 24(2):151-160.

Smith, Virginia and Kenneth G. Hirth
2000 A Catalog of Carved Monuments and a Guide to the Visual Characteristics of Xochicalco's Art Style. In *The Xochicalco Mapping Project*, edited by K. Hirth, pp. 17-56. Archaeological Research at Xochicalco. vol. 2. University of Utah Press, Salt Lake City.

Solar Valverde, Laura
2002 Interacción interregional en Mesoamérica. Una aproximación a la dinámica del epiclásico. Tesis licenciado, Arqueología, Escuela Nacional de Antropología e Historia, México, D.F.

Solís, Felipe (editor)
2009 *Teotihuacan: Cité des Dieux*. Somogy Éditions d'Art, Paris.

Spence, Michael W.
1992 Tlailotlacan, a Zapotec Enclave in Teotihuacan. In *Art, Ideology, and the City of Teotihuacan*, edited by J. C. Berlo, pp. 59-88. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Spence, Michael W. and Grégory Pereira
2007 The Human Skeletal Remains of the Moon Pyramid, Teotihuacan. *Ancient Mesoamerica* 18(01):147-157.

Spence, Michael W., Christine D. White, Fred J. Longstaffe and Kimberley R. Law
2004 Victims of the Victims: Human trophies worn by sacrificed soldiers from the Feathered Serpent Pyramid, Teotihuacan. *Ancient Mesoamerica* 15(01):1-15.

Spencer, Charles S. and Elsa M. Redmond
1997 *Archaeology of the Cañada de Cuicatlán, Oaxaca*. American Museum of Natural History Papers, No. 80, New York.

Šprajc, Iván
1996 *Venus, lluvia y maíz: simbolismo y astronomía en la cosmovisión mesoamericana*. Instituto Nacional de Antropología e Historia, México, D.F.

Spranz, Bodo
1973 Late Classic Figurines from Tlaxcala, Mexico, and Their Possible Relation to the Codex Borgia Group. In *Mesoamerican Writing Systems: A Conference at Dumbarton Oaks, October 30th and 31st, 1971*, edited by E. P. Benson, pp. 217-226. Dumbarton Oaks Research Library and Collections and Trustees for Harvard University, Washington, D.C.

Stahle, D.W., J. Villanueva Diaz, D.J. Burnette, J. Cerano Paredes, R.R. Heim Jr., F.K. Fye, R. Acuna Soto, M.D. Therrell and M.K. Cleaveland
2011 Major Mesoamerican droughts of the past millennium. *Geophysical Research Letters* 38(5).

Stark, Barbara L.
1998 Estilos de volutas en el periodo Clásico. In *Rutas de intercambio en Mesoamérica: III Coloquio Pedro Bosch-Gimpera*, edited by E. C. Rattray, pp. 215-238. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, México D.F.

Stark, Barbara L. and Lynette Heller
1991 Cerro de las Mesas Revisited: Survey in 1984-1985. In *Settlement Archaeology of Cerro de las Mesas, Veracruz, Mexico*, edited by B. L. Stark, pp. 1-25. Monograph 34. Institute of Archaeology, University of California, Los Angeles.

Stern, Theodore
1949 *The Rubber-Ball Game of the Americas*. Monographs of the American Ethnological Society no. 17. J.J. Augustin, New York.

Steward, Julian H.
1942 The Direct Historical Approach to Archaeology. *American Antiquity* 7(4):337-343.

Stocker, Terry and Kate Howe
2003 Reconsideración del elemento trilobulado en Mesoamérica: examen de los datos, interpretaciones sobre su continuidad y sugerencias para investigaciones futuras. *Arqueología* 30:88-116.

Stone, Andrea
1989 Disconnection, Foreign Insignia, and Political Expansion: Teotihuacan and the Warrior Stelae of Piedras Negras. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 153-172. Dumbarton Oaks Research Library and Collection, Washington D.C.

Stone, Andrea J.
2002 Spirals, Ropes, and Feathers: The Iconography of Rubber Balls in Mesoamerican Art. *Ancient Mesoamerica* 13(01):21-39.

Stone, Andrea and Marc Zender
2011 *Reading Maya Art: A Hieroglyphic Guide to Ancient Maya Painting and Sculpture*. Thames & Hudson Ltd, London.

Stuart, David
1987 *Ten Phonetic Syllables*. Research Reports on Ancient Maya Writing, No. 14. Center for Maya Research, Washington D.C.

1998a "The Fire Enters His House": Architecture and Ritual in Classic Maya Texts. In *Function and Meaning in Classic Maya Architecture*, edited by S. D. Houston, pp. 373-425. Dumbarton Oaks, Washington D.C.

1998b Testimonios sobre la guerra durante el Clásico maya. *Arqueología Mexicana* 32:6-13.

2000 The Arrival of Strangers. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by D. Carrasco, L. Jones and S. Sessions, pp. 465-513. University of Colorado Press, Boulder.

2006a Jade and Chocolate: Bundles of Wealth in Classic Maya Economics and Ritual. In *Sacred Bundles: Ritual Acts of Wrapping and Binding in Mesoamerica*, edited by J. Guernsey and F. K. Reilly, pp. 127-144. Boundary End Archaeology Research Center, Barnardsville, N.C.

2006b The Language of Chocolate: References to Cacao on Classic Maya Drinking Vessels. In *Chocolate in Mesoamerica: A Cultural History of Cacao*, edited by C. L. McNeil, pp. 184-201. University of Florida Press, Gainesville.

Stuart, David and Stephen D. Houston
1994 *Classic Maya Place Names*. Dumbarton Oaks Studies in Precolumbian Art and Archaeology no. 33. Dumbarton Oaks, Washington D.C.

Suárez Cortés, María Elena, Dan M. Healan and Robert H. Cobean
2007 Los orígenes de la dinastía real de Tula: Excavaciones recientes en Tula Chico. *Arqueología Mexicana* 15(85):48-50.

Sugiura Yamamoto, Yoko
1996 El Epiclássico y el problema del Coyotlatelco vistos desde el valle de Toluca. In *Arqueología Mesoamericana: Homenaje a William T. Sanders*, edited

by A. G. Mastache, J. R. Parsons, R. S. Santley and M. C. Serra Puche, pp. 233-255. vol. I. Instituto Nacional de Antropología e Historia, México, D.F.

Sugiyama, Saburo
2005 *Human Sacrifice, Militarism, and Rulership: Materialization of State Ideology at the Feathered Serpent Pyramid, Teotihuacan*. Cambridge University Press, Cambridge.

Sugiyama, Saburo and Leonardo López Luján
2007 Dedicatory Burial/Offering Complexes at the Moon Pyramid, Teotihuacan. *Ancient Mesoamerica* 18(01):127-146.

Swenson, Edward
2014 Dramas of the Dialectic: Sacrifice and Power in Ancient Polities. In *Violence and Civilization: Studies of Social Violence in History and Prehistory*, edited by R. Campbell, pp. 28-60. Joukowsky Institute Publication 4. Oxbow Books, Oxford, UK and Oakville, CT.

Taladoire, Eric
2001 The Architectural Background of the Pre-Hispanic Ballgame: An Evolutionary Perspective. In *The Sport of Life and Death: The Mesoamerican Ballgame*, edited by E. M. Whittington, pp. 96-115. Thames & Hudson, Inc., New York.

2003 Could We Speak of the Super Bowl at Flushing Meadows? *La Pelota mixteca*, a Third Pre-Hispanic Ballgame, and Its Possible Architectural Context. *Ancient Mesoamerica* 14:319-342.

2012 Las representaciones bi y tri-dimensionales de juegos de pelota en Mesoamérica. *Arqueología Mexicana* 20(117):18-27.

Taladoire, Eric and Benoit Colsenet
1991 "Bois Ton Sang, Beaumanoir": The Political and Conflictual Aspects of the Ballgame in the Northern Chiapas Area. In *The Mesoamerican Ballgame*, edited by V. L. Scarborough and D. R. Wilcox, pp. 161-174. The University of Arizona Press, Tucson.

Tate, Carolyn E.
1992 *Yaxchilan: The Design of a Maya Ceremonial City*. University of Texas Press, Austin.

Taube, Karl A.

1985 The Classic Maya Maize God: A Reappraisal. In *Fifth Palenque Round Table, 1983*, edited by M. G. Robertson and V. M. Fields, pp. 171-181. The Pre-Columbian Art Research Institute, San Francisco.

1986 The Teotihuacan Cave of Origin. *Res: Anthropology and Aesthetics* 12:51-82.

1988a The Ancient Yucatec New Year Festival: The Liminal Period in Maya Ritual and Cosmology. Ph.D. Dissertation, Anthropology, Yale University, New Haven.

1988b A Study of Classic Maya Scaffold Sacrifice. In *Maya Iconography*, edited by E. P. Benson and G. G. Griffin, pp. 331-351. Princeton University Press, Princeton.

1989 Ritual Humor in Classic Maya Religion. In *Word and Image in Maya Culture*, edited by W. F. Hanks and D. S. Rice, pp. 351-382. University of Utah Press, Salt Lake City.

1992a The Iconography of Mirrors at Teotihuacan. In *Art, Ideology, and the City of Teotihuacan*, edited by J. C. Berlo, pp. 169-204. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1992b *The Major Gods of Ancient Yucatan*. Dumbarton Oaks Studies in Pre-Columbian Art and Archaeology no. 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.

1994a The Birth Vase: Natal Imagery in Ancient Maya Myth and Ritual. In *The Maya Vase Book, Vol. 4: A Corpus of Rollout Photographs of Maya Vases*, edited by J. 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 H. J. Prem, pp. 212-246. Acta Mesoamericana. Verlag von Flemming, Möckmühl.

1995 The Rainmakers: The Olmec and Their Contribution to Mesoamerican Belief and Ritual. In *The Olmec World: Ritual and Rulership*, 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.

1998 The Jade Hearth: Centrality, Rulership, and the Classic Maya Temple. In *Function and Meaning in Classic Maya Architecture*, edited by S. D. Houston, pp. 427-478. Dumbarton Oaks, Washington D.C.

2000a Lightning Celts and Corn Fetishes: The Development of Maize Symbolism in Mesoamerica and the American Southwest. In *Olmec Art and Archaeology: Social Complexity in the Formative Period*, edited by J. E. Clark and M. Pye, pp. 296-337. Studies in the History of Art. National Gallery of Art, Washington D.C.

2000b 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 D. Carrasco, L. Jones and S. Sessions, pp. 269-340. University of Colorado Press, Boulder.

2000c *The Writing System of Ancient Teotihuacan*. Ancient America 1. Center for Ancient American Studies, Barnardsville, NC.

2001 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 V. M. Fields and V. Zamudio-Taylor, pp. 102-123. Los Angeles County Museum of Art, Los Angeles.

2003a Ancient and Contemporary Maya Conceptions about Field and Forest. In *Lowland Maya Area: Three Millennia at the Human-Wildland Interface*, edited by A. Gómez-Pompa, M. F. Allen, S. L. Fedick and J. J. Jimenez-Osorio, 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 A. Ciudad Ruiz, M. H. Ruz Sosa and M. J. Iglesias Ponce de Leon, pp. 405-442. Sociedad Española de Estudios Mayas y El Centro de la Cultura Maya, Madrid and Mexico, D.F.

2003c Tetitla and the Maya Presence at Teotihuacan. In *The Maya and Teotihuacan: Reinterpreting Early Classic Maya Interaction*, edited by G. E. Braswell, pp. 273-314. University of Texas Press, Austin.

2004a Aztec Religion: Creation, Sacrifice, and Renewal. In *The Aztec Empire*, edited by F. Solís, pp. 168-177. Guggenheim Museum Publications, 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 Research Library and Collection, Washington D.C.

2004d The Stairway Sculptures of Structure 10L-16: Fire and the Evocation and Resurrection of K'inich Yax K'uk' Mo'. In *Understanding Early Classic Copan*, edited by E. E. Bell, M. A. Canuto and R. J. Sharer, pp. 265-296. 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 O. Chinchilla and B. Arroyo, pp. 33-54. U tz'ib 1, no. 5. Asociación Tikal, Guatemala City.

2005b The Symbolism of Jade in Classic Maya Religion. *Ancient Mesoamerica* 16(01):23-50.

2006 Climbing Flower Mountain: Concepts of Resurrection and the Afterlife at Teotihuacan. In *Arqueología e historia del Centro de Mexico: Homenaje a Eduardo Matos Moctezuma*, edited by L. López Lujan, D. Carrasco and L. Cué, pp. 153-170. Instituto Nacional de Antropología e Historia, México D.F.

2009a La Religion à Teotihuacan. In *Teotihuacan: Cité des Dieux*, edited by F. Solís, pp. 152-159. Somogy Éditions d'Art, Paris.

2009b The Womb of the World: The *Cuauhxicalli* and Other Offering Bowls of Ancient and Contemporary Mesoamerica. In *Maya Archaeology 1*, edited by C. Golden, S. Houston and J. Skidmore, pp. 86-106. Pre-Columbia 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 G. Vail and C. Hernandez, pp. 145-191. Dumbarton Oaks, Washington D.C.

2010b Where Earth and Sky Meet: The Sea in Ancient and Contemporary Maya Cosmology. In *Fiery Pool: The Maya and the Mythic Sea*, edited by D. Finamore and S. D. Houston, pp. 202-219. Yale University Press, New Haven.

2011a 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 E. H. Boone and G. Urton, pp. 77-109. Dumbarton Oaks Research Library and Collection, Washington D.C.

2011b They of the East: Portrayals of Maya Gods and Men in the Realistic Paintings of Tetitla, Teotihuacan. Manuscript in possession of the author.

2012 The Symbolism of Turquoise in Ancient Mesoamerica. In *Turquoise in Mexico and North America: Science, Conservation, Culture and Collection*, edited by J. C. H. King, M. Carocci, C. Cartwright, C. McEwan and R. Stacy, pp. 115-132. Archetype Publications and the British Museum, London.

2013a The Ballgame, Boxing, and Ritual Bloodsport in Ancient Mesoamerica. Manuscript in possession of the author.

2013b 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 D. Ragavan, pp. 89-125. The University of Chicago, Chicago.

2015 The Huastec Sun God: Portrayals of Solar Imagery, Sacrifice, and War in Late Postclassic Huastec Iconography. In *The Huasteca: Culture, History, and Interregional Exchange*, edited by K. A. Faust and K. N. Richter, pp. 98-127. University of Oklahoma Press, Norman.

n.d. In Search of Paradise: Religion and Cultural Exchange in Early Postclassic Mesoamerica. Manuscript in possession of the author.

Taube, Karl A., William A. Saturno, David Stuart and Heather Hurst

2010 *The Murals of San Bartolo, El Petén, Guatemala Part 2: The West Wall*. Ancient America No. 10. The Boundary End Archaeology Research Center, Barnardsville, NC.

Taube, Karl and Stephen Houston

In press Masks and Iconography. In *Temple of the Night Sun: A Royal Tomb at El Diablo, Guatemala*, pp. 208-229. Precolumbia Mesoweb Press, San Francisco.

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 H. Orr and R. Koontz, pp. 161-220. Cotsen Institute of Archaeology Press, Los Angeles.

Tedlock, Dennis

1996 *Popol Vuh: The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings*. Simon & Schuster, New York.

Testard, Juliette

2014 Pouvoir et altérité. Interactions suprarégionales à l'Epiclassique (600 à 900 apr. J.-C.) dans le Mexique central (Puebla-Tlaxcala et Morelos). Doctoral dissertation, Histoire de l'art et Archéologie, Université Paris 1 Panthéon-Sorbonne, UFR 03, Paris.

Thompson, J. Eric S.

1951 The Itza of Tayasal, Peten. In *Homenaje al doctor Alfonso Caso*, edited by J. Comas, M. Maldonado-Koerdell, E. Davalos Hurtado and I. Marquina, pp. 389-400. Impr. Nuovo Mundo, México, D.F.

1956 Notes on the Use of Cacao in Middle America. In *Notes on Middle American Archaeology and Ethnology*, pp. 95-116. vol. 128. Carnegie Institution of Washington, Department of Archaeology, Washington D.C.

1970 *Maya History and Religion*. University of Oklahoma Press, Norman.

1991 [1962] *A Catalog of Maya Hieroglyphs*. University of Oklahoma Press, Norman and London.

Tiesler, Vera

2007 Funerary or Nonfunerary? New References in Identifying Ancient Maya Sacrificial and Postsacrificial Behaviors from Human Assemblages. In *New Perspectives on Human Sacrifice and Ritual Body Treatments in Ancient Maya Society*, edited by V. Tiesler and A. Cucina, pp. 14-44. Springer, New York.

Tiesler, Vera and Andrea Cucina

2006 Procedures in Human Heart Extraction and Ritual Meaning: A Taphonomic Assessment of Anthropogenic Marks in Classic Maya Skeletons. *Latin American Antiquity* 17(4):493-510.

Ting, Carmen, Marcos Martinón-Torres, Elizabeth Graham and Christophe Helmke

2015 The production and exchange of moulded-carved ceramics and the 'Maya Collapse'. *Journal of Archaeological Science* 62:15-26.

Tommasi de Magrelli, Wanda

1980 Los enterramientos de Teotenango, Mex. In *Rutas de intercambio en Mesoamerica y el norte de Mexico*, pp. 119-127. vol. II. Sociedad Mexicana de Antropología, Saltillo, Coahuila.

Torres Guzmán, Manuel, Antonio Reyes and Jaime Ortega Guevara

1975 Proyecto Zapotal, Veracruz. In *Balance y perspectiva de la antropología de Mesoamérica y del Centro de México*, pp. 323-329. vol. 1. Sociedad Mexicana de Antropología, Xalapa.

Townsend, Richard F.

1999 The Mt. Tlaloc Project. In *Aztec Ceremonial Landscapes*, edited by D. Carrasco, pp. 26-30. University Press of Colorado, Boulder.

2009 *The Aztecs*. Third ed. Thames & Hudson Ltd, London.

Tozzer, Alfred M.

1941 *Landa's Relación de las Cosas de Yucatan: A Translation*. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, volume 18. Peabody Museum, Cambridge.

1957 *Chichen Itza and Its Cenote of Sacrifice: A Comparative Study of Contemporaneous Maya and Toltec*. Memoirs of the Peabody Museum of Archaeology and Ethnology, Harvard University, Volumes XI and XII. Peabody Museum, Cambridge, MA.

Trik, Aubrey S.

1963 The Splendid Tomb of Temple 1 at Tikal, Guatemala. *Expedition* 6(1):2-18.

Trobriner, Stephen

1972 The Fertile Mountain: An Investigation of Cerro Gordo's Importance to the Town Plan and Iconography of Teotihuacan. In *Teotihuacan: XI mesa redonda*, pp. 103-115. Sociedad Mexicana de Antropología, México, D.F.

Turner, Andrew

n.d. Unmasking Tlaloc: The Iconography, Symbolism, and Ideological Development of the Teotihuacan Rain God and Other Masked Beings. Manuscript.

Umberger, Emily

1987a Antiques, Revivals, and References to the Past in Aztec Art. *Res: Anthropology and Aesthetics* (13):62-105.

1987b Events Commemorated by Date Plaques at the Templo Mayor: Further Thoughts on the Solar Metaphor. In *The Aztec Templo Mayor*, edited by E. H. Boone, pp. 411-449. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1996 Art and Imperial Strategy in Tenochtitlan. In *Aztec Imperial Strategies*, edited by F. Berdan, R. E. Blanton, E. H. Boone, M. G. Hodge, M. E. Smith and E. Umberger, pp. 85-106. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Urcid, Javier

1993 The Pacific Coast of Oaxaca and Guerrero: The Westernmost Extent of Zapotec Script. *Ancient Mesoamerica* 4(01):141-165.

2001 *Zapotec Hieroglyphic Writing*. Dumbarton Oaks, Washington D.C.

2007 A stela of uknown provenience inscribed in the Central Mexican scribal tradition. *Mexicon* 29(5):117-123.

2011a Scribal Traditions from Highland Mesoamerica (300-1000 A.D.). In *Oxford Handbook of Mesoamerican Archaeology*, edited by C. A. Pool and D. L. Nichols, pp. 855-868. Oxford University Press, New York.

2011b The Written Surface as a Cultural Code: A Comparative Perspective of Scribal Traditions from Southwestern Mesoamerica. In *Their Way of Writing: Scripts, Signs, and Pictographies in Pre-Columbian America*, edited by E. H. Boone and G. Urton, pp. 111-148. Dumbarton Oaks Research Library and Collection, Washington, D.C.

Urcid, Javier and Elba Domínguez

2013 La Casa de la Tierra, la Casa del Cielo: los murales en el Edificio A de Cacaxtla. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 609-675. vol. III. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México, D.F.

Urcid, Javier and Arthur A. Joyce

2001 Carved Monuments and Calendrical Names. *Ancient Mesoamerica* 12(02):199-216.

Uriarte Castañeda, María Teresa and Erik Velázquez García
2013 El mural de La Batalla de Cacaxtla: Nuevas aproximaciones. In *La pintura mural prehispánica en México V: Cacaxtla*, edited by M. T. Uriarte Castañeda and F. Salazar Gil, pp. 677-739. vol. III. Universidad Nacional Autónoma de México, Instituto de Investigaciones Estéticas, México, D.F.

Uruñuela, Gabriela and Patricia Plunket
2005 La transición del Clásico al Posclásico: Reflexiones sobre el Valle de Puebla-Tlaxcala. In *Reacomodos demográficos del Clásico al Posclásico en el centro de México*, edited by L. Manzanilla, pp. 303-324. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, México, D.F.

2012 Under the Volcano: The Rise of Cholula. In *Children of the Plumed Serpent: The Legacy of Quetzalcoatl in Ancient Mesoamerica*, edited by V. M. Fields, J. M. D. Pohl and V. I. Lyall, pp. 80-97. Los Angeles County Museum of Art and Scala Publishers, Los Angeles.

Vargas Pacheco, Ernesto
1975 La cerámica. In *Teotenango: El antiguo lugar de la muralla*, edited by R. Piña Chán, pp. 189-265. vol. 1. Dirección de Turismo, Gobierno del Estado de México, México, D.F.

1980 Consideraciones sobre Teotenango y Ojo de Agua, Estado de México. In *Anales de Antropología Tomo I: Arqueología y Antropología Física*, pp. 53-67. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, México, D.F.

Velázquez V., Ricardo
1975 Miscelanea de barro. In *Teotenango: El antiguo lugar de la muralla*, edited by R. Piña Chán, pp. 317-332. vol. 2. Dirección de Turismo, Gobierno del Estado de México, México, D.F.

Villa Benitez, Alexander
2006 Late Classic and Epiclassic Obsidian Procurement and Consumption in the southeastern Toluca Valley, Central Highland Mexico. Doctoral dissertation, Anthropology, The University of Texas, Austin.

Villagra Caleti, Agustin
1971 Mural Painting in Central Mexico. In *Handbook of Middle American Indians*, edited by R. Wauchope, pp. 135-156. vol. 10, part 1. University of Texas Press, Austin.

von Winning, Hasso
1948 The Teotihuacan Owl-and-Weapon Symbol and Its Association with "Serpent Head X" at Kaminaljuyu. *American Antiquity* 14(2):129-132.

1976 Late and Terminal Preclassic: The Emergence of Teotihuacán. In *Origins of Religious Art and Iconography in Preclassic Mesoamerica*, edited by H. B. Nicholson, pp. 141-156. UCLA Latin American Center Publications, Los Angeles.

1979 The Binding of the Years and the "New Fire" at Teotihuacan. *Indiana* 5(15-27).

1987 *La iconografía de Teotihuacán: los dioses y los signos*. Estudios y fuentes del arte en México. 2 vols. Universidad Nacional Autónoma de México, México.

Walling, Stanley L.
1982 A Stylistic Analysis of the Cacaxtla Murals. *Estudios de Cultura Maya* 14:205-224.

Webb, Malcolm C.
1978 The Significance of the "Epiclassic" Period in Mesoamerican Prehistory. In *Cultural Continuity in Mesoamerica*, edited by D. L. Browman, pp. 155-178. Mouton Publishers, The Hague and Paris.

Webster, David, Barbara Fash, Randolph Widmer and Scott Zeleznik
1998 The Skyband Group: Investigation of a Classic Maya Elite Residential Complex at Copán, Honduras. *Journal of Field Archaeology* 25(3):319-343.

Weigand, Phil C.
1968 The Mines and Mining Techniques of the Chalchihuites Culture. *American Antiquity* 33:45-61.

Weigand, Phil C. and Garman Harbottle
1993 The Role of Turquoise in the Ancient Mesoamerican Trade Structure. In *The American Southwest and Mesoamerica: Systems of Prehistoric Exchange*, edited by J. E. Ericson and T. G. Baugh, pp. 159-177. Plenum Press, New York and London.

Welsh, W. Bruce M.
1988 *An Analysis of Classic Lowland Maya Burials*. BAR International Series 409. British Archaeological Reports, Oxford.

Werness, Maline Diane
2003 Pabellon Molded-Carved Ceramics: A Consideration in Light of the Terminal Classic Collapse of Classic Maya Civilization. Masters thesis, Art History, University of Texas, Austin.

Whittington, E. Michael (editor)
2001 *The Sport of Life and Death: The Mesoamerican Ballgame*. Thames & Hudson, Inc., New York.

Wilkerson, S. Jeffrey K.
1984 In Search of the Mountain of Foam: Human Sacrifice in Eastern Mesoamerica. In *Ritual Human Sacrifice in Mesoamerica*, edited by E. H. Boone, pp. 101-132. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1990 El Tajín: Great Center of the Northeast. In *Mexico: Splendors of Thirty Centuries*, edited by K. Howard, pp. 155-181. The Metropolitan Museum of Art and Bullfinch Press, New York.

Winter, Marcus C.
1989 From Classic to Post-Classic in Pre-Hispanic Oaxaca. In *Mesoamerica After the Decline of Teotihuacan: AD 700-900*, edited by J. C. Berlo and R. A. Diehl, pp. 123-130. Dumbarton Oaks Research Library and Collection, Washington D.C.

2007 *Cerro de las Minas: Arqueología de la Mixteca Baja*. Arqueología Oaxaqueña Serie Popular 1. Centro INAH Oaxaca, Oaxaca.

Winter, Marcus and Javier Urcid
1990 Una Mandíbula Humana Grabada de la Sierra Mazateca, Oaxaca. *Notas Mesoamericanas* 12:39-49.

Wolf, Eric R.
1999 *Envisioning Power: Ideologies of Dominance and Crisis*. University of California Press, Berkeley and Los Angeles.

Wrem Anderson, Kasper and Christophe Helmke
2013 The Personification of Celestial Water: The Many Guises of the Storm God in the Pantheon and Cosmology of Teotihuacan. *Contributions in New World Archaeology* 5:165-196.

Wyllie, Cherra

2008 Continuity and Change in Late Classic Southern Veracruz Art, Hieroglyphs, and Religion. In *Classic Period Cultural Currents in Southern and Central Veracruz*, edited by P. J. Arnold III and C. A. Pool, pp. 225-257. Dumbarton Oaks Research Library and Collection, Washington, D.C.

2010 The Mural Paintings of El Zapotal, Veracruz, Mexico. *Ancient Mesoamerica* 21:209-227.

Yadeun, Juan

1992 *Toniná*. El Equilibrista and Turner Libros, México D.F. and Madrid.

Yoneda, Keiko

2007 Glyphs and Messages in the *Mapa de Cuauhtinchan No. 2*: Chicomoztoc, Itzpapalotl, and 13 Flint. In *Cave, City, and Eagle's Nest: An Interpretive Journey through the Mapa de Cuauhtinchan No. 2*, edited by D. Carrasco, pp. 161-203. Translated by S. Sessions. University of New Mexico Press, Albuquerque.

Young, M. Jane

1988 *Signs from the Ancestors: Zuni Cultural Symbolism and Perceptions of Rock Art*. University of New Mexico Press, Albuquerque.

Zacarías B., Ma. Patricia

1975 Los enterramientos. In *Teotenango: El antiguo lugar de la muralla*, edited by R. Piña Chán, pp. 365-409. vol. 2. Dirección de Turismo, Gobierno del Estado de México, México.

Zender, Marc

2004 Glyphs for Handspan and Strike in Classic Maya Ballgame Texts. *PARI Journal: Quarterly Publication of the Pre-Columbian Art Research Institute* 4(4):1-9.

Zender, Marc and Stanley Guenter

2003 The Names of the Lords of *Xib'alb'a* in the Maya Hieroglyphic Script. In *Eduard y Caecilie Seler: Sistematización de los estudios americanistas y sus reperusiones*, edited by R. von Hanffstengel and C. Tercero Vasconcelos, pp. 91-126. CONACULTA and INAH, México D.F.

Figures

(All illustrations and photographs by the author, unless otherwise noted)

Chapter 1 Figures

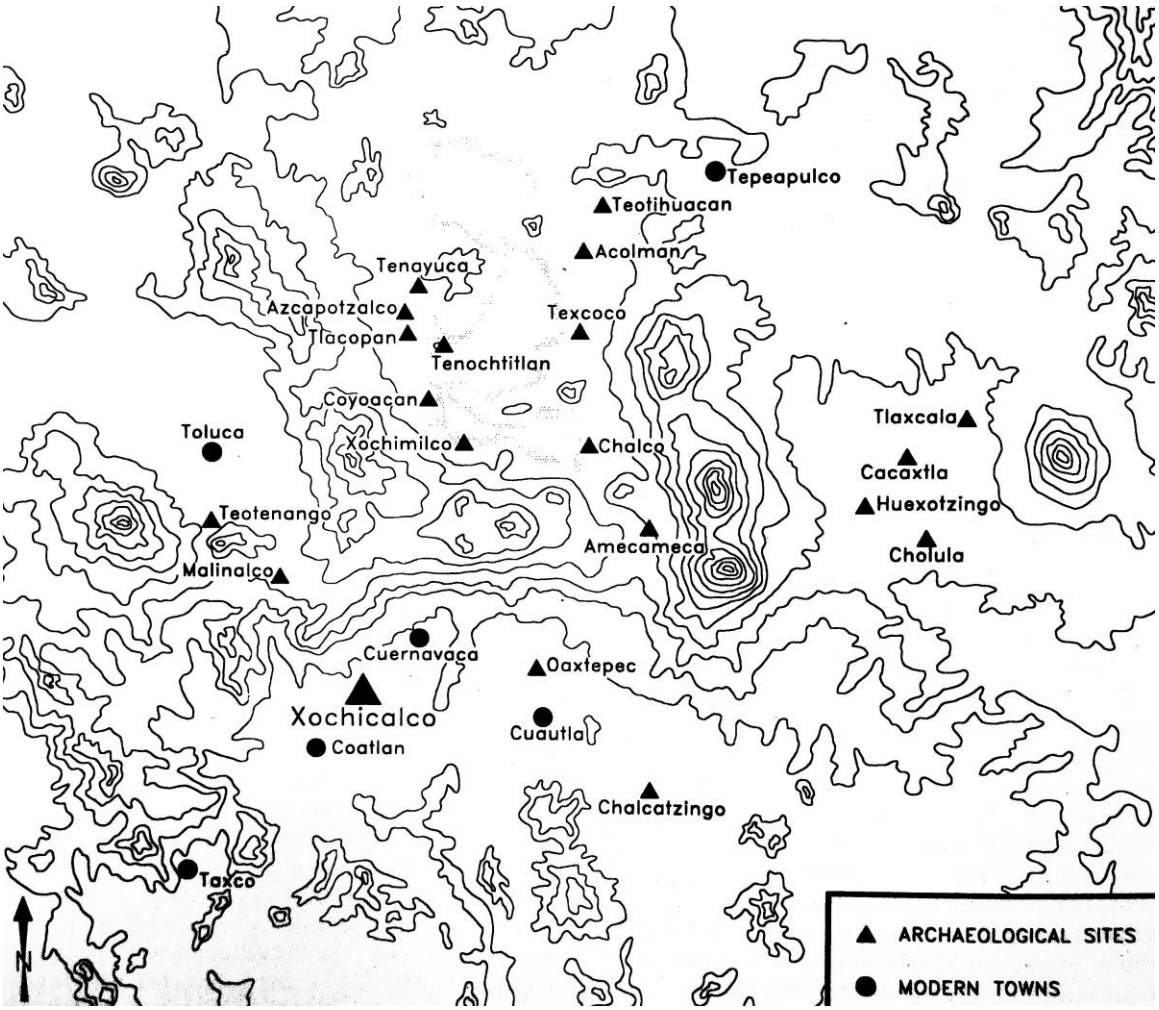


Figure 1.1. Map of Central Mexico showing important sites. From Hirth 2000:fig. 1.2.

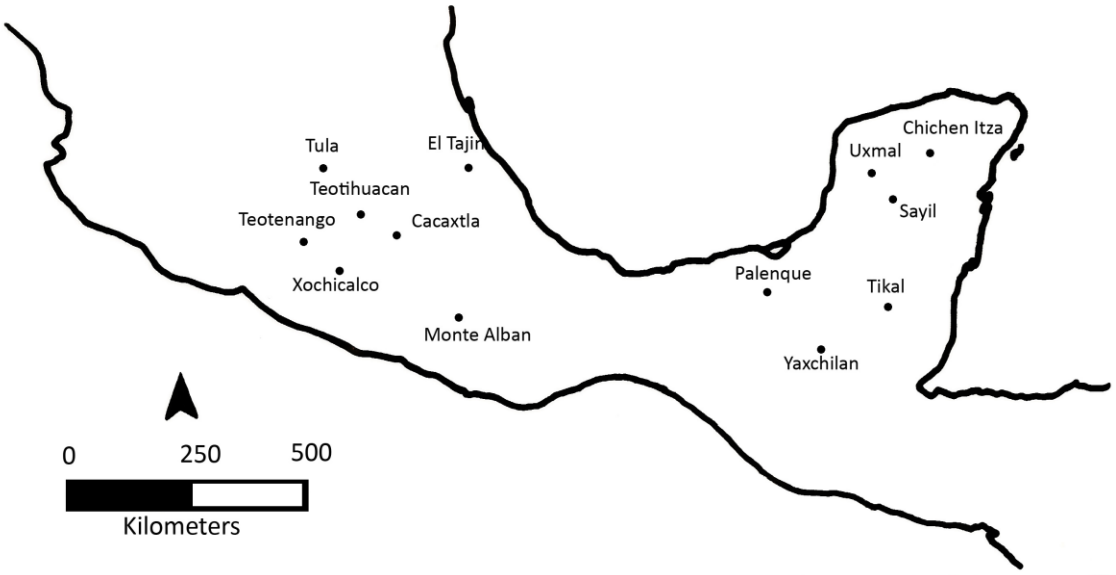


Figure 1.2. Map of Late Classic Mesoamerica showing major sites and regions.

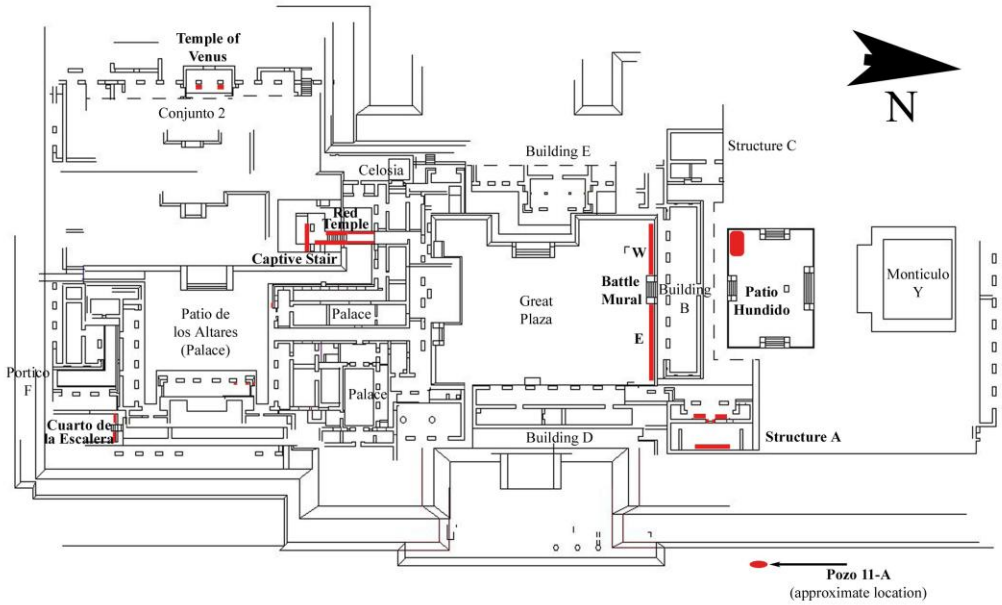


Figure 1.3. Plan of Cacaxtla denoting locations of murals in red. From Brittenham 2008:fig. 12.

Figure 1.4. East wall of Red Temple, Cacaxtla. From Brittenham 2008:fig. 13.

a

b

Figure 1.5. Structure A murals, Cacaxtla. a), North Portico mural. From Brittenham 2008:fig. 2. b) South Portico mural, Cacaxtla. From Brittenham 2008:fig. 1.

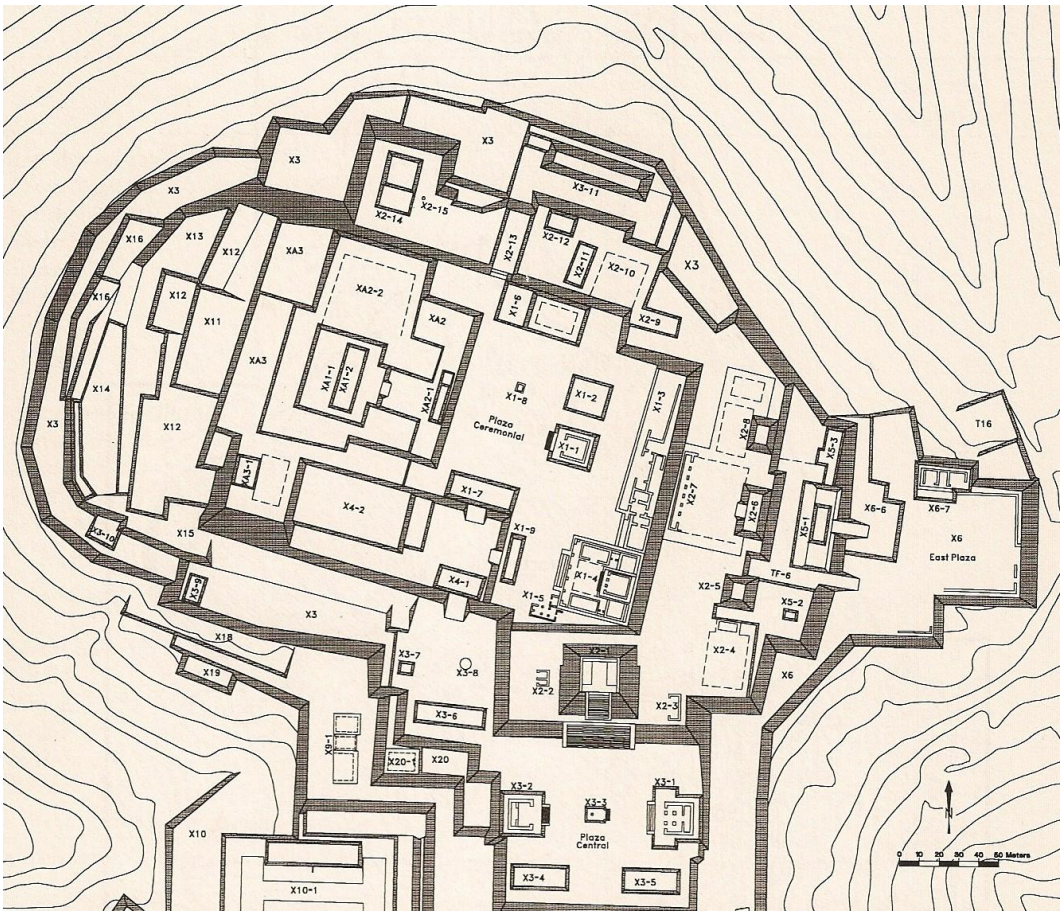


Figure 1.6. Plan of Xochicalco's acropolis. From Hirth 2000:fig. 5.5.

Figure 1.7. Stela 1, Stela 2, and Stela 3, Xochicalco. MNA.

Figure 1.8. Pyramid of the Plumed Serpents, Xochicalco.

Figure1.9. Sculpture from La Malinche, Xochicalco. Museo Cuauhnahuac.

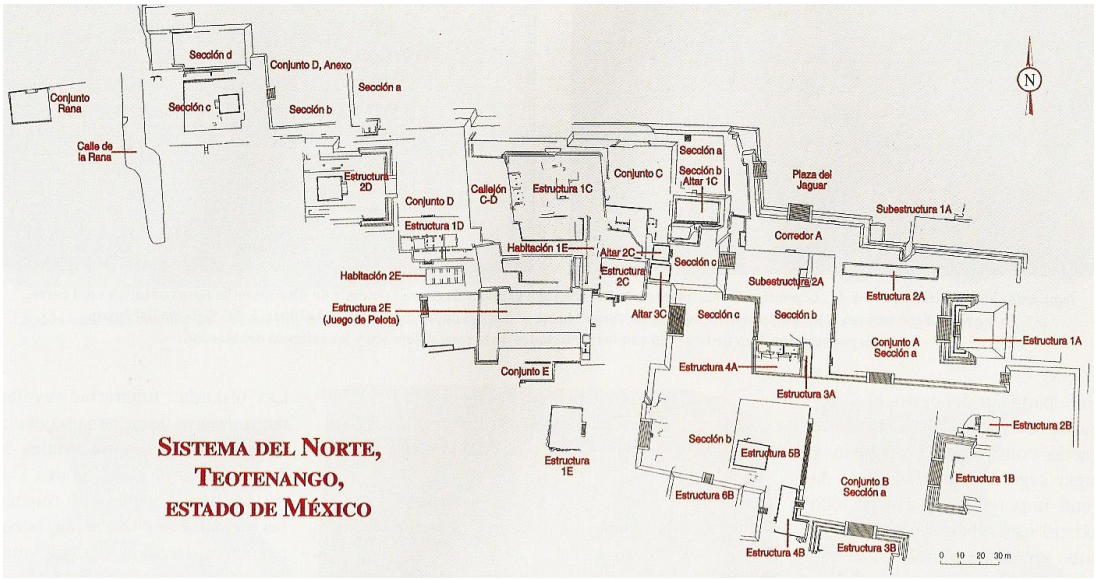


Figure 1.10. Plan of Teotenango. From Piña Chan 2000:41.

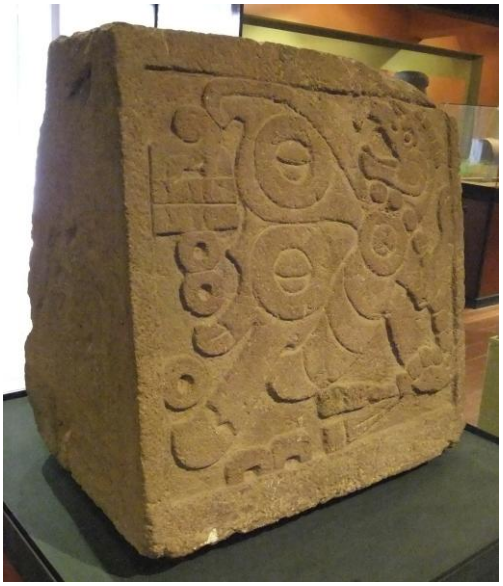
a  b

Figure 1.11. Stone sculpture from Teotenango. a) The Trapezoidal Stone. Teotenango site museum. b) The Teotenango Stela. Teotenango site museum.

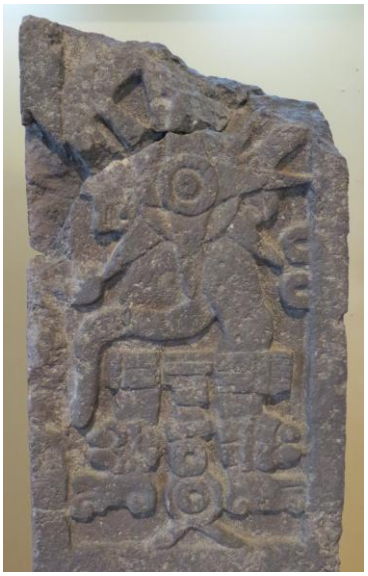
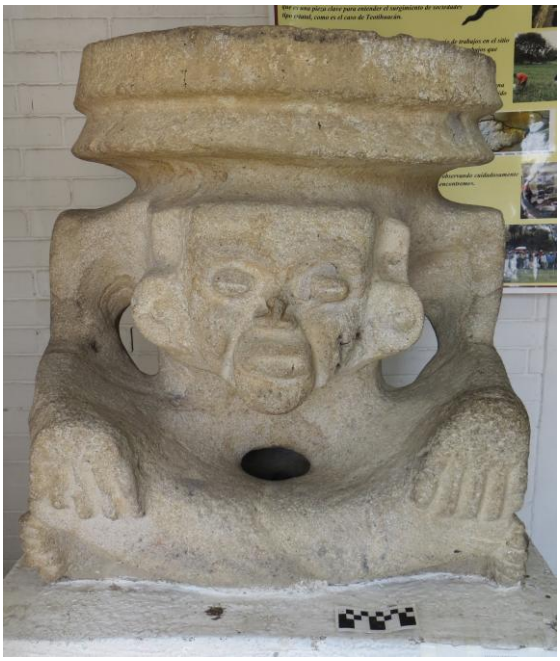


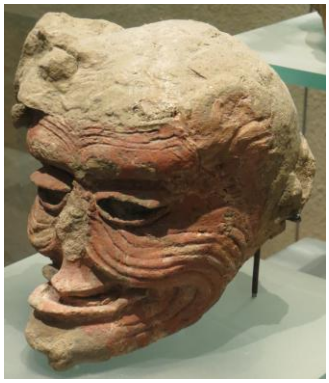
Figure 1.12. The Nevado de Toluca Stela. Teotenango site museum.

Chapter 2 Figures

a b 

c

Figure 2.1. Formative and Classic period representations of the Old Fire God. a) Probable Olmec Huehueteotl effigy. MAX. b). Stone Huehueteotl effigy, Museo de Arqueología Comunitario, San Matias Tlalancaleca, Puebla. c). Stone Huehueteotl effigy from Teotihuacan, MNA.

a b c 

d e

Figure 2.2. Late Classic representations of the Old Fire God. a) Ceramic Huehueteotl effigy, Cerro de las Mesas, Veracruz, MNA. b). Stone Huehueteotl effigy fragment from Mesa de los Pastores, Museo Regional de Queretaro. c). Probable Huehueteotl effigy fragment, Cacaxtla site museum. d). Stone Huehueteotl effigy brazier with elongated skull. Cantona site museum. e). Stone Huehueteotl effigy and copal "facemask" from Xochicalco, MNA.

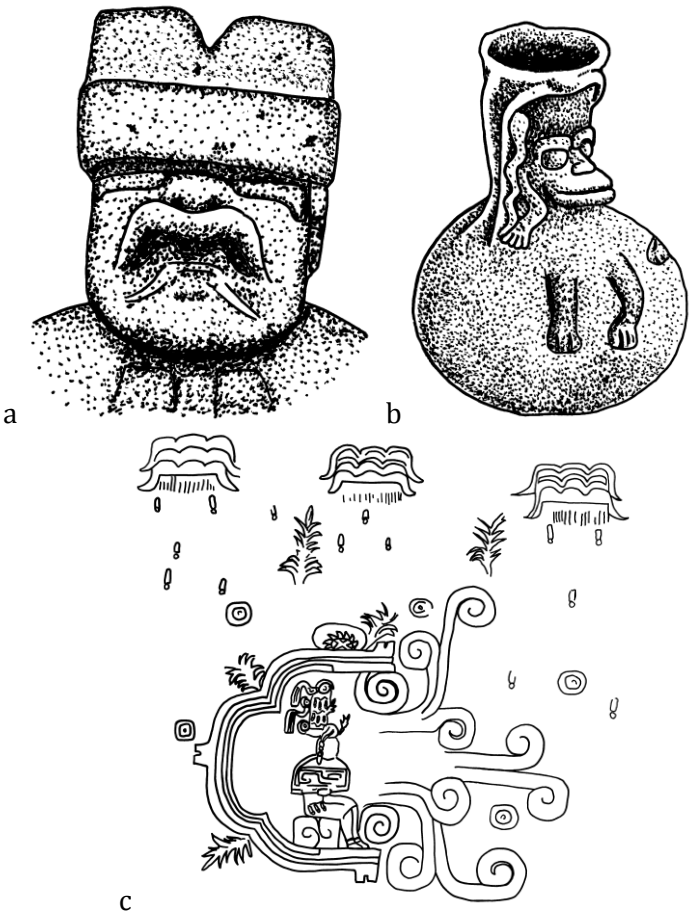
a b c

Figure 2.3. Ñuiñe and Zapotec representations of the Old Fire God. a) Ñuiñe brazier. Museo de las Culturas de Oaxaca. b). Ñuiñe brazier. Museo Regional de Huajuapan. c). Probable Zapotec brazier. Museo de las Culturas de Oaxaca.

a b c

Figure 2.4. Gourds and copal. a) Codex Borbonicus, page 21. b) Ball of copal from Chichén Itzá. From Coggins and Ladd 1992:fig. 9.4. c) Ball of copal from Chichén Itzá. From Coggins 1984:fig. 157.

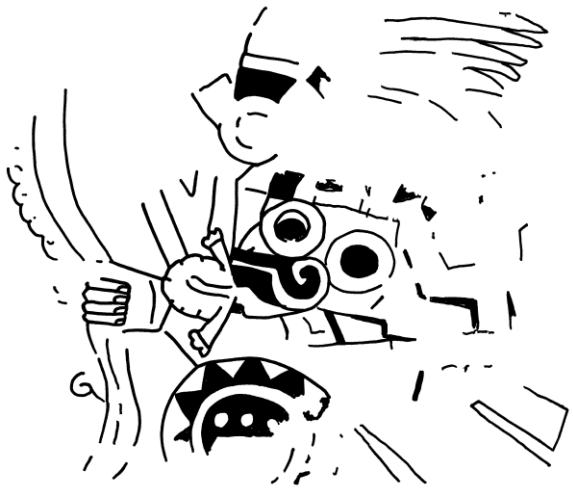
Figure 2.5. The Late Postclassic Tlaloc as depicted in the Codex Borgia, p. 67.



a b c

Figure 2.6. Rain-related imagery from the Formative period. a) San Lorenzo Monument 10. b) Jar from Tlapacoya (after Schaafsma and Taube 2006:fig. 14a). c) Chalcatzingo Monument 1 (after Gay 1972:fig. 11).

a



b

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Figure 2.7. The Teotihuacan Tlaloc. a) Mural fragment, possibly from Techinantitla (after García Moll 2006:pl. 1). b) Mural fragment, Amanalco (after Wrem Anderson and Helmke 2013:fig. 10e). c) Los Horcones Stela 3 (after Navarrete 1986:fig. 3).

a b

Figure 2.8. Late Classic stone sculptures depicting Tlaloc. a) Detail of Stela 2 of the Xochicalco stela triad. MNA. b) Sculpture possibly from Ixtapan del Oro or Valle de Bravo. Teotenango site museum.

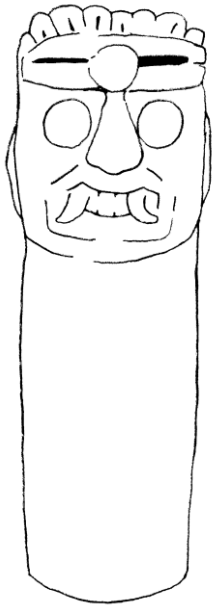
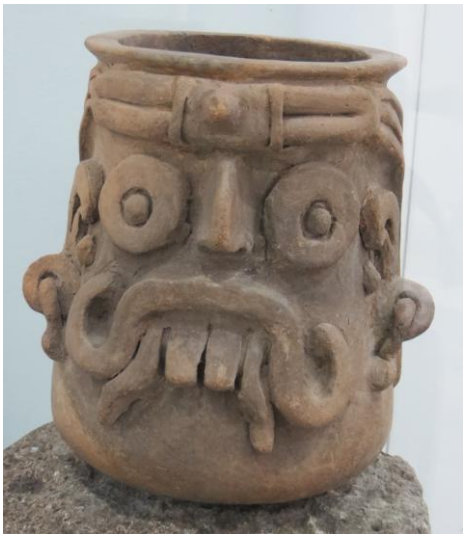
a  b c

Figure 2.9. Representations of Tlaloc from Cacaxtla. a) Columnar Tlaloc sculpture. After Armillas 1995 [1941]:fotos 23-24. b) Structure A north jamb mural, Cacaxtla. From Brittenham 2015:Fig. 279. c) Image of Tlaloc on Battle Mural, Cacaxtla. From Brittenham 2015:fig. 189.

a  b

c d

Figure 2.10. Late Classic ceramic representations of Tlaloc. a) Tlaloc jar. Xochicalco site museum. b) Sculpture fragment. Cacaxtla site museum. c) Figurine fragment. Teotenango site museum. d) Figurine fragment. Teotenango site museum.

a b

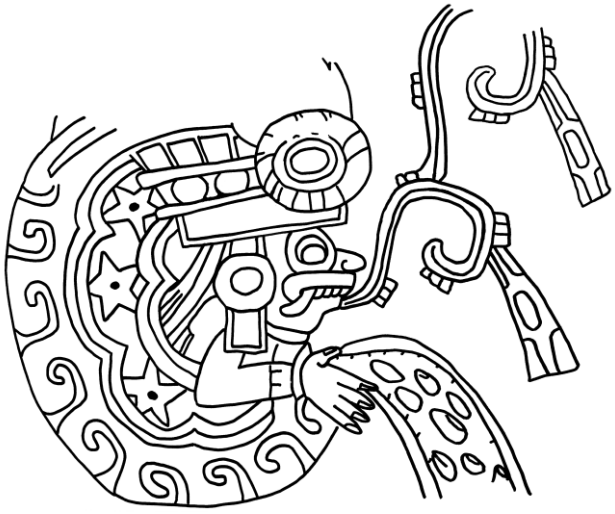
c 

Figure 2.11. Representations of Tlaloc surrounded by volutes. a) Jar from Xochicalco. Xochicalco site museum. b) Applique from Xochicalco. Xochicalco site museum. c) Mural fragment from Zacuala, Teotihuacan (after Ruiz Gallut 2006:pl. 37).

a b

Figure 2.12. Tlaloc figures from Los Once Señores de Cacaxtla corpus. a) Figure holding maize ear in left hand. b) Figure holding squash in left hand.

a b

Figure 2.13. Figures with attributes of Tlaloc. a) Ceramic sculpture from Cacaxtla acropolis. From Brittenham and Nagao 2014:fig. 3. b) Ceramic sculpture from Los Once Señores de Cacaxtla.

a b c

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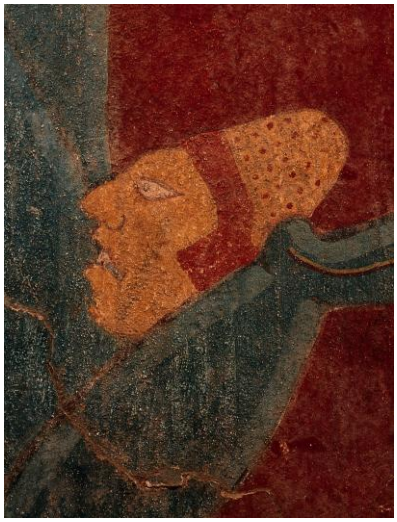
a b 

Figure 2.15. Figures with maize cob-shaped crania. a) Figurine fragment. Teotihuacan site museum. b) Detail from Cacaxtla Red Temple mural. From Brittenham 2015:fig. 234.

a b

Figure 2.16. Comparison of figurine from Xochitecatl to the Late Postclassic Xochiquetzal. a) Figurine. Xochitecatl site museum. b) Xochiquetzal, Codex Borgia, p. 58.

a b

Figure 2.17. Comparison of figurine from Xochitecatl to the Late Postclassic Tlazolteotl. a) Figurine. Xochitecatl site museum. b) Tlazolteotl, Codex Borgia, p. 68.

a b

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a b

Figure 2.19. Sculpture from Cerro Malinche. Museo Cuauhnahuac, Cuernavaca. a) Frontal view. b) Right side.

Figure 2.20. Aztec incensario from Tlahuac in the form of Chicomecoatl. MNA.

a b c

Figure 2.21. Figurines from Xochitecatl. a) MNA. b) MNA. c) Xochitecatl site museum.

a b

Figure 2.22. Nopiloa figurines from South-central Veracruz. a) MNA. b) MAX.

Figure 2.23. “Caritas sonrientes” figurines from South-central Veracruz. MAX.

a b c

Figure 2.24. Jaina-style figurines. a) Museo Arqueologico de Hecelchakan. b) Museo Arqueologico de Campeche. c) Museo Arqueologico de Hecelchakan.

Figure 2.25. Xipe Totec, Codex Borgia, p. 25.

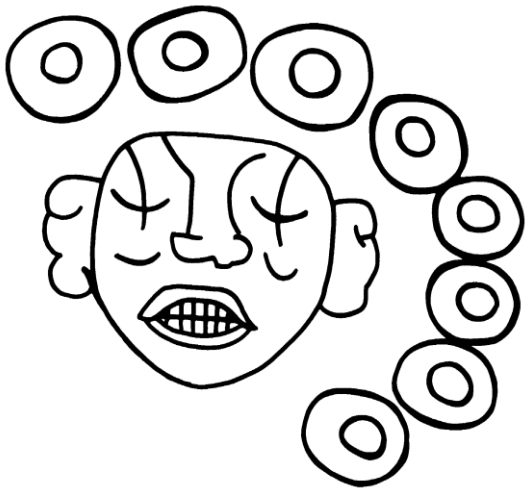
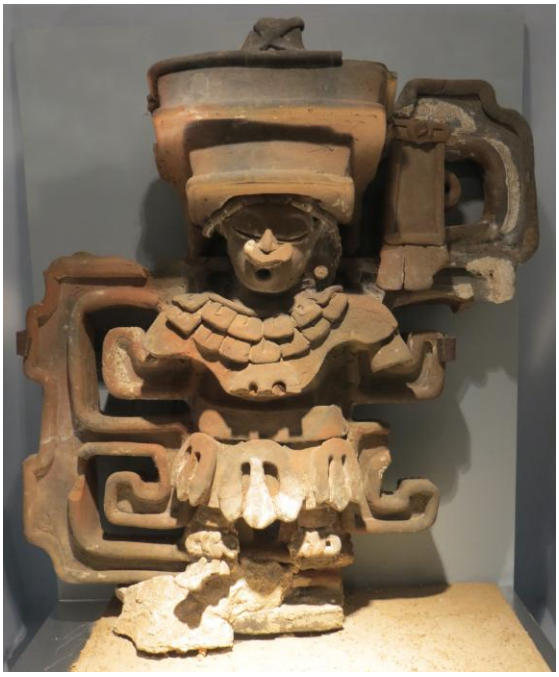


Figure 2.26. Probable Xipe Totec from Zacuala compound, Teotihuacan. After Sejourne (2002 [1959]:fig. I.6).

a b

Figure 2.27. Large ceramic Late Classic Xipe Totec sculptures. a) Example from Xolalpan, Teotihuacan. MNA. b) Example from San Mateo Tezoquipan. Museo Templo Mayor.

a b 

c

Figure 2.28. Xipe Totec figures from Los Once Señores de Cacaxtla corpus. a) Figure holding probable *chicahuaztli* staff. Cacaxtla site museum. b) Cacaxtla site museum. c) Photo courtesy of Mario Martínez Lara.

a

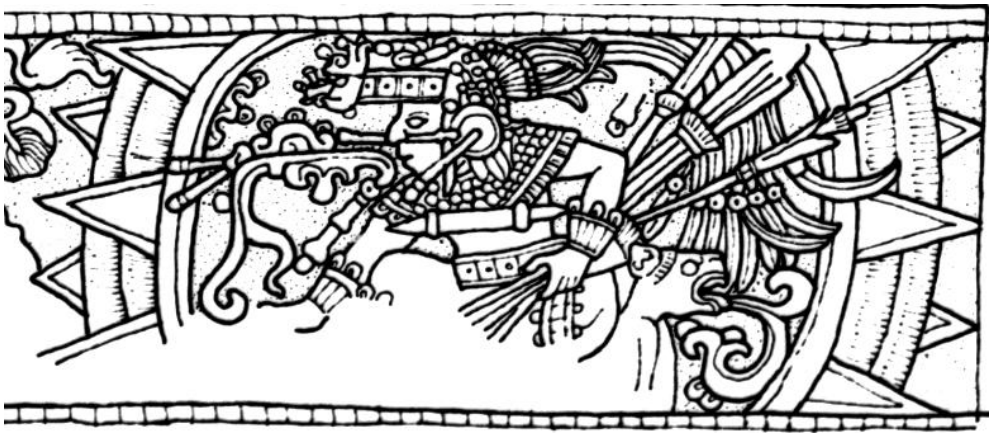
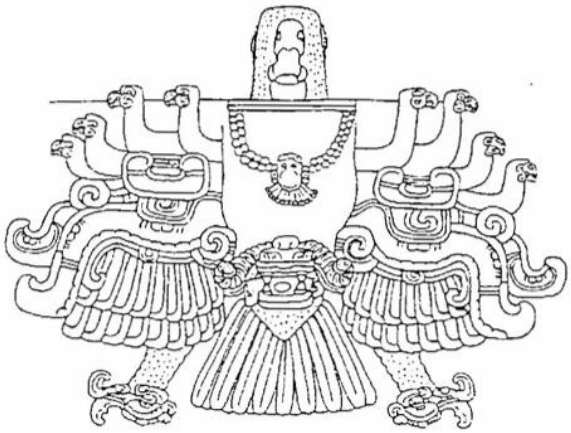
b 

Figure 2.29. Postclassic sun gods in solar disks. a) Tonatiuh, Codex Borgia, page 71. b) Wooden lintel from Upper Temple of the Jaguars, Chichén Itzá. Drawing by Linda Schele.

a

b 

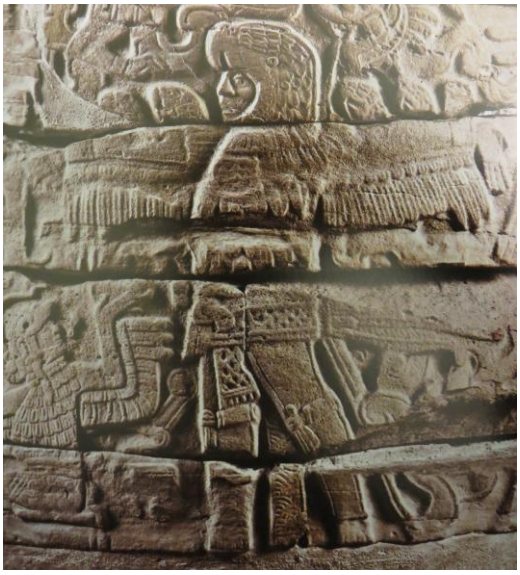
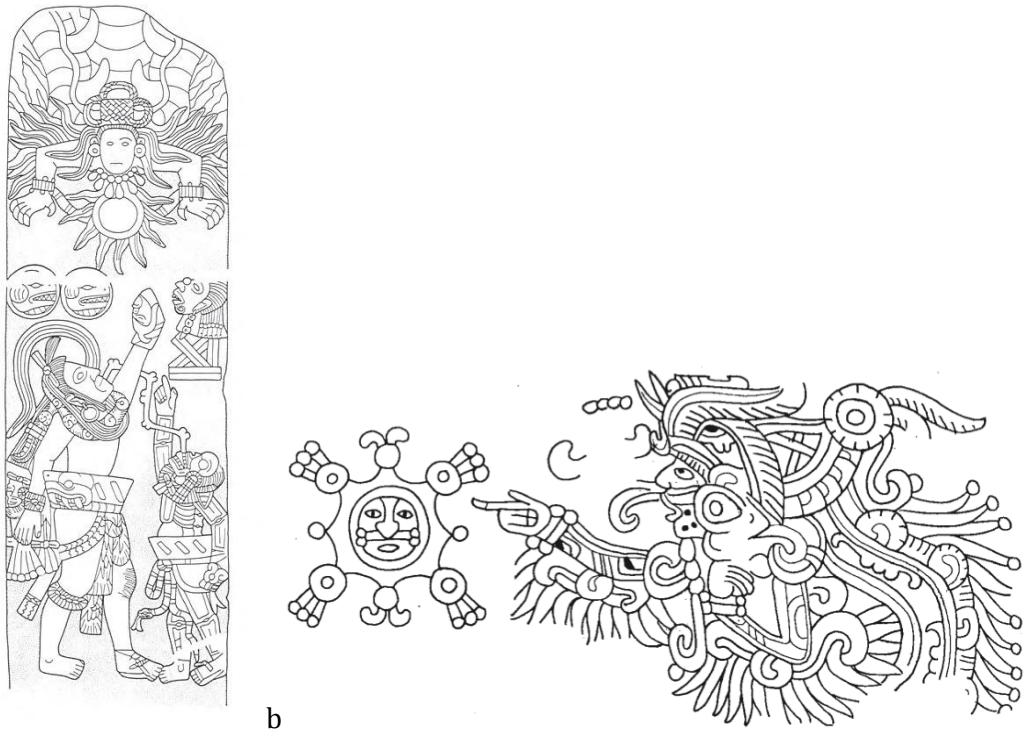
c 

Figure 2.30. The macaw solar deity. a) Mural fragment from Room 13, Zone 5A, Teotihuacan. b) Early Classic stucco relief from ballcourt, Copán. From Taube 2005:Fig. 4b. c) Relief-carved column from Mound of the Building Columns, El Tajín.

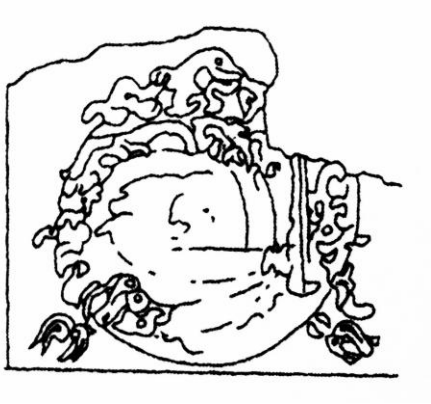


a b

Figure 2.31. Feathered solar deities emerging from serpent maws. a) Bilbao Monument 3. From Chinchilla Mazariegos 1998:9. b) Detail from Maya-style vessel from Otumba. From Taube 2015:Fig. 5.12a.

a b

Figure 2.32. Late Classic Central Mexican imagery related to the solar macaw. a) Terracotta sculpture from Cacaxtla. Cacaxtla site museum. b) Macaw "ballcourt marker" from Xochicalco, MNA.

a b 

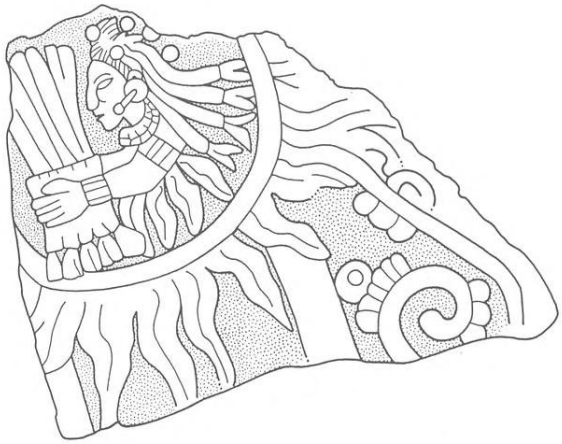
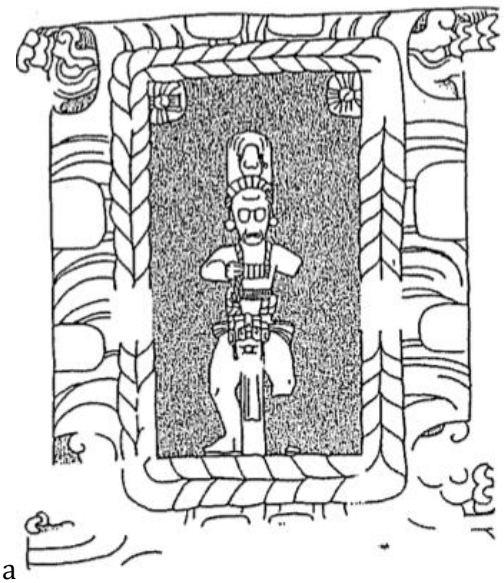
c d 

Figure 2.33. Late Classic precursors to the solar disk. a) Solar figure from Las Higueras, Veracruz. MNA. b) Possible example from El Zapotal, Veracruz. From Wyllie 2008:diag. 1j. c) El Castillo Monument 1. From Chinchilla Mazariegos 2013:Fig. 6. d) Cotzumalhuapa-style monument, National Museum of Archaeology and Ethnology, Guatemala. From Chinchilla Mazariegos 1998:44.

a 

b

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Figure 2.34. Maya solar imagery. a) Sculpture depicting Yax K'uk' Mo' in feathered shield from Copán Structure 10L-16, Stairblock II. From Taube 2004b:Fig. 13.13a. b) Solar cartouche, House A, Palenque. c) Detail of mural from Upper Temple of the Jaguars, Chichén Itzá. Painting by Adela Breton.

Figure 2.35. The Nevado de Toluca Stela. Teotenango site museum.

Figure 2.36. Structure A, North Portico mural, Cacaxtla. From Brittenham 2015:Fig. 277.

Figure 2.37. Structure A, South Portico mural, Cacaxtla. From Brittenham 2015:Fig. 278.

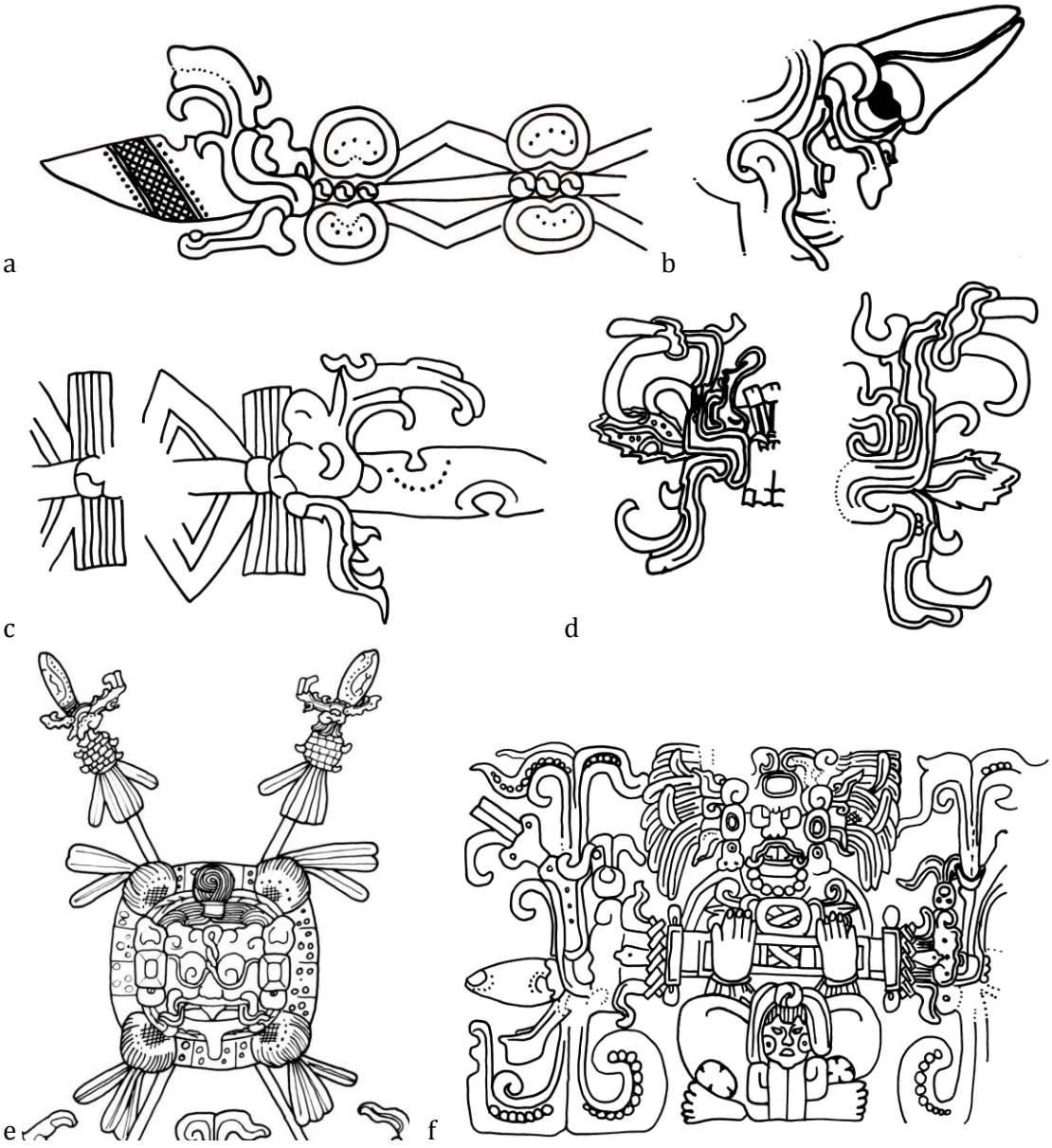
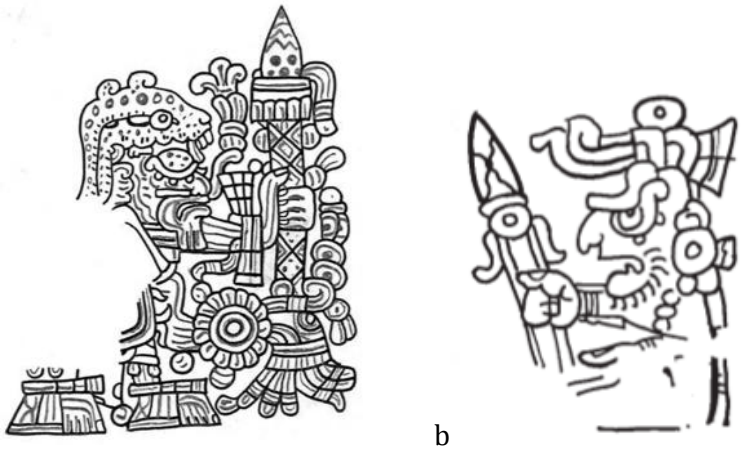


Figure 2.38. Classic Maya centipede lances with protruding flint "tongues." a) Detail from Naranjo Stela 8. After drawing by Ian Graham. b) Detail from Copan Stela M. After drawing by Claude Baudez. c) Detail from Reitberg Stela. After Looper 2003:fig. 3.39. d) Detail from Quirigua Stela J. After Looper 2003:3.37-3.38. e) Detail from Tablet of the Sun, Palenque showing crossed centipede lances and JGU face on shield. f) Detail from Yaxchilan Stela 1 showing seated Maya diurnal sun god with centipede heads emerging from ceremonial bar. After Tate 1992:fig. 27a.



a b

Figure 2.39. Late Postclassic bearded Maya sun gods with flint-tipped lances. a) detail from Xelha mural. From Taube 2010a:fig. 13a. b) detail from Codex Madrid. From Taube 2010a:fig. 13b.

a b

Figure 2.40. Plumed serpents as solar vehicles. a) Carved bone from Monte Albán, Tomb 7. From Taube 2010b:fig. 30. b) Jade from Cenote of Sacrifice, Chichén Itzá. From Finamore and Houston 2010:pl. 65.

a b

c

Figure 2.41. The Late Postclassic Xochipilli and 7 Flower as gods of music. a) Aztec wooden drum (*huehuetl*) from Malinalco. Centro Cultural Mexiquense, Toluca. b) Aztec ceramic drum depicting Xochipilli. MNA. c) 9 Wind (right) and 7 Flower (left) Codex Vienna p. 24.

a

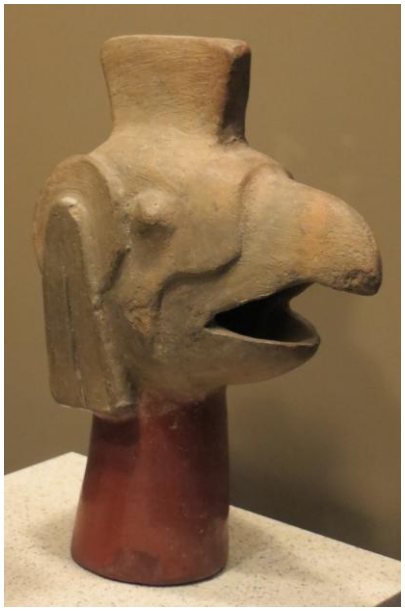
b c 

Figure 2.42. Representations of the Late Postclassic Xochipilli. a) Codex Magliabechiano, p. 35r. b) Postclassic ceramic Xochipilli sculpture, Madereros, Veracruz. MNA. c) Aztec ceramic censer, MNA.

Figure 2.43. Possible Late Classic precursor to Xochipilli from Central Veracruz. MAX.

a b

Figure 2.44. Possible Jaina-style Maya representations of Late Classic Xochipilli. a) Museo Arqueologico de Jonuta. b) MNA.

a b

Figure 2.45. Late Classic Gulf Coast representations of figure with crest and tassels. a) *Palma*. MAX. b) Figurine. MNA .

Figure 2.46. Two-sided figurine from the Late Classic Gulf Coast. MNA.

Figure 2.47. Urn from Cacaxtla. Museo Regional de Tlaxcala.

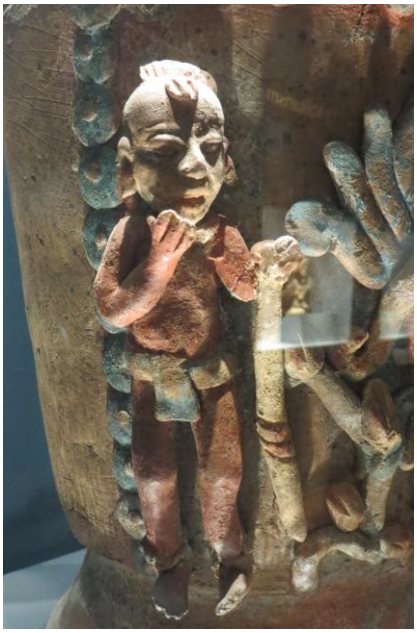
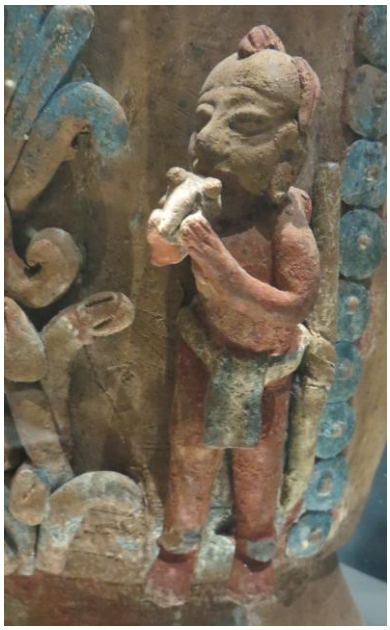
a  b 

Figure 2.48. Details of urn from Cacaxtla showing two flanking figures. Cacaxtla site museum. a) Figure with staff on right side of vessel. b) Figure blowing conch on left side of vessel.

a b

Figure 2.49. Possible Xochipilli precursor on musical instruments. a) Flute from Xochicalco. Xochicalco site museum. b) Whistle fragment. Centro Cultural "Chimalpahin" PJ0410.

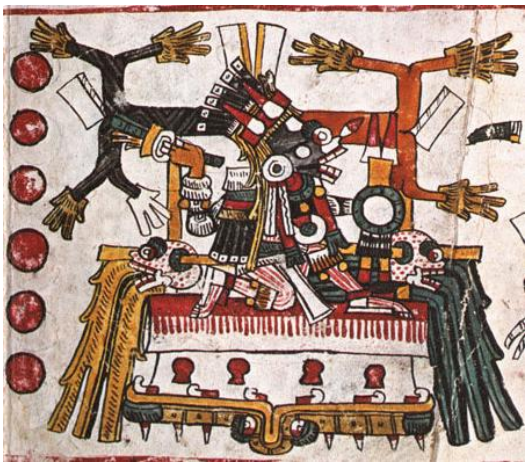


Figure 2.50. Late Postclassic Tlahuizcalpantecuhtli in *tzompantli*, Codex Borgia p. 19.

Figure 2.51. Probable Toltec skeletal Tlahuizcalpantecuhtli from incised shell. MNA.

a

b

c

Figure 2.52. Early Postclassic figures with lobed star symbols at their waists. a) Relief-carved slab from Palacio Quemado, Tula showing figure with lobed star symbol at waist. From Brittenham 2015:fig. 156. b) Detail of mural from Upper Temple of the Jaguars, Chichén Itzá. Painting by Adela Breton. c) Ixtapantongo mural (detail) showing Warrior Sun God (right) and Tlahuizcalpantecuhtli (left). From Taube 1994:fig. 15.

Figure 2.53. Detail from Maltrata Monument. Note feathered serpent carrying lobed star symbol. MAX.

a b

Figure 2.54. a) South and b) North column figures, Temple of Venus, Cacaxtla. From Brittenham 2015:Fig. 138.

Figure 2.55. Figure holding shield with lobed star symbol, Battle Mural, Cacaxtla. From Brittenham 2015:fig. 157.

a b

Figure 2.56. Late Classic Maya deity with pointed cranium, star symbol, and scorpion tail. a) Plate showing figure with star sign and scorpion tail. Photo by Justin Kerr, K4565. b) Relief of Maize god with star symbol and scorpion tail from Skyband Bench on Structure 8N11 of the Sepulturas Group, Copán. From Uriarte Castañeda and Velázquez García 2013:fig. 14.3.

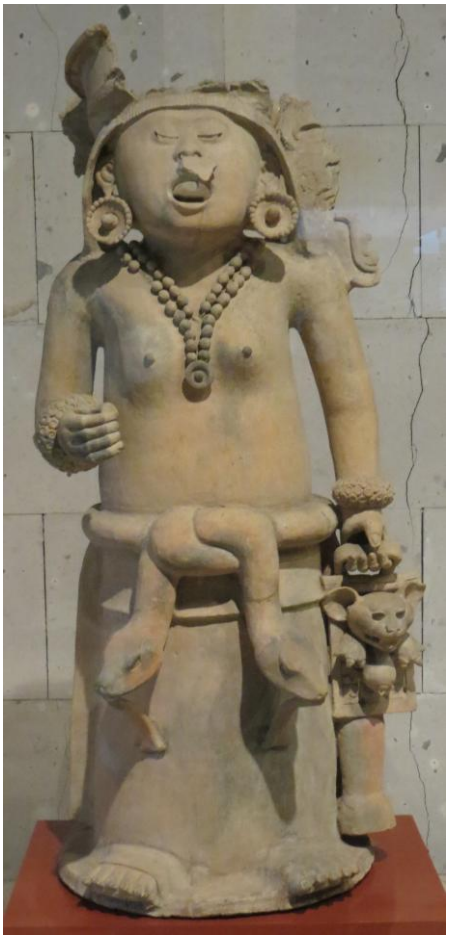
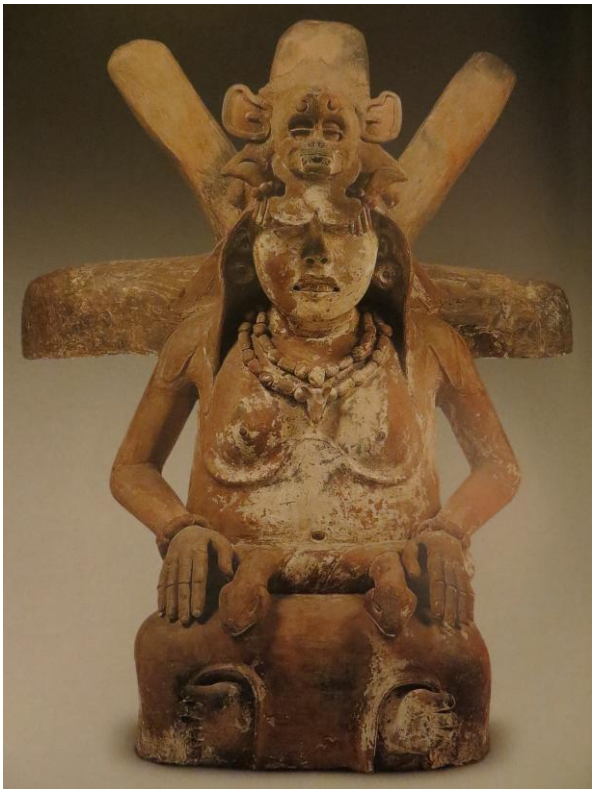
a  b 

Figure 2.57. Ceramic sculptures from El Zapotal, Veracruz. a) Standing figure from Mound 2, MAX. b) Seated figure with star sign. From Ladron de Guevara 2012:92.

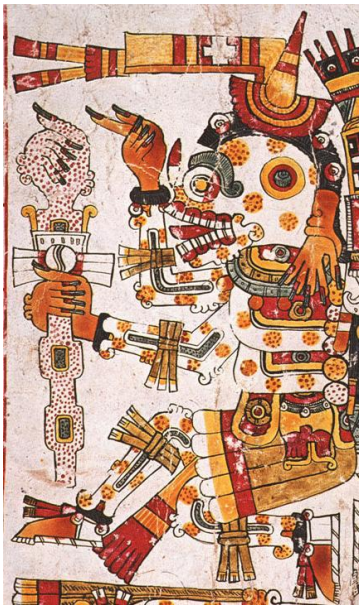
a  b

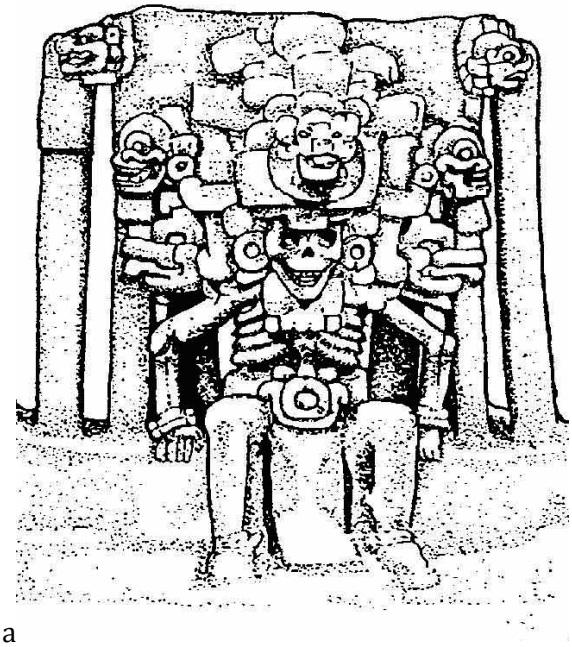
Figure 2.58. Mesoamerican skeletal death deities. a) Late Postclassic Mictlantecuhtli, Codex Borgia p. 56. b) Late Classic God A, stucco façade, Toniná. From Yadeun 1992:114.

Figure 2.59. Cylindrical sculpture representing skeletal being. Teotihuacan site museum.

a b

Figure 2.60. Skulls with knotted cords. a) Skull-relief from Teotihuacan. MNA. b) Stone plaque. Cantona site museum.

Figure 2.61. Relief sculpture fragment from Vista Hermosa, Veracruz. From Pascual Soto 2009:Fig. 52.



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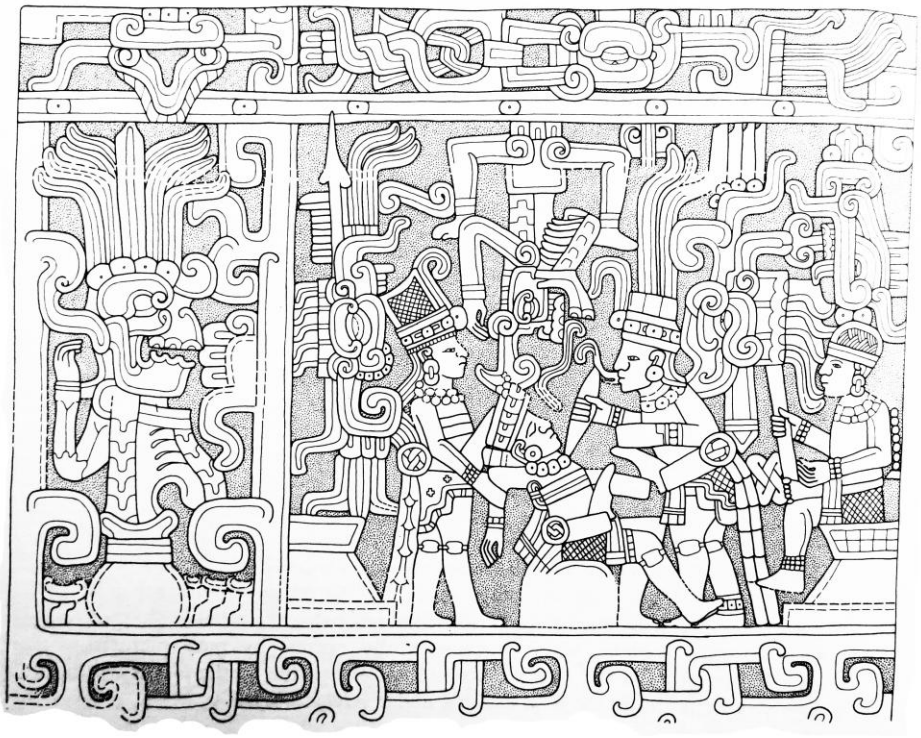
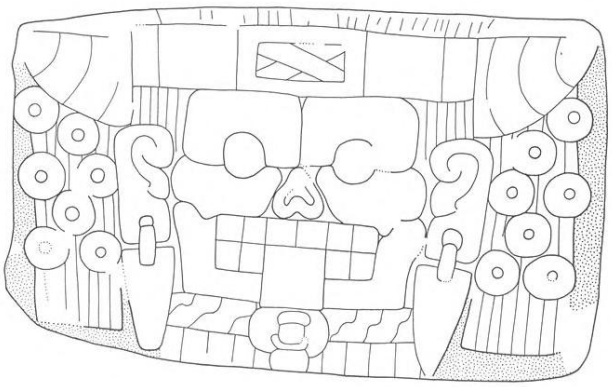


c

Figure 2.62. Late Classic Gulf Coast skeletal death god imagery. a) Seated figure from El Zapotal, Mound 2. From Wylie 2007:fig. 14. b) Sculpture 1, El Tajín. c) South Ballcourt Panel 4, El Tajín. From Kampen 1972:Fig. 23.



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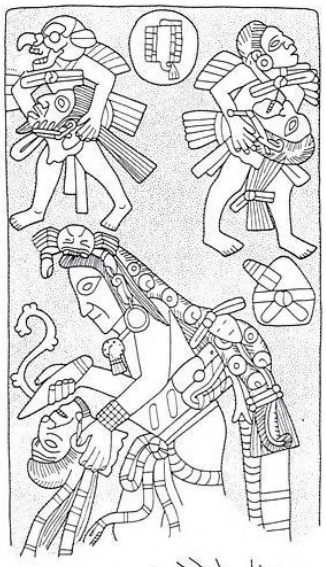

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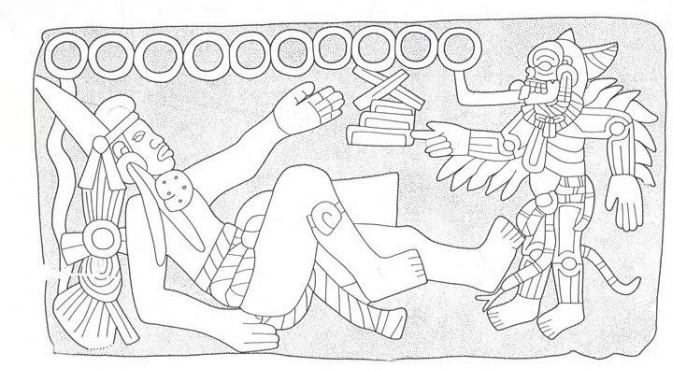


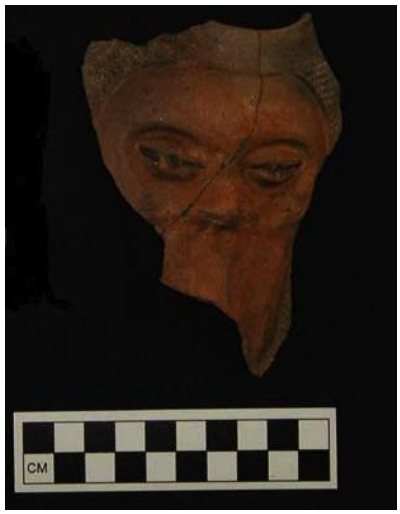
c

Figure 2.63. Skeletal death god imagery from Cotzumalhuapa. a) El Baúl Monument 67. From Chinchilla Mazariegos 1998:32. b) Bilbao Monument 1. From Chinchilla Mazariegos 1998:7. c) Bilbao Monument 13. From Chinchilla Mazariegos 1998:16.

Figure 2.64. Ceramic death deity heads from San Miguel Ixtapan. San Miguel Ixtapan site museum.

Figure 2.65. Cohimbre Stela 1. From Gutiérrez Mendoza 2007:Fig. 280.

Figure 2.66. The Late Postclassic Ehecatl, Codex Borgia, p. 19.

a 

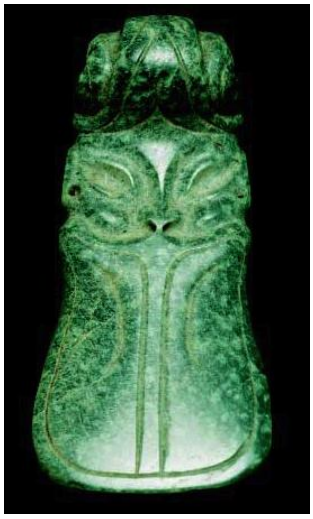
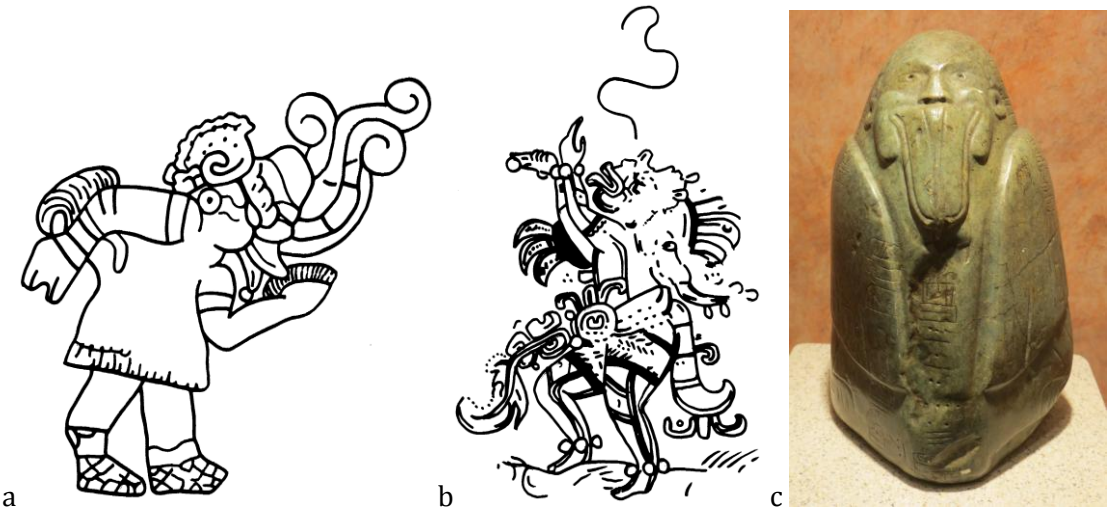
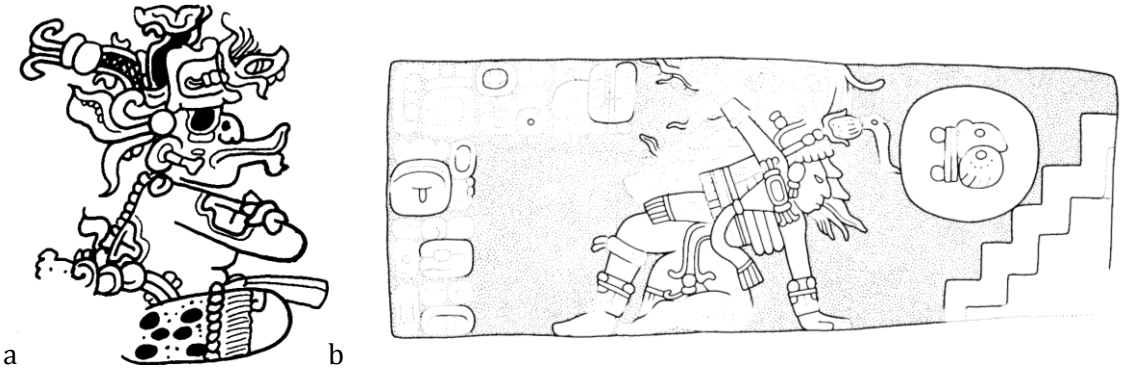
b 
c

Figure 2.67. Early Mesoamerican duckbilled deity imagery. a) Tecomate fragment from Cuauhtémoc, Chiapas. From Rosenswig 2003:fig. 3. B) Olmec jade pendent. From Taube 2004:Plate 36. c) La Venta Monument 7. Parque La Venta, Villahermosa, Tabasco.



a b c

Figure 2.68. Late Preclassic and Early Classic Mesoamerican duckbilled deity imagery. a) Izapa Monument 5 (detail). After drawing by Ayax Moreno. b) Wind God, San Bartolo North Wall Mural, after drawing by Heather Hurst. c) Tuxtla Statuette, MNA.



a b

Figure 2.69. The Classic Maya wind god. a) Detail from Late Classic vessel. Note *ik'* symbols on arm and lower back. From Taube 2004b:Fig. 82c. b) Carved step from Yaxchilan, Structure 33. From Taube 2004b:fig. 82a.

a b c

Figure 2.70. The Classic Maya wind god and music. a) Seibal Stela 19. Drawing by Ian Graham. b) Detail of Seibal Stela 3. c) Jaina-style figurine. Note turtle shell and antler in hands. MNA.

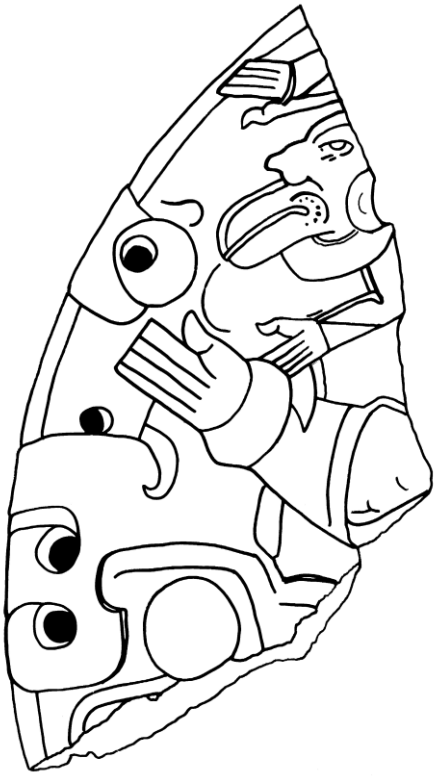
a  b

Figure 2.71. Duck-billed beings in Central Mexico. a) Slate Mirror Back from Temple of Quetzalcoatl. Teotihuacan. After https://www.youtube.com/watch?v=_Dqy57L_cME. b) Jadeite figurine. Cacaxtla site museum.

a b

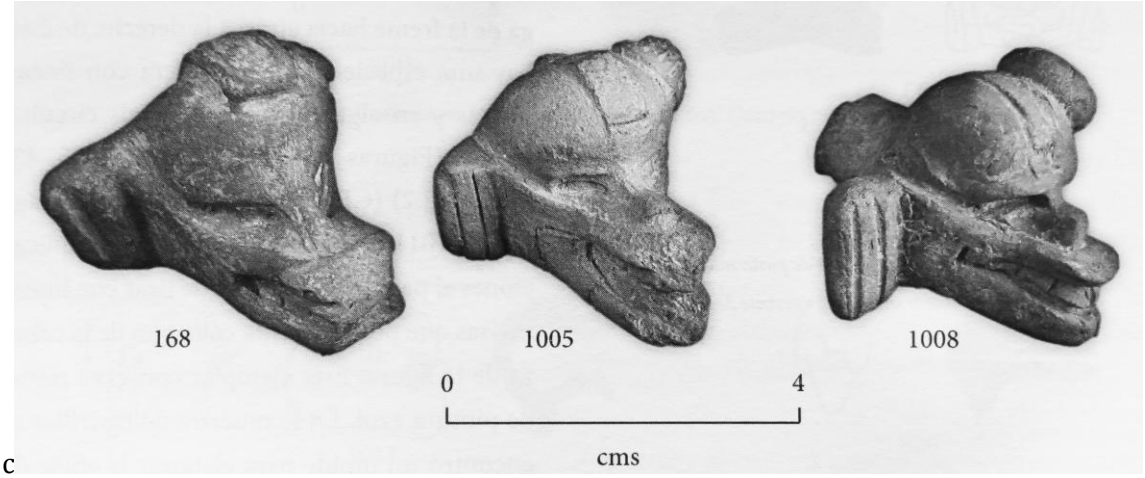
c 

Figure 2.72. Late Classic musical instruments from the Gulf Coast and Oaxaca in the form of the duckbilled deity. a) Ceramic whistle. Museo Regional de San Andrés Tuxtla. b) Ceramic flute from Veracruz. MAX. c) Mold-made Ñuiñe transverse ocarina parts. From Sánchez Santiago 2009:plate. 2.7.

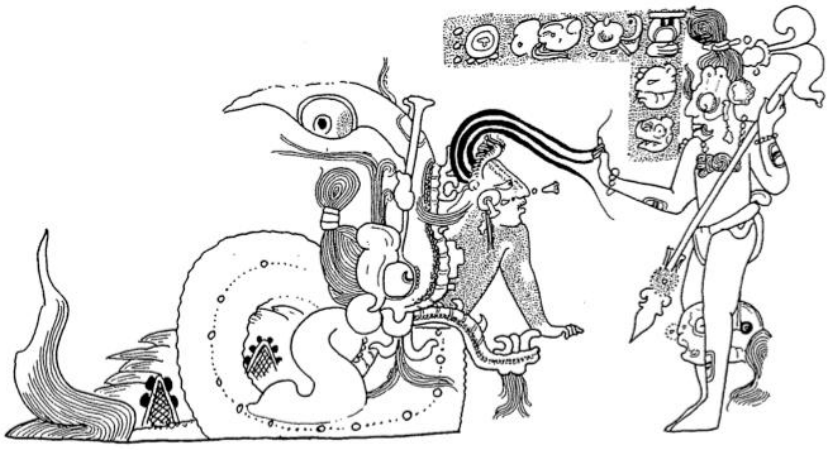
a

b

Figure 2.73. Avian beings on musical instruments from Late Classic Central Mexico. a) Left and right sides of probable ceramic flute fragment. Centro Regional de Cultura de Chalco "Chimalpahin." b) Ceramic flute from Ojo de Agua, Museo Municipal Techialoyan Tepemaxalco, San Antonio la Isla, Estado de Mexico.

Figure 2.74. Aztec ceramic flute with image of Ehecatl. MNA.

a



b

Figure 2.75. Anthropomorphic wind gods. a) Late Classic Maya example. From Taube 2004b:fig. 4d. b) Detail of south portico of Structure A. From Brittenham 2015:fig. 280.

Figure 2.76. Yacatecuhtli, Codex Fejérváry-Mayer, p. 36.

Figure 2.77. God L from Red Temple mural, Cacaxtla. From Brittenham 2015:fig. 214.

a b

c d

Figure 2.78. The Late Classic Maya God L. a) Detail of Codex-style vessel. Photo by Justin Kerr, K2796. b) Detail of Chama-style vessel. Photo by Justin Kerr, K0702. c) Painted plate. Photo by Justin Kerr, K9279. d) East jamb sculpture, Temple of the Cross, Palenque. Drawing by Linda Schele.

a b

c d

Figure 2.79. Representations of the Fat God in Mesoamerican art. a) Monument 47, Bilbao, Guatemala. From Parsons 1986:fig. 108. b) Late Classic Glutton *wahy* from Maya vessel. From Taube 2004b:fig. 74a. c) Classic period Fat God figurine from Teotihuacan. From Von Winning 1987:1:Ch. 7, fig. 1,k. d) Late Classic Fat God figurine from the Gulf Coast. MNA.

Figure 2.80. The Fat God in the Late Classic Northern Maya Lowlands. a) Jaina-style figurine. MNA. b) Fat God sculpture, Oxkintok. MNA. c) Fat God column from Dsecilná, Campeche (left and right sides). Palacio Canton, Merida. d) Fat God sculpture. MNA.

a b

Figure 2.81. Probable representations of the Fat God in Late Classic Central Mexico. a) Unfired clay sculpture. Cacaxtla site museum. b) Incensario lid from Ojo de Agua. Museo Municipal Techialoyan Tepemaxalco, San Antonio La Isla, Estado de Mexico.

a

b

Figure 2.82. The Fat God and probable Late Classic Xochipilli. a) Figurine with long braids and Fat God mask from Chalahuite, Veracruz (two views). Cempoala site museum. b) Figurine from Teotihuacan. From Solís 2009:fig. 199f.

Figure 2.83. Ceramic sculpture from Xochicalco referred to as “El Creador.” From Garza Tarazona 2010:20.

a b

Figure 2.84. Monkeys and cacao pods in Late Classic Maya art. a) Howler monkey *wahy* from Late Classic vessel. Photo by Justin Kerr, K5070. b) Detail from Chama-style vessel. Photo by Justin Kerr, K1789.

a b

c d

Figure 2.85. Monkeys and cacao growing from vines in Late Classic Maya art. a) Vessel lid. Toniná site museum. b) Urn fragment from Ocosingo region. Museo Regional de Chiapas. c) Lidded vessel, Cueva de los Andasolos, Chiapas. Comitán Museo de Arqueología. d) Supernatural howler monkey sculpture, Reviewing Stand of Copán Temple 11. From Nájera Coronado 2013:Fig. 10.

Chapter 3 Figures

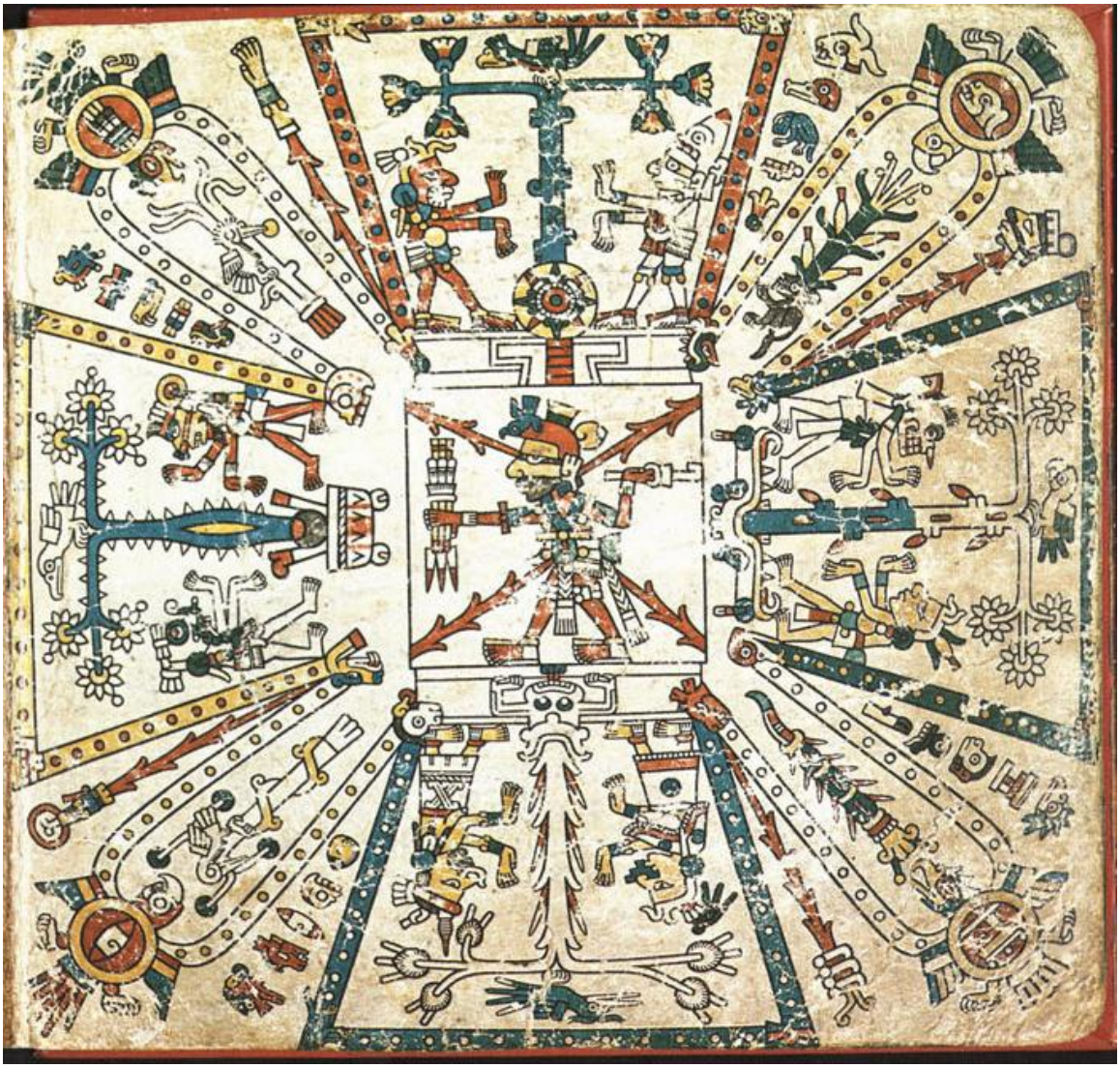


Figure 3.1. Codex Fejérváry-Mayer, page 1.

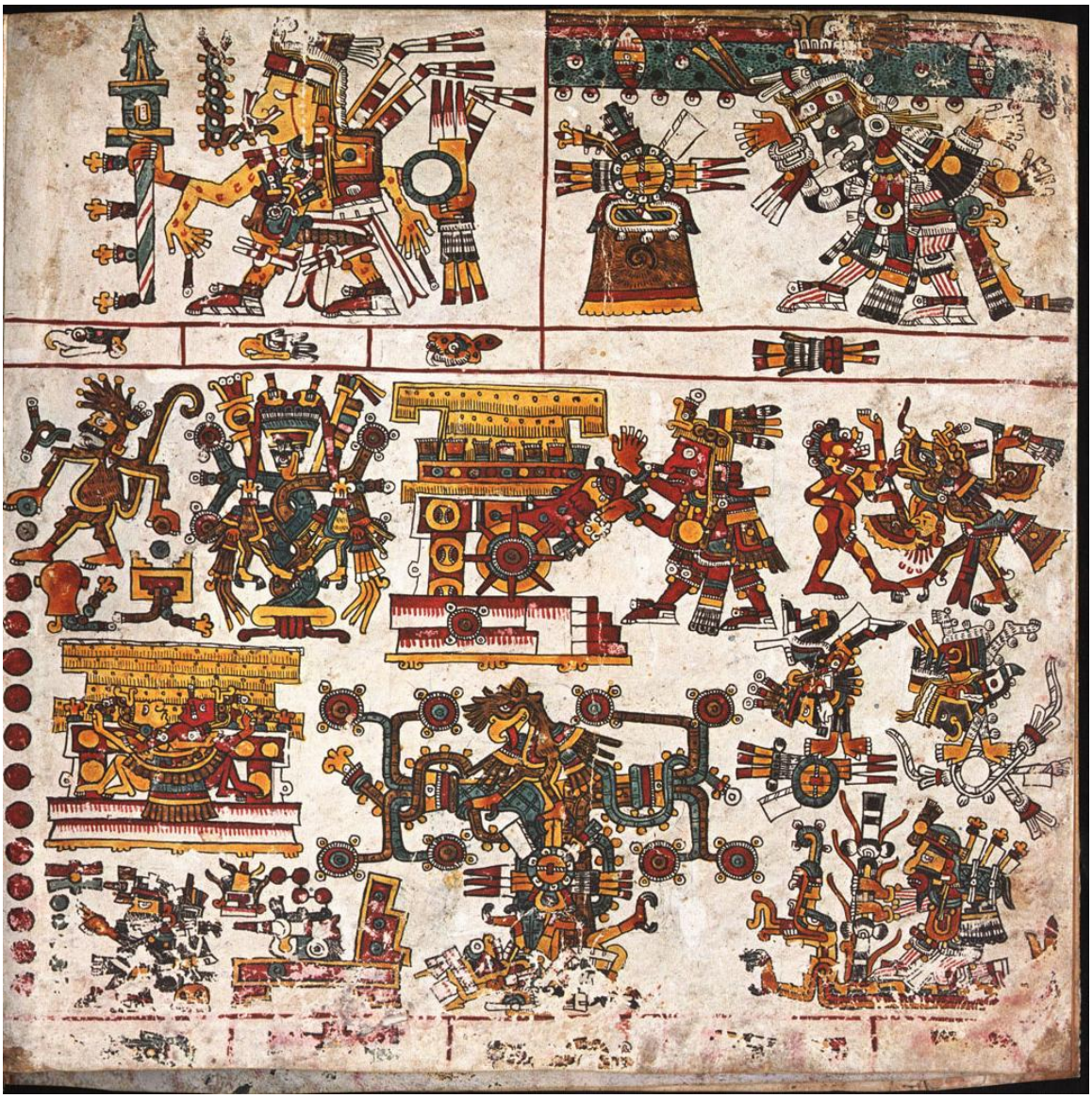


Figure 3.2. Codex Borgia, page 49.

Figure 3.3. Codex Borgia, page 50.

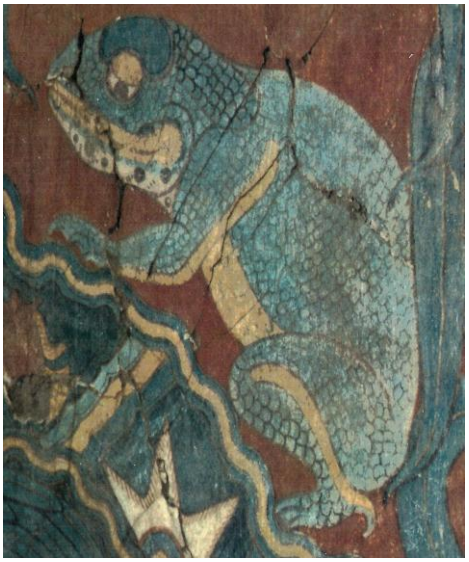
Figure 3.4. Codex Borgia, page 51.

Figure 3.5. Codex Borgia, page 52.

Figure 3.6. Codex Borgia, page 53 (detail).

Figure 3.7. Structure A, North Portico mural, Cacaxtla. From Brittenham 2015:Fig. 277.

Figure 3.8. Structure A, South Portico mural, Cacaxtla. From Brittenham 2015:Fig. 278.

a  b

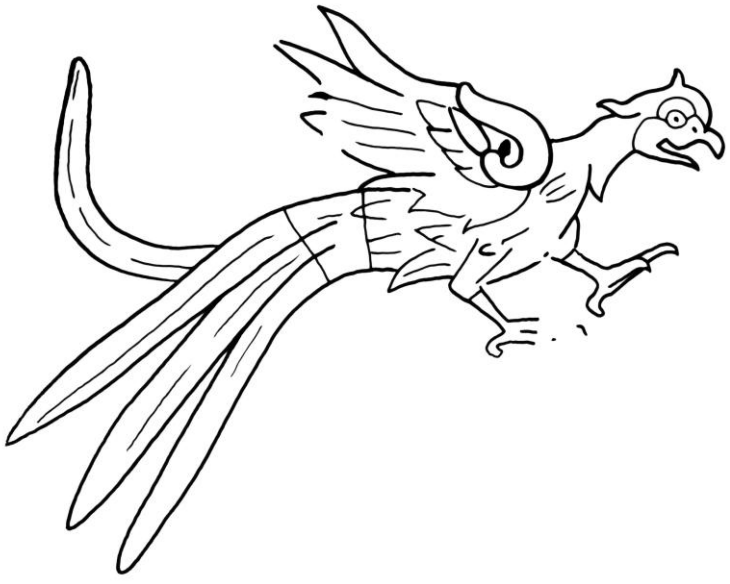
c

Figure 3.9. Animals from Red Temple Mural of Cacaxtla. a) Blue toad from eastern staircase. From Martin 2013:fig. 11.1. b) Yellow jaguar-spotted toad from western staircase. From Martin 2013:fig. 11.6. c) Yellow jaguar turtle from western staircase. From Brittenham 2013:fig. 5.52.

Figure 3.10. Ballcourt ring from Eastern Ballcourt, Xochicalco.

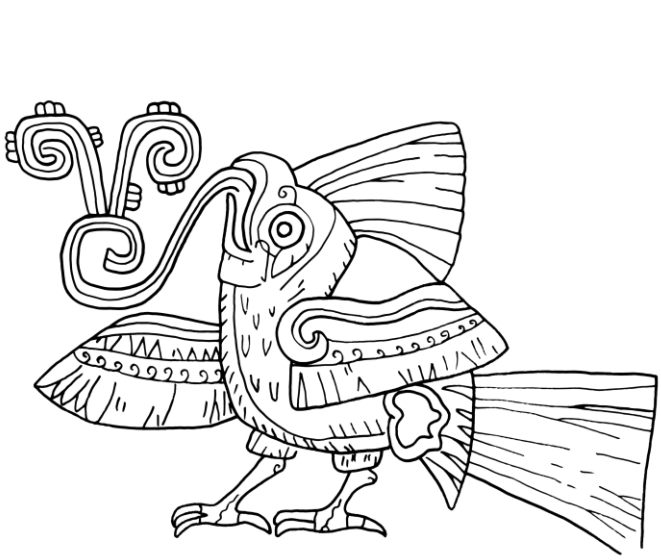
a

b



c

Figure 3.11. Quetzals in Late Classic Central Mexican art. a) Detail of alabaster vessel from Xochicalco, MNA. b) Descending quetzal almena, Xochicalco site museum. c) Detail of Red Temple mural, Cacaxtla.



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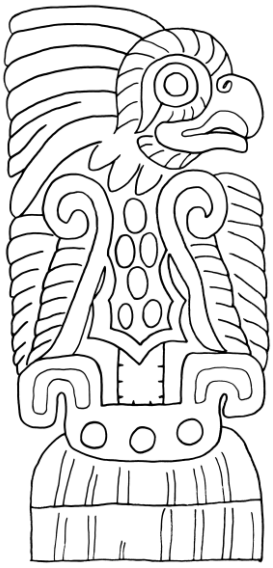

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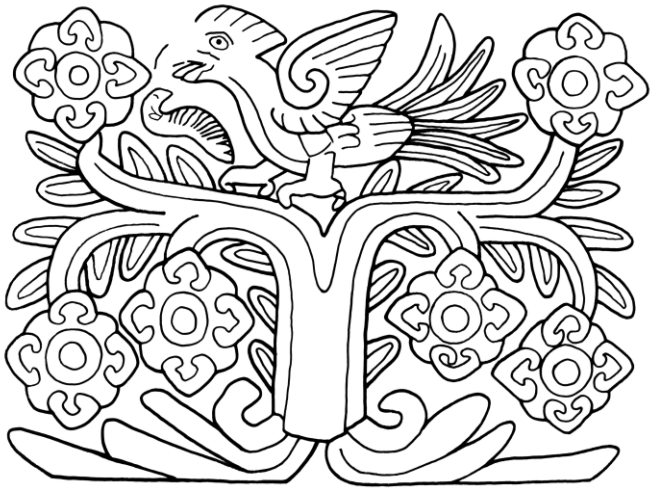


d

Figure 3.12. Quetzals with stylized wings in Mesoamerican art. a) Mural fragment from Teotihuacan, Museo Beatriz de la Fuente. b) Detail of column from Temple of Quetzalpapalotl, Teotihuacan. c) Quetzal effigy jar, Monte Alban. From Caso and Bernal 1952:fig. 298. d) Detail of Late Postclassic stone box, likely from the southern Basin of Mexico, MNA.

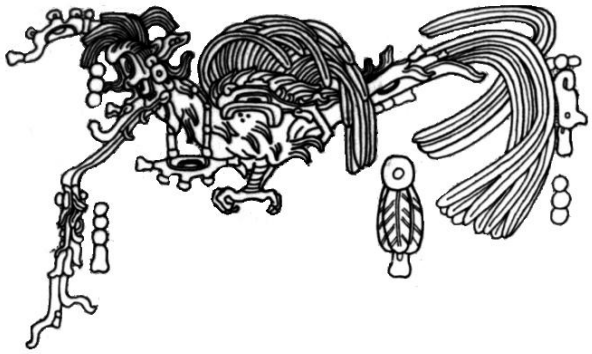


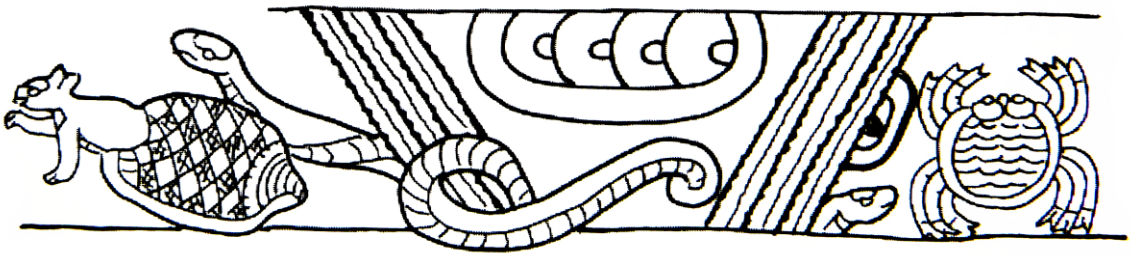
Figure 3.13. Principal Bird Deity on Tablet of the Foliated Cross, Palenque. Drawing by Linda Schele.

a b

Figure 3.14. Supernatural bats in Late Classic Maya art. a) detail of Chama-style vessel. Photo by Justin Kerr, K4018. b) detail of vessel. Photo by Justin Kerr, K5367.

a b

Figure 3.15. Supernatural bats in Borgia Group codices. a) Codex Vaticanus B, page 24. b) Codex Fejérváry-Mayer, page 41 (detail).



a

b

c

Figure 3.16. Water bands. a) Cacaxtla Structure A. Note the *le* sign at center and the eye on band to the right of the crab. From Taube, et al. 2010:fig. 56c. b) Tepantitla, Teotihuacan. c) Detail from Late Classic Maya Vase of the Seven Gods. After photograph by Justin Kerr. K2796.

Figure 3.17. Red Temple Mural of Cacaxtla, east face. From Brittenham 2013:fig. 5.43.

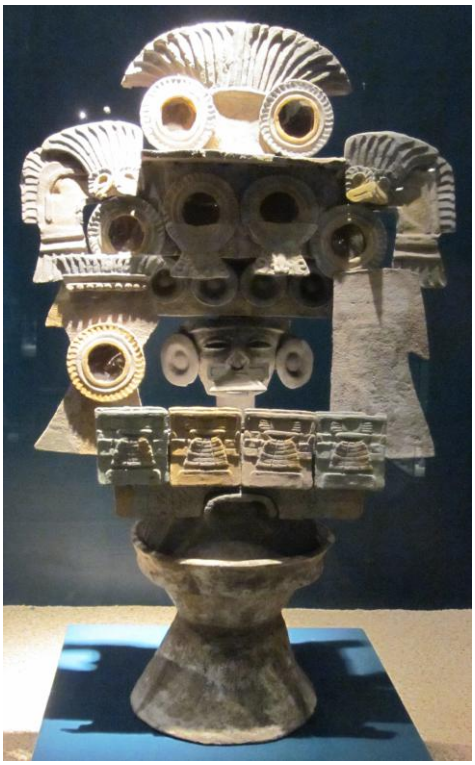
a  b

Figure 3.18. Theater-style censers from Teotihuacan. a) Teotihuacan site museum. Note butterfly-shaped nose ornament on central mask and pair of quetzals on the upper corners. b) MNA. Note butterfly-shaped nose ornament on central face and paired quetzals on either side.

Figure 3.19. Detail of North Wall mural, San Bartolo, Guatemala. Illustration by Heather Hurst.

Figure 3.20. Censer lid from Xico. Museo Rufino Tamayo, Oaxaca.

a

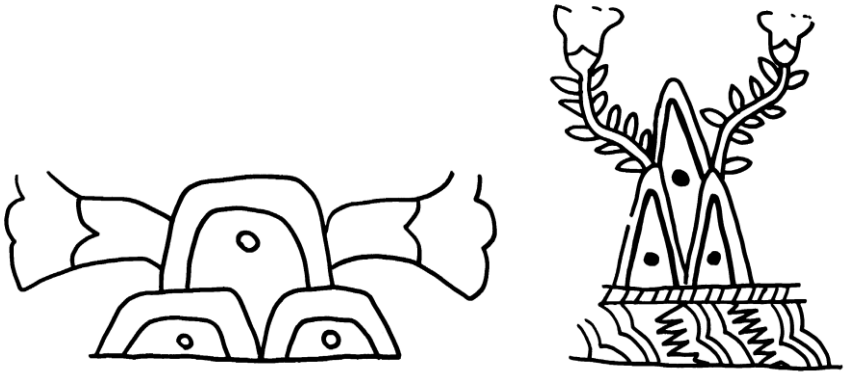
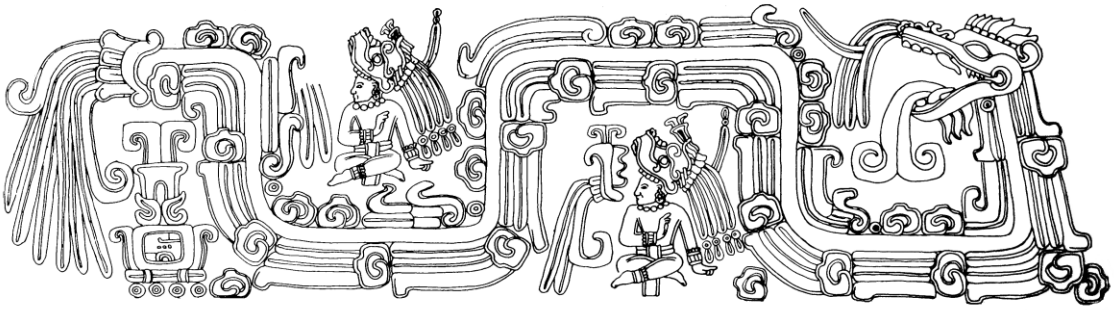
b 

Figure 3.21. Representations of Flower Mountain. a) Censer lid from Xico. Museo Rufino Tamayo, Oaxaca. Note triple mountains and flowering plants. b) Teotihuacano glyphic elements showing three mountains and flowering plants. From Taube 2005:figs.2a-b.

Figure 3.22. Floral appliqués from Ojo de Agua. Museo Municipal Techialoyan Tepemaxalco, San Antonio La Isla, Estado de México.

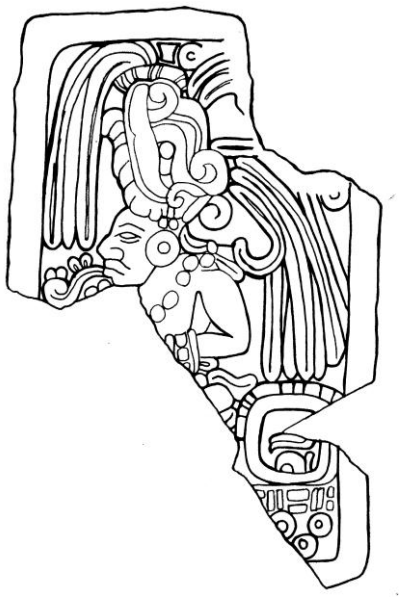
Figure 3.23. Deceased figures with floral breath elements from Ojo de Agua. Museo Municipal Techialoyan Tepemaxalco, San Antonio La Isla, Estado de México.

Figure 3.24. Butterflies in Mesoamerican art. a) Butterfly emerging from portal on vessel from Teotihuacan. After Seler 1991-1998:6:fig. 178a. b) Detail of vessel from Teotihuacan. After Seler 1991-1998:6:fig. 167. c) Late Postclassic petroglyph from Cuahilama, Mexico D.F. d) Detail of Late Postclassic stone base, MNA. e) Itzpapalotl, Codex Vaticanus B, page 63v. f) Detail from sixteenth-century Lienzo de Zacatepec, Oaxaca. g) Late Postclassic Cholula Polychrome plate portraying butterfly head. From Pohl, et al. 2012:fig. 15.



a

b



c

Figure 3.25. a) The lower talud of the Pyramid of the Plumed Serpents at Xochicalco. Drawing by Virginia Smith. b) Detail of seated figure on the Pyramid of the Plumed Serpents. c) Ceramic plaque from Xochicalco. After Gonzalez Crespo et al. 1995:fig. 23.

Figure 3.26. Serpent with blossom on its tail from façade of Structure 1, Hochob, Campeche.

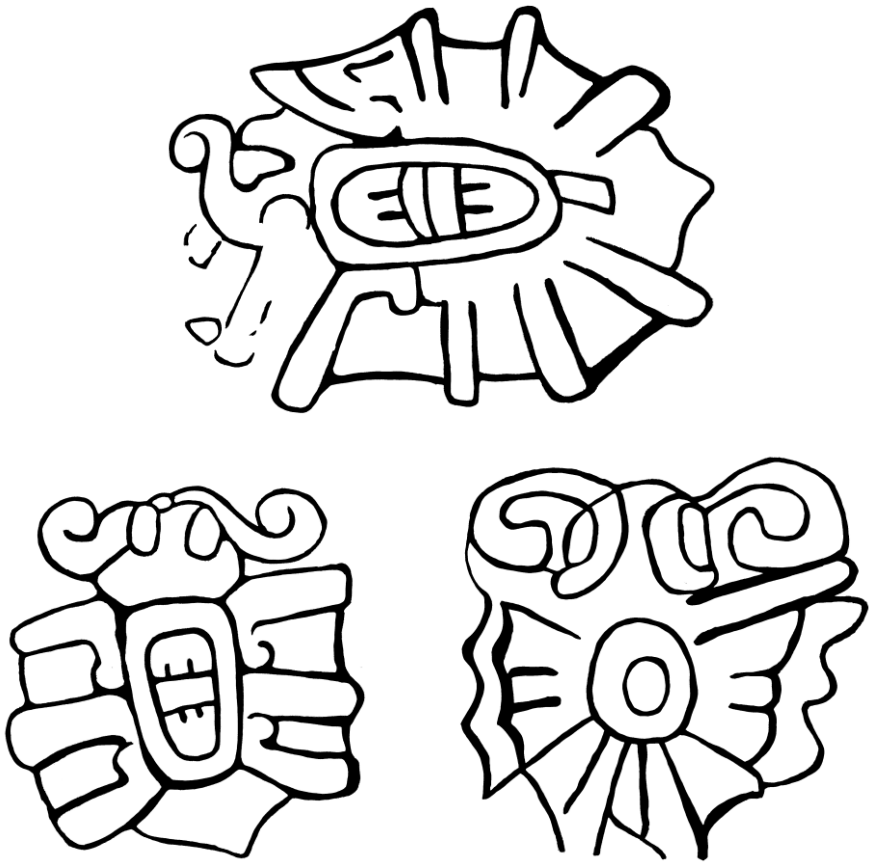


Figure 3.27. Butterflies incised on stone plaques from the Animal Ramp, Xochicalco.

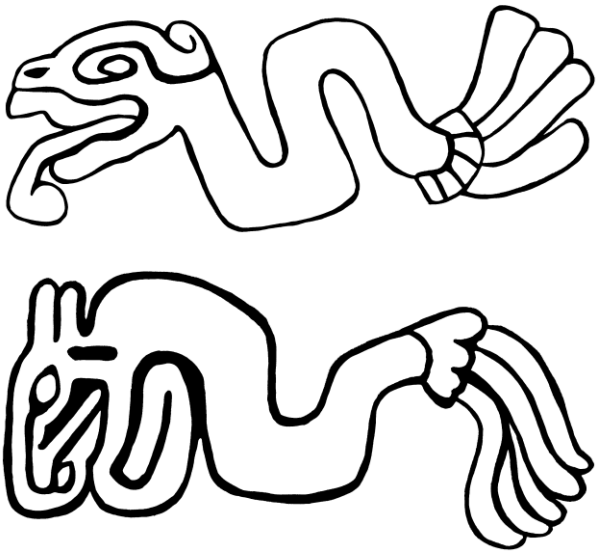


Figure 3.28. Feathered serpents on stone plaques from the Animal Ramp, Xochicalco.

Figure 3.29. Xochicalco butterfly relief sculptures. From Garza Tarazona and Mayer Guala 2005:fig. 53.

Figure 3.30. Trapezoidal Stone, Teotenango.

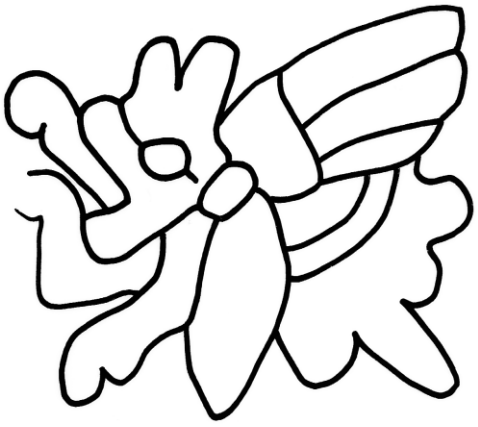


Figure 3.31. Butterfly on relief-carved panel, Tula. After Taube n.d.:fig. 5g.

Figure 3.32. Detail of pyriform vessel from Chak Mool, Quintana Roo. After Taube n.d.:fig. 8a.

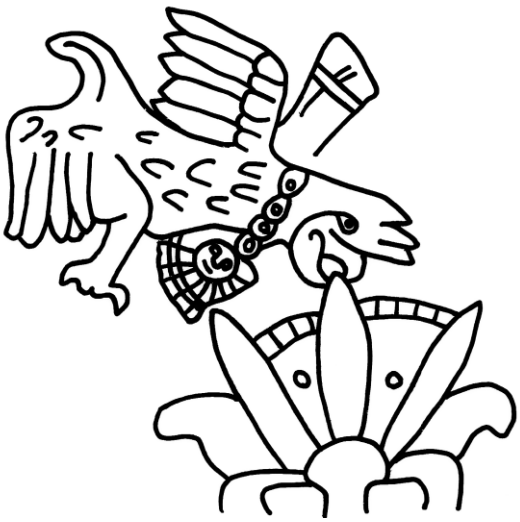


Figure 3.33. Quetzal with necklace from Chichén Itzá. After Taube n.d.:fig. 14c.

a

b

Figure 3.34. *Palma* portraying a descending quetzal, Late Classic, Veracruz, LACMA. a) From http://collections.lacma.org/node/173219. b) Detail of paired butterfly heads.

Figure 3.35. Fragmentary figure from Cámara de las Ofrendas, Xochicalco. MNA.

Figure 3.36. Vessel with butterfly features, Xochicalco. From Nagao 2014:fig. 288.

Figure 3.37. *Hacha* in the form of a butterfly. Xochicalco site museum (two views).

a

b

Figure 3.38. Butterfly and ballgame related imagery from Late Classic Veracruz. a) Figurine in the form of a ballplayer. From Whittington 2001:plate 53. b) *Palma*. From Wilkerson 1990:no. 76.

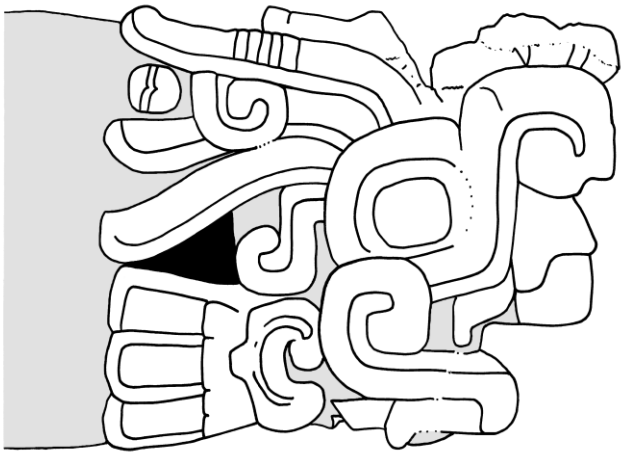


Figure 3.39. Eastern ballcourt marker, Plazuelas, Guanajuato.

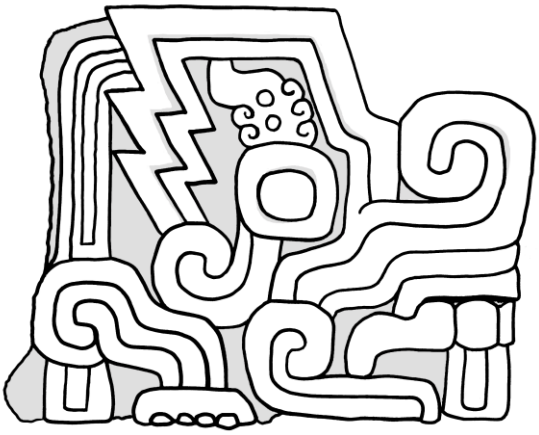
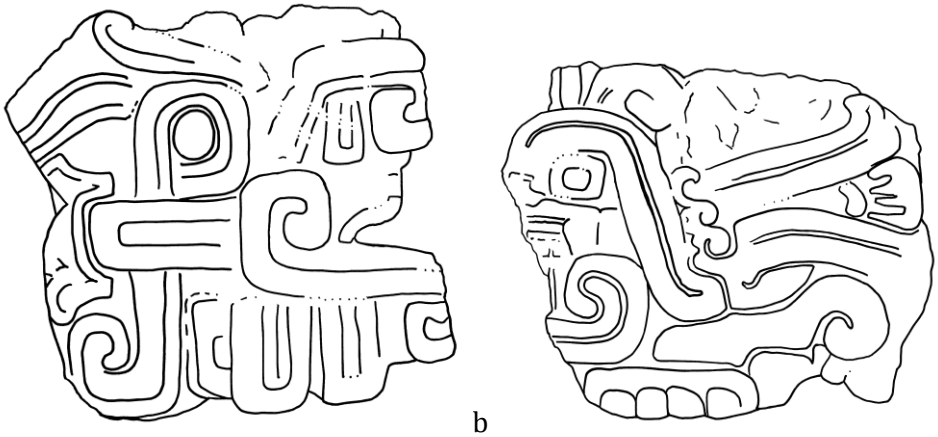
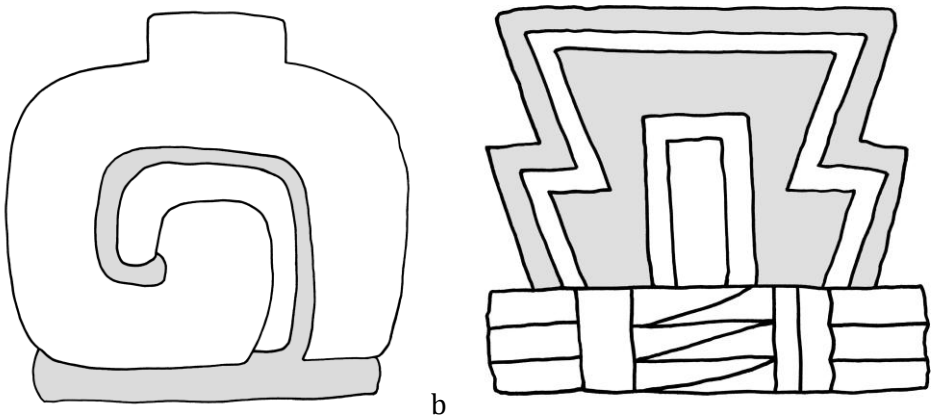


Figure 3.40. Western ballcourt marker, Plazuelas, Guanajuato.



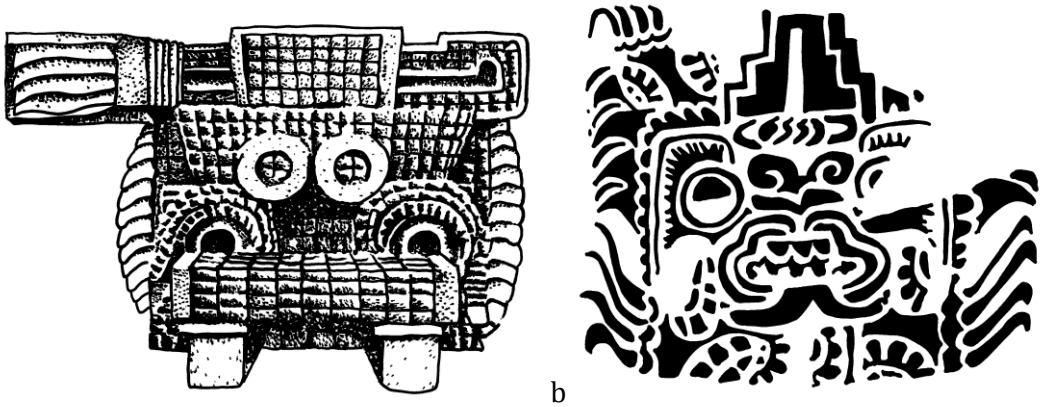
a b

Figure 3.41. Ballcourt markers, Plazuelas, Guanajuato. a) Probable butterfly. b) Probable feline War Serpent.



a b

Figure 3.42. Almenas from Plazuelas, Guanajuato. a) Cross-sectioned conch shell. b) Xi sign.



a b

Figure 3.43. The Teotihuacan War Serpent. a) Headdress from the façade of the Temple of Quetzalcoatl, Teotihuacan. After Caso and Bernal 1952:fig. 184a. b) Detail of painted vessel. After Seler 1991-1998:6:fig. 15.

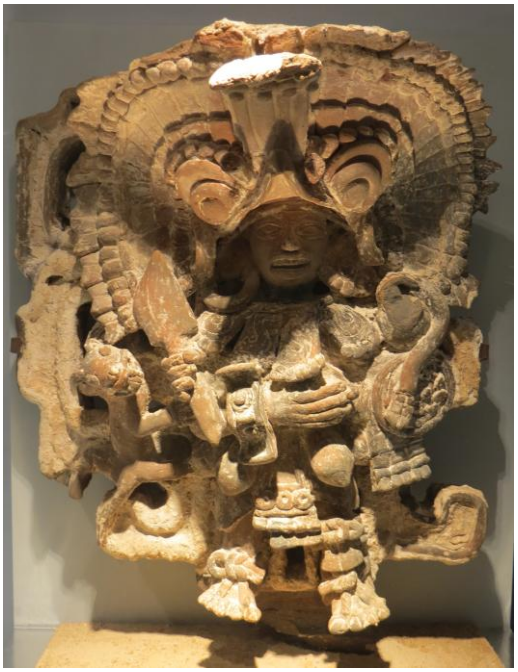
a  b

Figure 3.44. Los Once Señores de Cacaxtla figures with avian headdresses.

a b

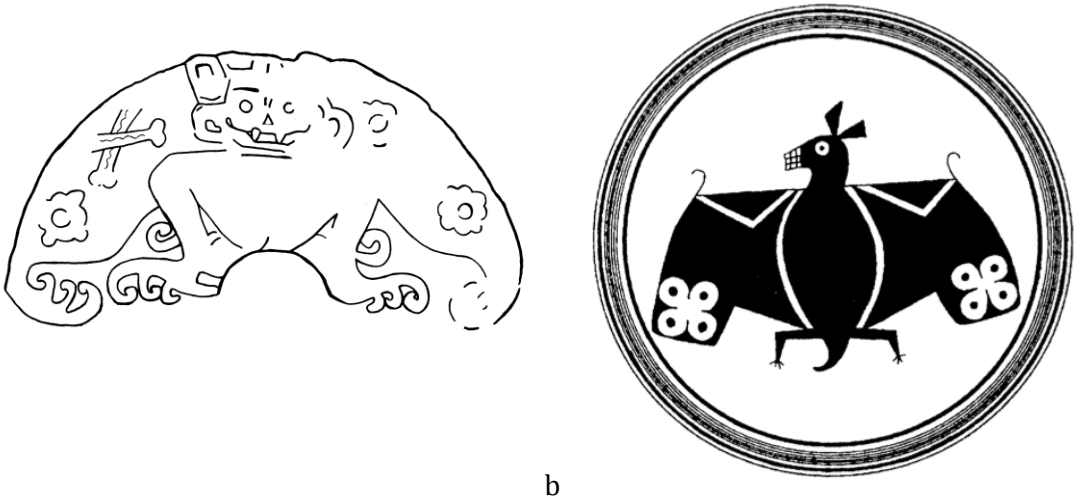
Figure 3.45. Tlaloc figures from Los Once Señores de Cacaxtla corpus.

Figure 3.46. Los Once Señores de Cacaxtla figures with War Serpent headdresses.

Figure 3.47. Appliqués from Ojo de Agua. Museo Municipal Techialoyan Tepemaxalco, San Antonio La Isla, Estado de México.

a b

Figure 3.48. Los Once Señores de Cacaxtla figures with butterfly headdresses.



a b

Figure 3.49. Bats with possible floral symbols on their wings. a) Bat from Eastern Ballcourt ring, Xochicalco. b) Mimbres bowl depicting a bat. From Hays-Gilpin and Hill 1999:fig. 2a.

a

b

Figure 3.50. a) Codex Borgia, page 44. b) Detail.

Figure 3.51. Itzpapalotl, Codex Borgia, page 66.

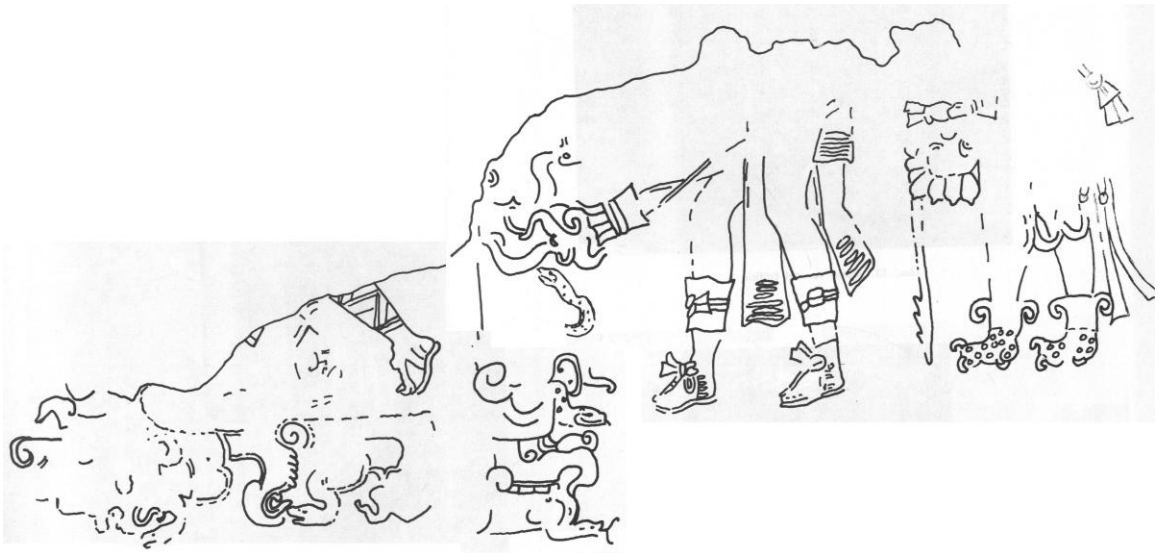
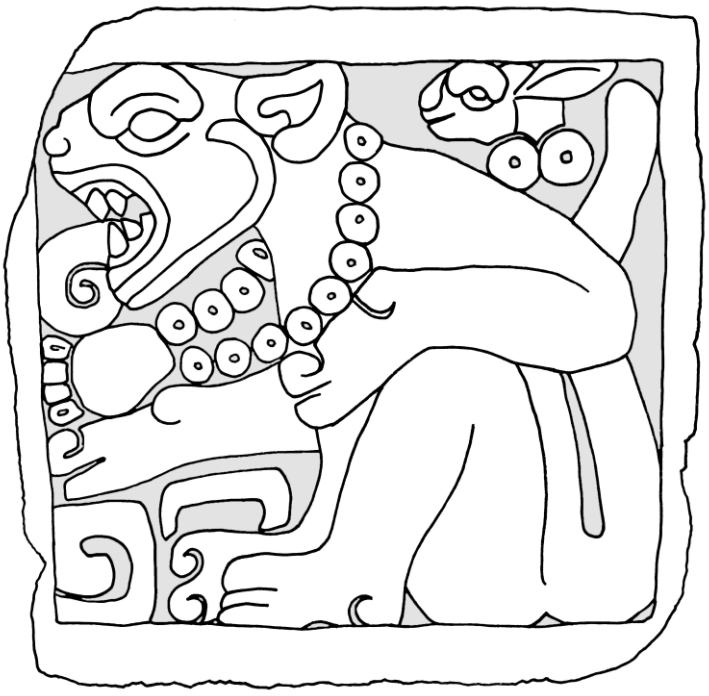


Figure 3.52. Inner mural from Structure A, Cacaxtla. From Lopez de Molina and Molina Feal 1986:pls. 51-52.

Figure 3.53. Unfired clay relief from Cacaxtla, Structure A. a) From Brittenham 2015:fig. 303. b) Line drawing.



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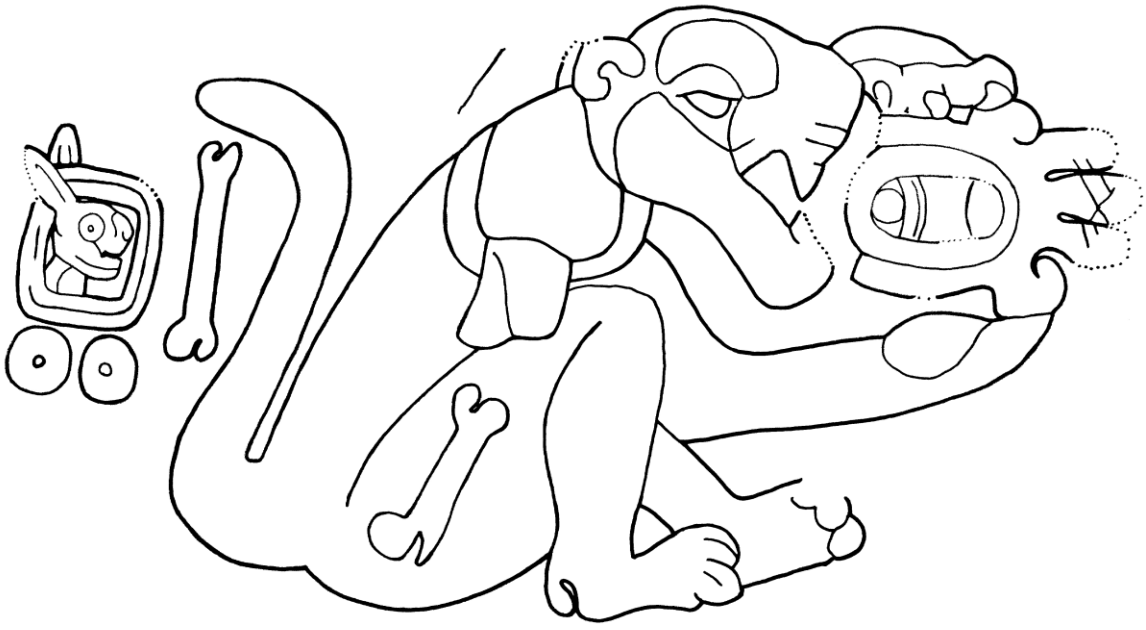


b

Figure 3.54. Felines with 2 Rabbit dates from Teotenango. a) Trapezoidal Stone. b) Petroglyph.

Figure 3.55. Detail of Battle Mural from Cacaxtla Structure B. Note the femur in front of the standing warrior at left, and the bloody heart glyphic compounds in front of his face and behind the standing warrior at right. From Brittenham 2015:fig. 169.

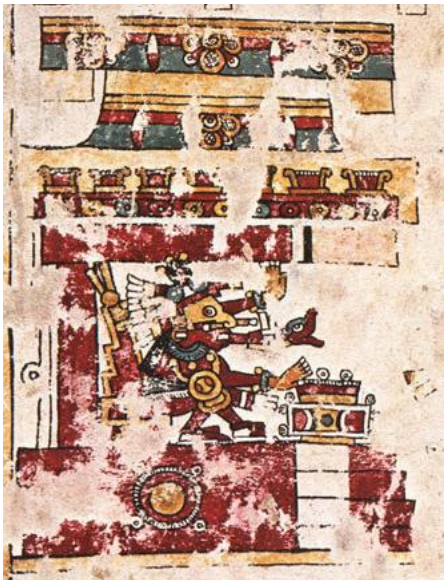


Figure 3.56. Codex Borgia, page 37 (detail).

a

b

Figure 3.57. a) Urn from Cacaxtla with figure in quetzal costume, Cacaxtla site museum. b) Detail.

Figure 3.58. Urn from Cacaxtla with butterfly-costumed figure. Museo Regional de Tlaxcala (two views and modified image with background removed. Note circular jades that frame the scene).

Figure 3.59. Urn from Cacaxtla with figure in butterfly costume. Cacaxtla site museum.

a b

Figure 3.60. Coyotlatelco vessels with floral motifs. a) Teotenango site museum. b) Museo Municipal Techialoyan Tepemaxalco, San Antonio La Isla, Estado de Mexico.

Chapter 4 Figures

a

b

Figure 4.1. Boulder *maqueta* from Xochicalco showing temple and ballcourt. Xochicalco site museum. a) Three-quarter view. b) Top view by author and Eric Heller.

a

b

Figure 4.2. *Maqueta* from San Miguel Ixtapan, Estado de México. a) Three-quarter view. b) Top view by author and Eric Heller.

Figure 4.3. *Maqueta* from Cuahilama, México D.F.

Figure 4.4. Miniature temple from the La Ventilla compound, Teotihuacan. Museo Beatriz de la Fuente, Teotihuacan.

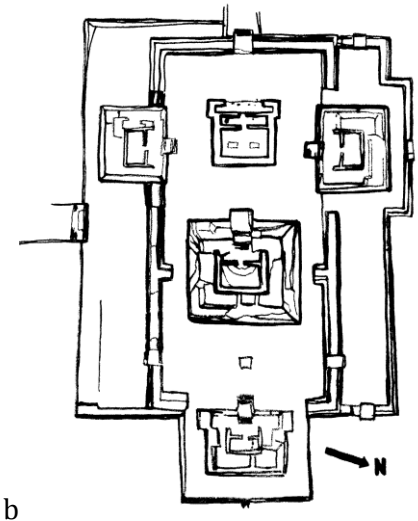
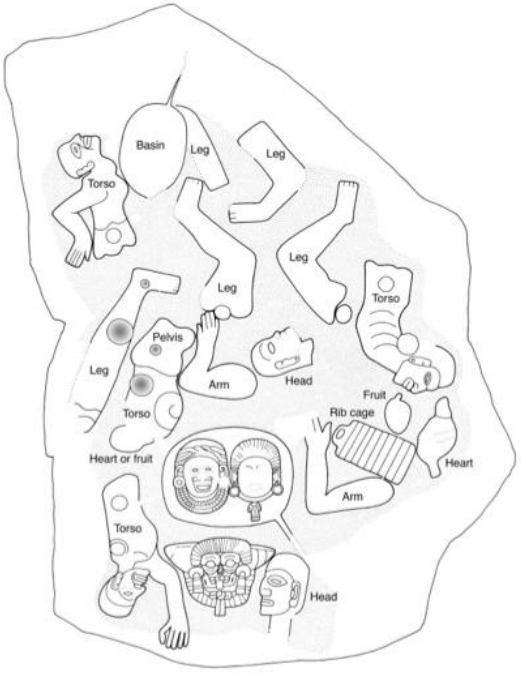
a b 

Figure 4.5. a) *Maqueta* showing sunken patio group, Plazuelas, Guanajuato. From Castañeda López, Carlos and Jorge Quiroz Rosales 2004:fig. 13. b) Plan of Casas Tapadas complex, Plazuelas, Guanajuato. After Castañeda López, Carlos and Jorge Quiroz Rosales 2004:fig. 2.

Figure 4.6. *Maqueta* from northern wall of Casas Tapadas complex, Plazuelas.

Figure 4.7. Stone cupules, Plazuelas, Guanajuato.



a

b

Figure 4.8. Cotzumalhuapa-style monuments with basins. a) Bilbao Monument 93. From Chinchilla Mazariegos 2014:fig. 11. b) Bilbao Monument 34. From Parsons 1969:pl. 49f.

Figure 4.9. Late Classic Maya floodable ballcourt vessel. From Whittington 2001:164.

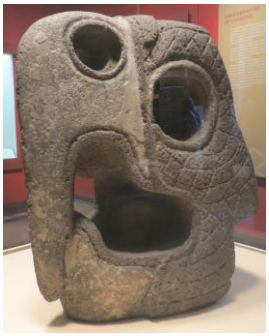
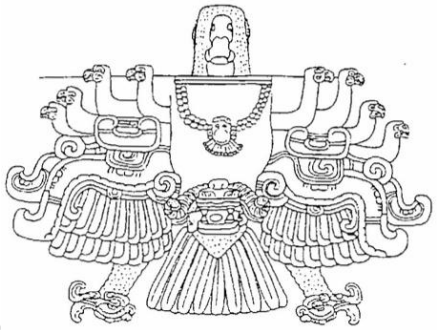

a 
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Figure 4.10. Macaw imagery from Xochicalco and Copán. a) "Ballcourt marker" from Xochicalco, MNA. b) Early Classic stucco relief from ballcourt. From Taube 2005:Fig. 4b. c) Macaw from corner of ballcourt façade. From Fash 2011:fig. 142.

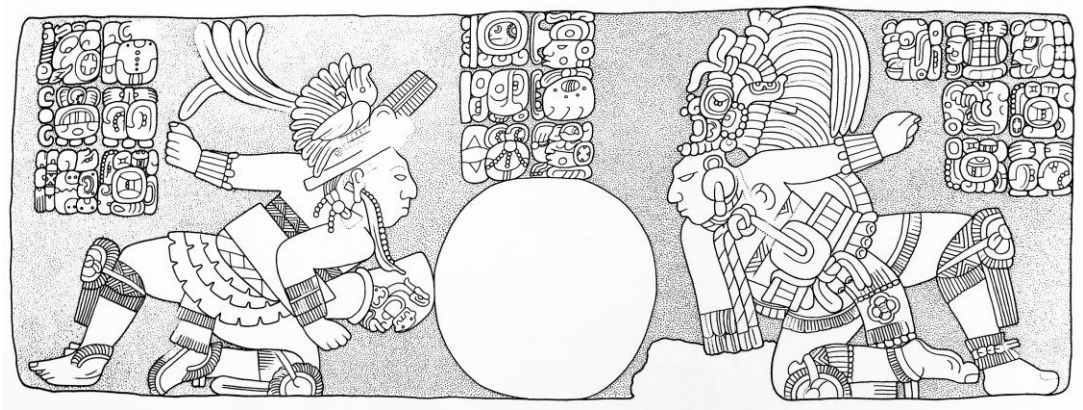


Figure 4.11. Toniná Monument 171. Drawing by Ian Graham.

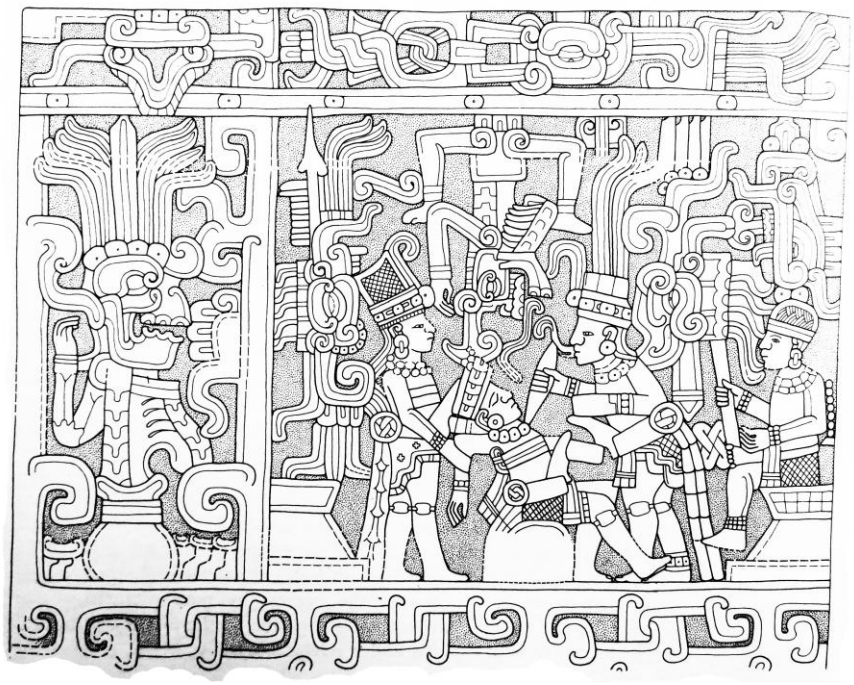


Figure 4.12. South Ballcourt Panel 4, El Tajín. From Kampen 1972:Fig. 23.

a b

Figure 4.13. *Hachas* from Xochicalco. a) *Hacha* excavated in the Cámara de las Ofrendas, Xochicalco. MNA. b) *Hacha* in the form of a butterfly. Xochicalco site museum.

Figure 4.14. El Baúl Monument 27. From Chinchilla Mazariegos 2009:fig. 6.12.

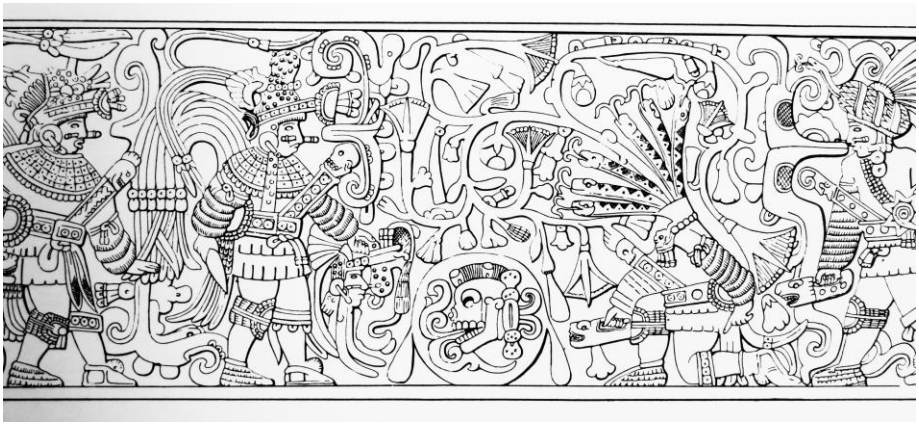


Figure 4.15. Panel from Great Ballcourt of Chichén Itzá. Tozzer 1957:fig. 474.

a

b

Figure 4.16. Decapitated ballplayers. a) Relief from Aparicio, Veracruz. MAX. b) Detail from vessel from Escuintla, Guatemala. Denver Art Museum, 1980.0237.

Figure 4.17. *Tzompantli* (right) adjacent to the Templo Mayor of Tenochtitlan, Codex Ramirez.

Figure 4.18. Structure B, Templo Mayor archaeological site, Mexico City.

Figure 4.19. Detail of *tzompantli* platform from Chichén Itzá.

Figure 4.20. Teotihuacan-style censer from Escuintla, Guatemala. From Chinchilla Mazariegos 2010:fig. 8.

Figure 4.21. Stone skulls from Xochicalco. Xochicalco site museum.

Figure 4.22. Ballcourt and adjacent four-sided platform, Toniná.

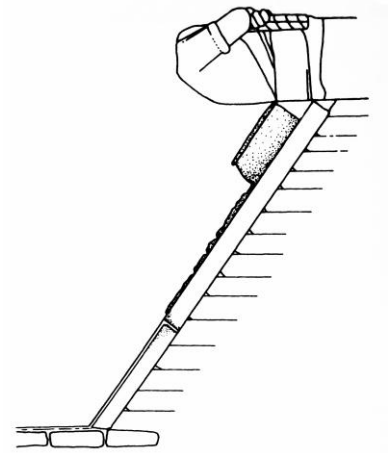


Figure 4.23. Tenoned ballcourt marker in the form of a bound captive and profile of main ballcourt, Toniná. From Taladoire and Colsenet 1991:fig. 9.5.

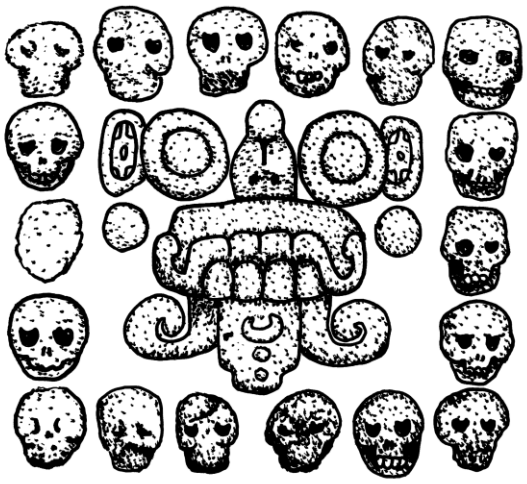
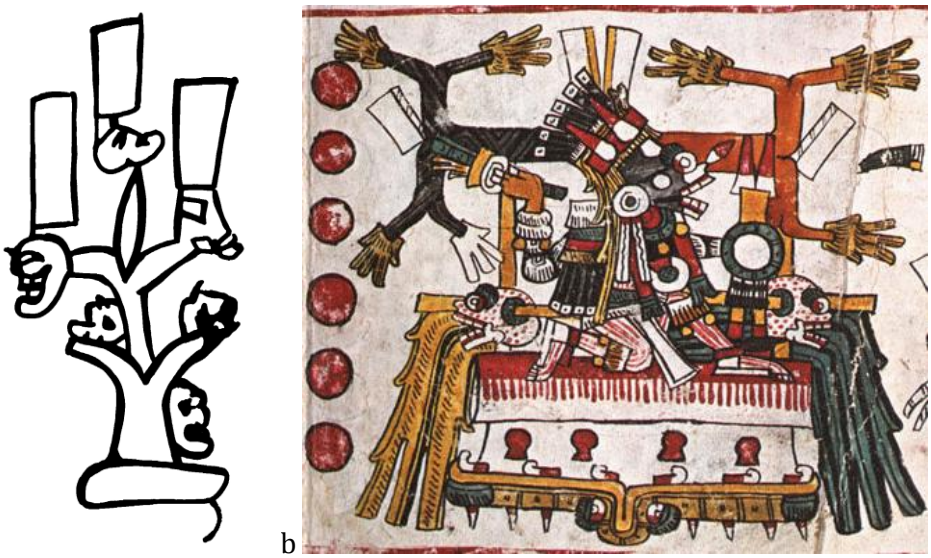


Figure 4.24. Detail of Stair block I of Structure 10-16L, Copán. After Fash and Fash 2000:fig. 14.6.



a b

Figure 4.25. *Tzompantli* in Postclassic Central Mexican art. a) Detail of mural from Ixtapantongo, Estado de Mexico. After Villagra Caleti 1971:fig. 27. b) Detail of Codex Borgia, page 19.

Figure 4.26. Detail of stucco façade at Toniná portraying inverted severed head.

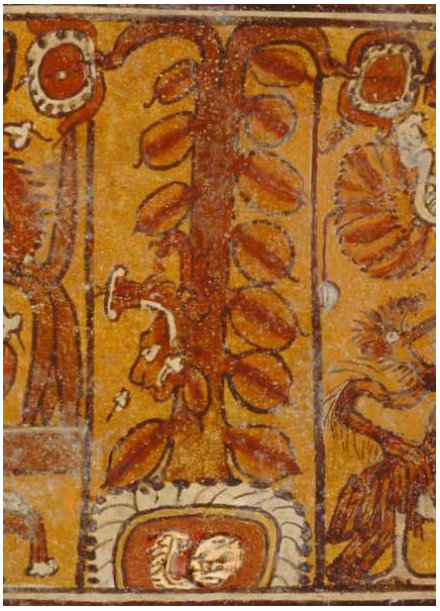


Figure 4.27. Detail of Late Classic Maya polychrome vase. Photograph by Justin Kerr. K5615.

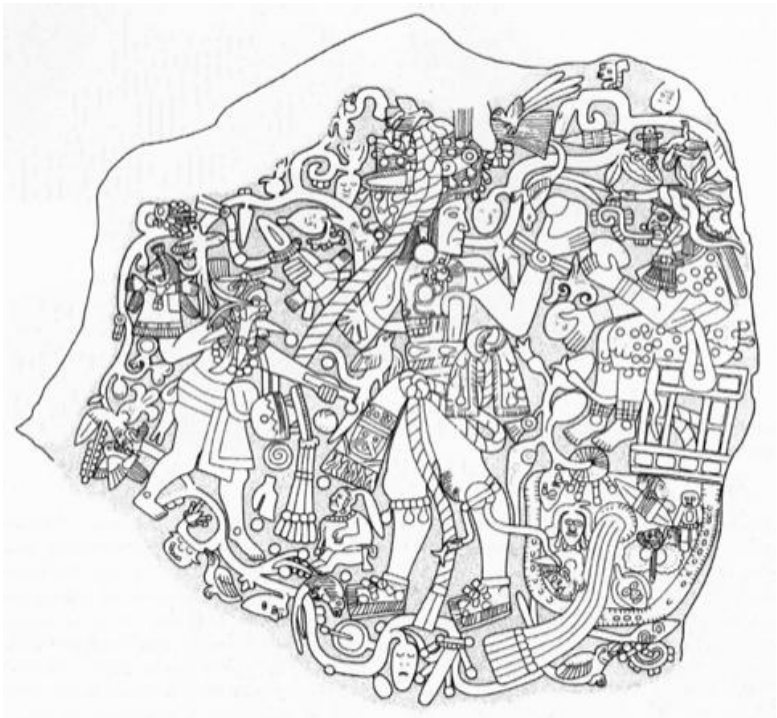


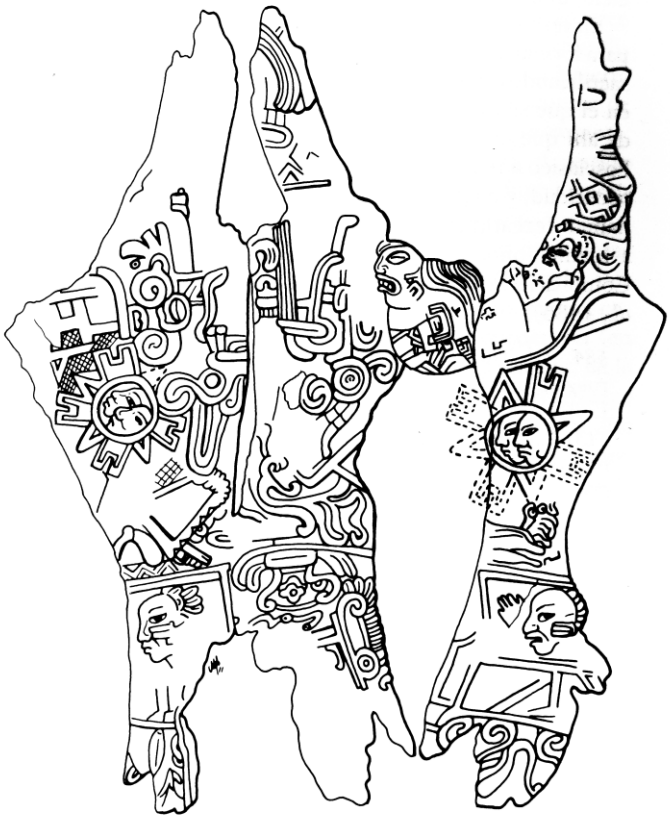
Figure 4.28. Bilbao Monument 21. From Chinchilla Mazariegos 2013:fig. 12.

a b

Figure 4.29. a) Bilbao Monument 3. From Chinchilla Mazariegos 1998:9. b) Detail after Chinchilla Mazariegos 1998:9.

Figure 4.30. Detail from Cacaxtla Battle Mural. From Brittenham 2015:fig. 169.

a



b

Figure 4.31. Carved bone from El Palacio, Cacaxtla. a) Cacaxtla site museum. b) From Piña Chán 1998:fig. IV.2.

Figure 4.32. Carved mandible from Cacaxtla. Cacaxtla site museum.

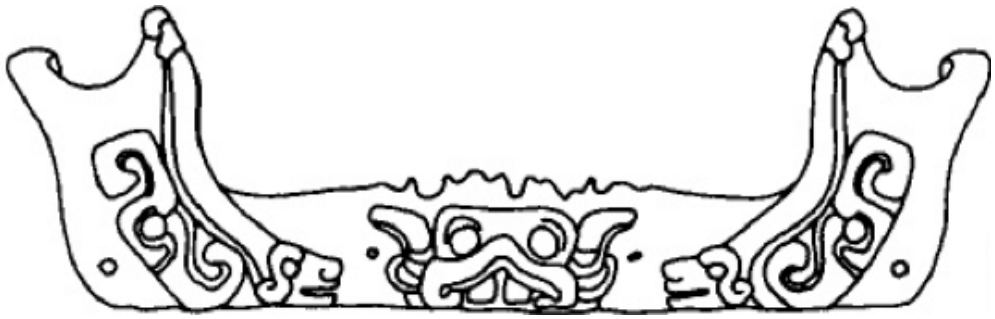


Figure 4.33. Carved mandible from Xico. From Franco 1968:plate XVII.

Figure 4.34. Carved occipital region of human skull, Xochicalco. Xochicalco site museum.

Figure 4.35. Bone rasps from Cacaxtla. Cacaxtla site museum.

Figure 4.36. Perforated human skull from Cacaxtla Structure B. Cacaxtla site museum.

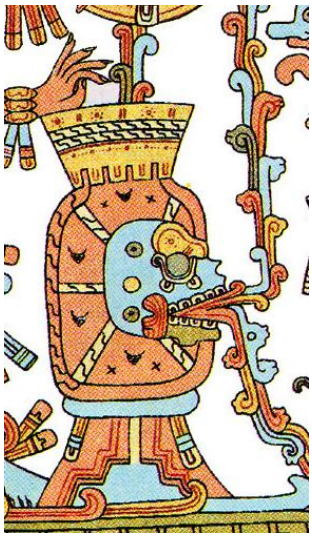
a b 

Figure 4.37. The use of bones as musical instruments in Late Postclassic artwork. a) Detail of Codex Vienna, page 24. b) Detail of Santa Rita mural, Belize. From Gann 1900.

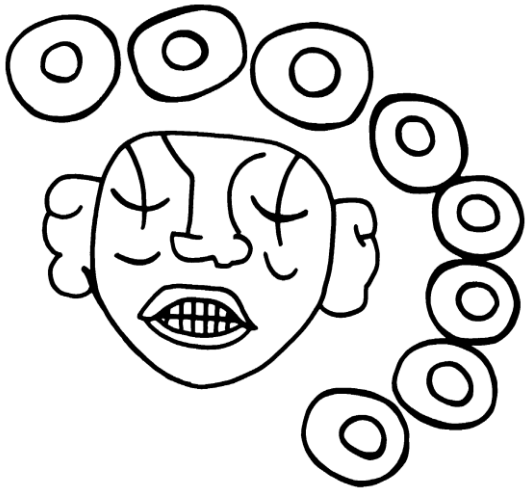


Figure 4.38. Probable Xipe Totec from Zacuala compound, Teotihuacan. After Sejourne (2002 [1959]:fig. I.6).

a b

Figure 4.39. Large ceramic Late Classic Xipe Totec sculptures. a) Example from Xolalpan, Teotihuacan. MNA. b) Example from San Mateo Tezoquipan. Museo Templo Mayor.

a b

c

Figure 4.40. Xipe Totec figures from Los Once Señores de Cacaxtla corpus. a) Figure holding probable *chicahuaztli* staff. Cacaxtla site museum. b) Cacaxtla site museum. c) Photo courtesy of Mario Martínez Lara.Ceramic sculpture, Cacaxtla site museum.

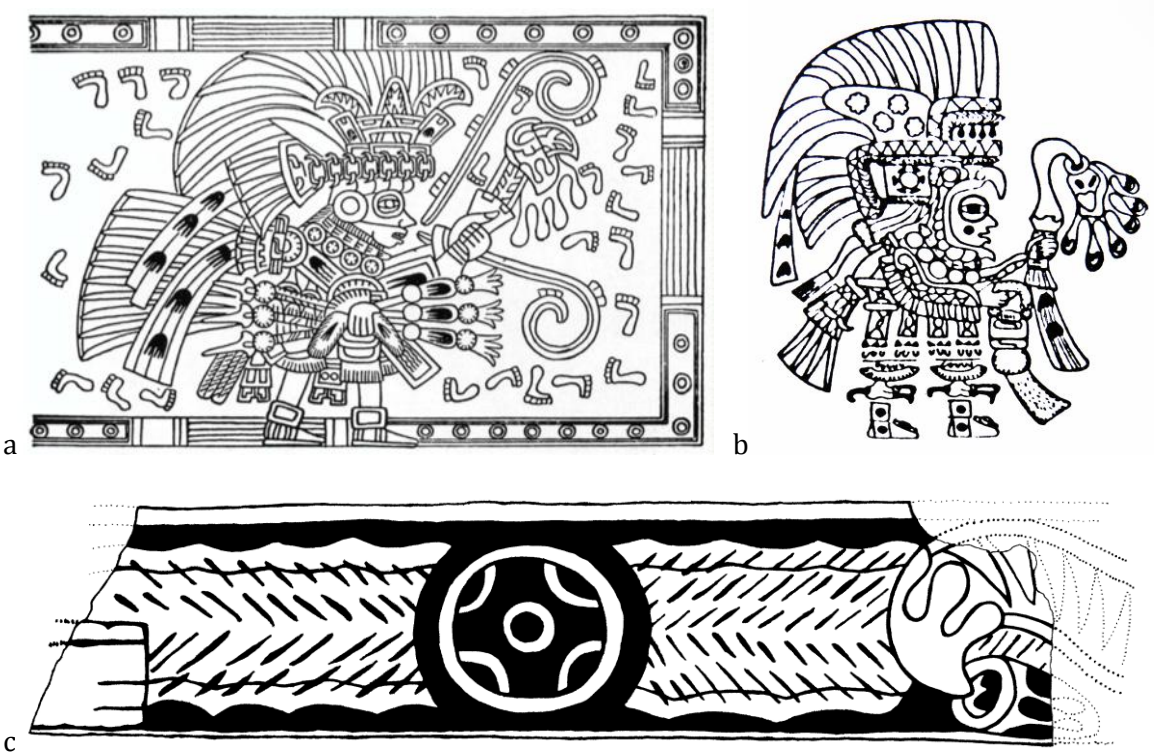
Figure 4.41. Detail from Palace Tablet, Palenque.

a b

Figure 4.42. Flayed figures from Late Classic southern Guatemala. a) Ceramic effigy figure from El Baúl. From Chinchilla Mazariegos 2014:fig. 3. b) Tenoned stone head from Finca El Portal. From Chinchilla Mazariegos 2014: fig. 6.

Figure 4.43. Greenstone pendant from Cacaxtla. From López de Molina and Molina Feal 1986:Pl. 161.

Figure 4.44. Captive Stair, Cacaxtla. From Brittenham 2015:fig. 7.



a b c

Figure 4.45. Mural fragments depicting Teotihuacan warriors with obsidian blades piercing hearts. a) Atetelco. From Kubler 1967:fig. 14. b) Zone 5. From Von Winning 1987:I:fig. XIII.7b. c) Painted border depicting quincunx and obsidian blade with heart, Zacuala, Teotihuacan. After Miller 1973:fig. 219.

Figure 4.46. Mural from Teotihuacan. From Millon 1988b:fig. V.11.

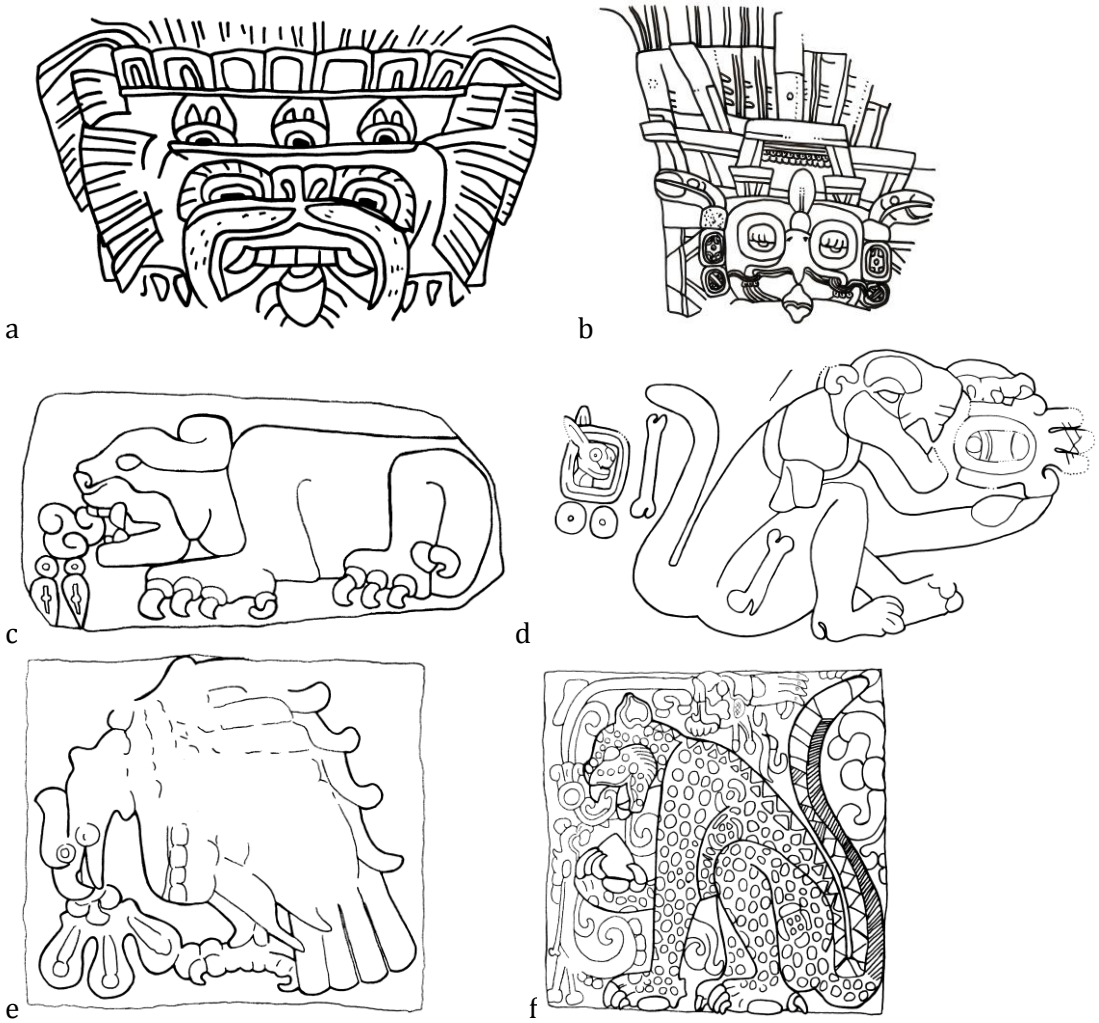
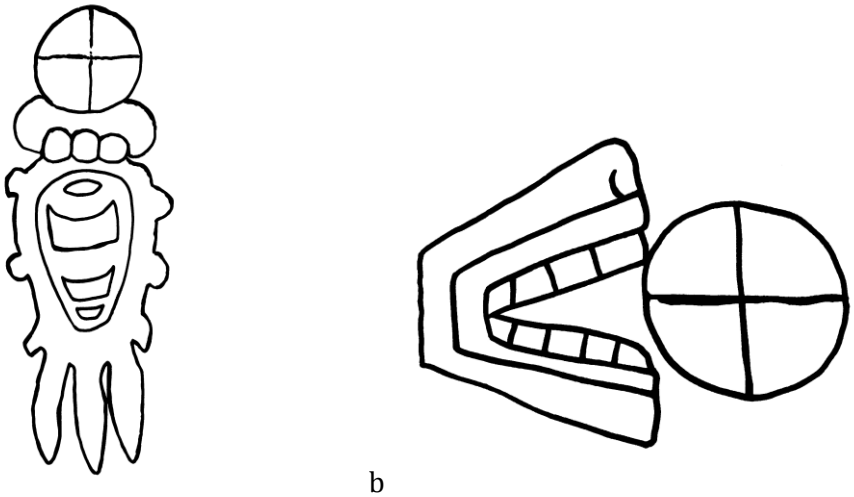


Figure 4.47. Animals devouring hearts. a) War Serpent from Teotihuacan vessel. After Evans 2010:pl. 10a. b) Detail of headdress from Piedras Negras Stela 9. After drawing by Ian Graham. c) Monument 1, San José de las Huertas, Ejutla. After Urcid 2010:fig. 4. d) Petroglyph from Teotenango. e) Bird of prey on Pyramid B, Tula. f) Jaguar on Platform of the Eagles and Jaguars, Chichén Itzá.

a b c

Figure 4.48. Sacrificial imagery from Piedras Negras. a) Detail of Stela 11. After drawing by Ian Graham. b) Detail of Stela 7. After drawing by Ian Graham. c) Detail of Stela 8. After drawing by Ian Graham.



a b

Figure 4.49. Glyphic compounds with jaws and quartered disks. a) Battle Mural, Cacaxtla. b) Pyramid of the Plumed Serpents, Xochicalco.

a b

Figure 4.50. Heart extraction depicted on the eastern talud of the Cacaxtla Battle Mural. a) After Uriarte Castañeda and Velázquez García 2013:fig. 14.53. b) From Uriarte Castañeda and Velázquez García 2013:fig. 14.30.

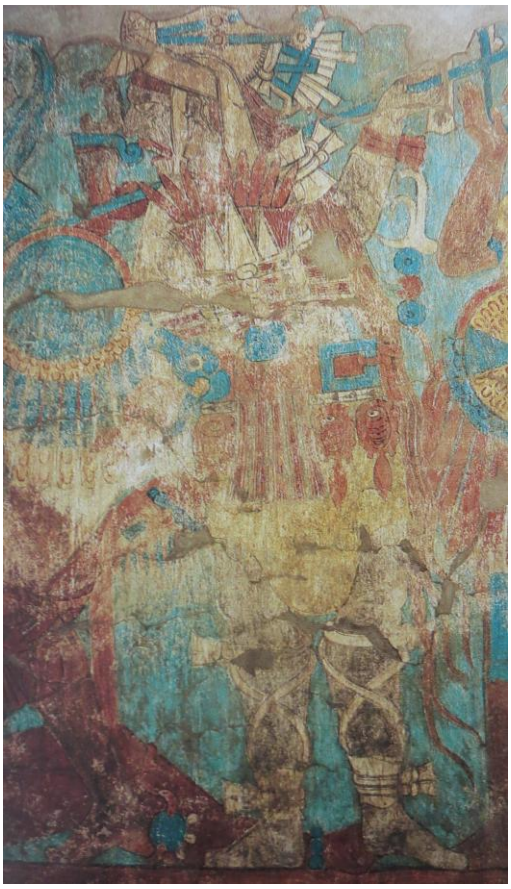
a b 

Figure 4.51. 3 Deer represented on the Battle Mural at Cacaxtla. a) Eastern talud. From Matos Moctezuma 1987:59. b) Western talud. From Matos Moctezuma 1987:74.

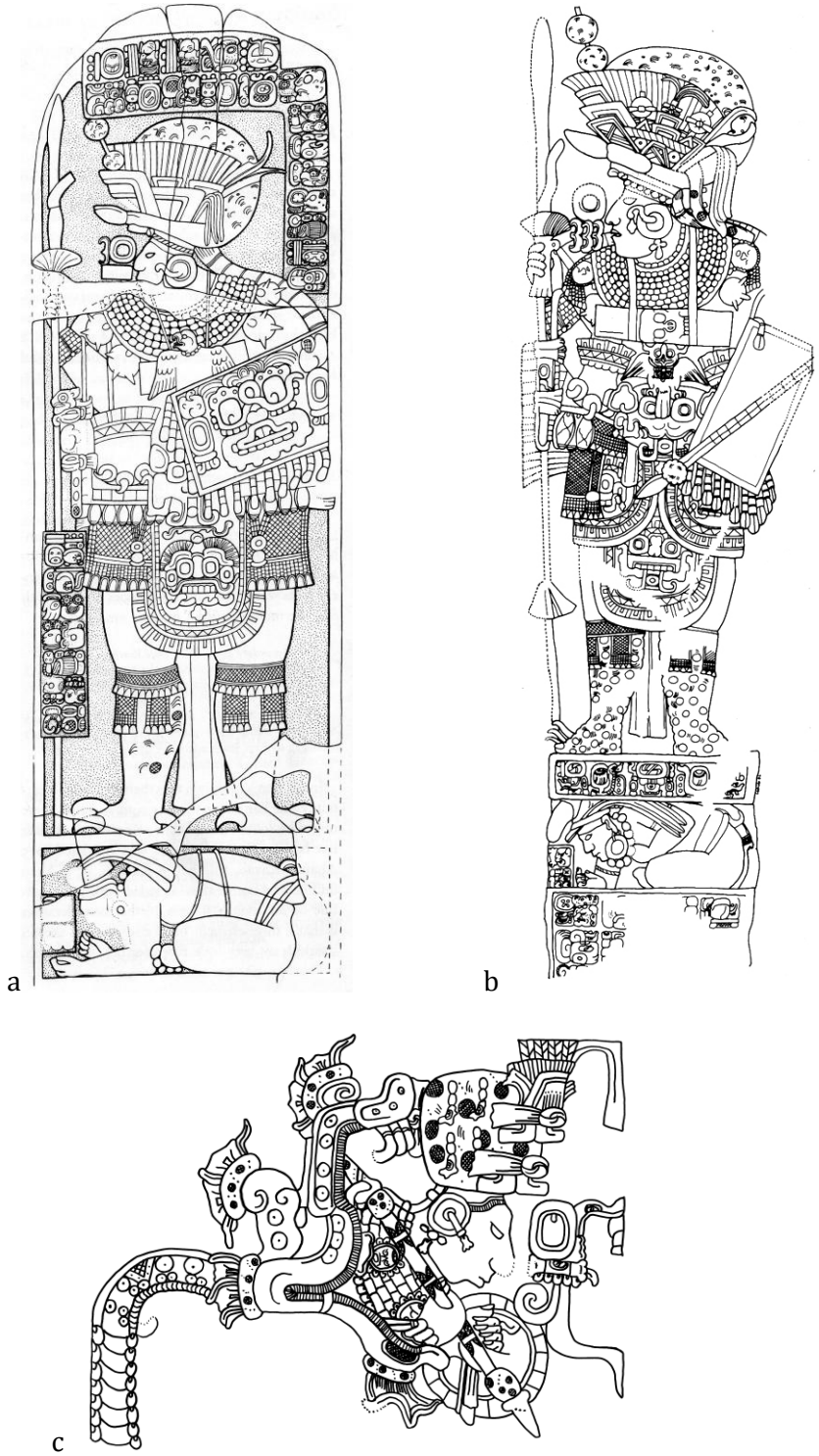
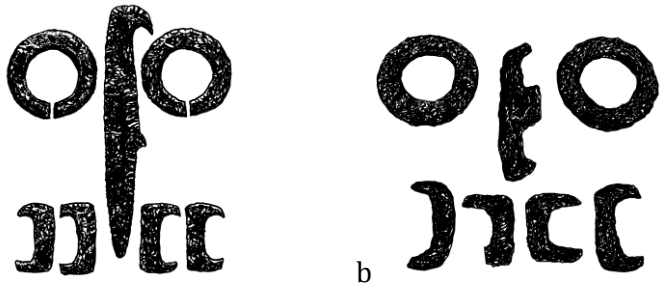
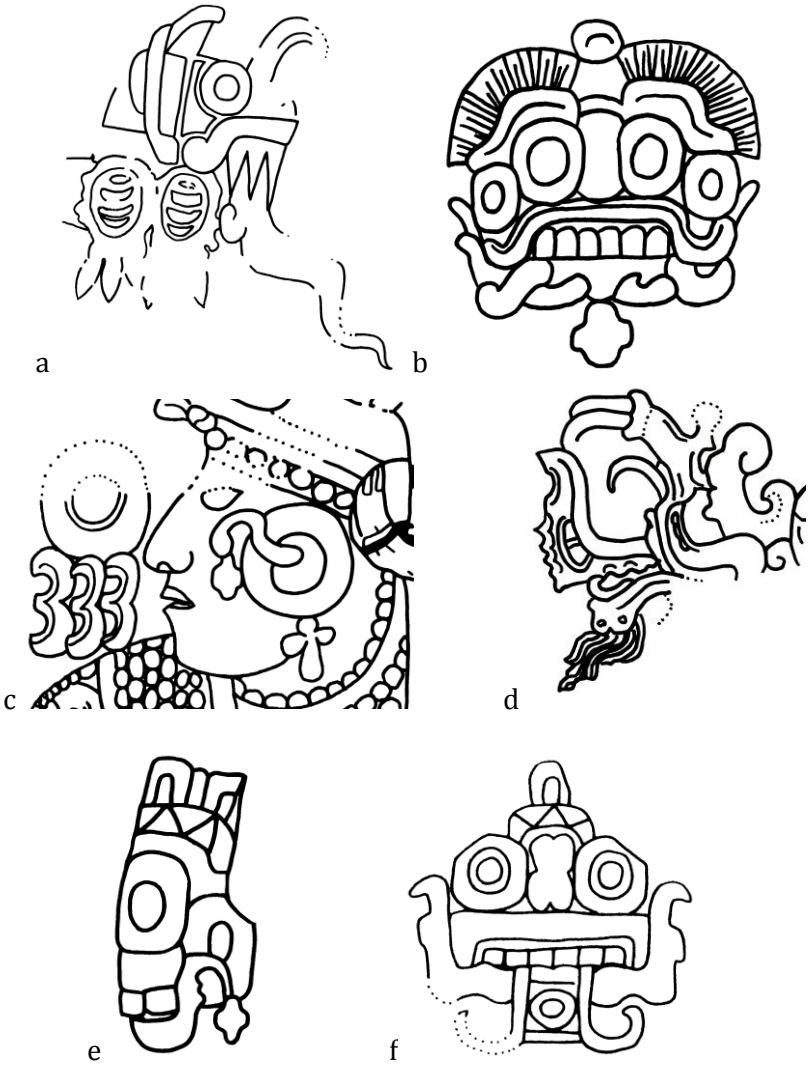


Figure 4.52. Late Classic Maya Tlaloc regalia. a) Aguateca Stela 2. Drawing by Ian Graham. b) Dos Pilas Stela 16. Drawing by Linda Schele. c) Detail of Yaxchilan Lintel 25. After drawing by Linda Schele.



a b

Figure 4.53. Obsidian masks from a) Cacaxtla and b) Xochicalco.



a b

c d

e f

Figure 4.54. Hearts and obsidian in Tlaloc regalia. a) Detail of 3 Deer's belt, Cacaxtla Battle Mural. After Matos Moctezuma 1987:55. b) Apron mask on Aguateca Stela 2. After drawing by Ian Graham. c) Detail of Dos Pilas Stela 16. After drawing by Linda Schele. d) Detail of Piedras Negras Stela 9. After drawing by Ian Graham. e) Apron mask on Dos Pilas Stela 16. After drawing by Linda Schele. f) Mask from kilt on Dos Pilas Stela 16. After drawing by Linda Schele.

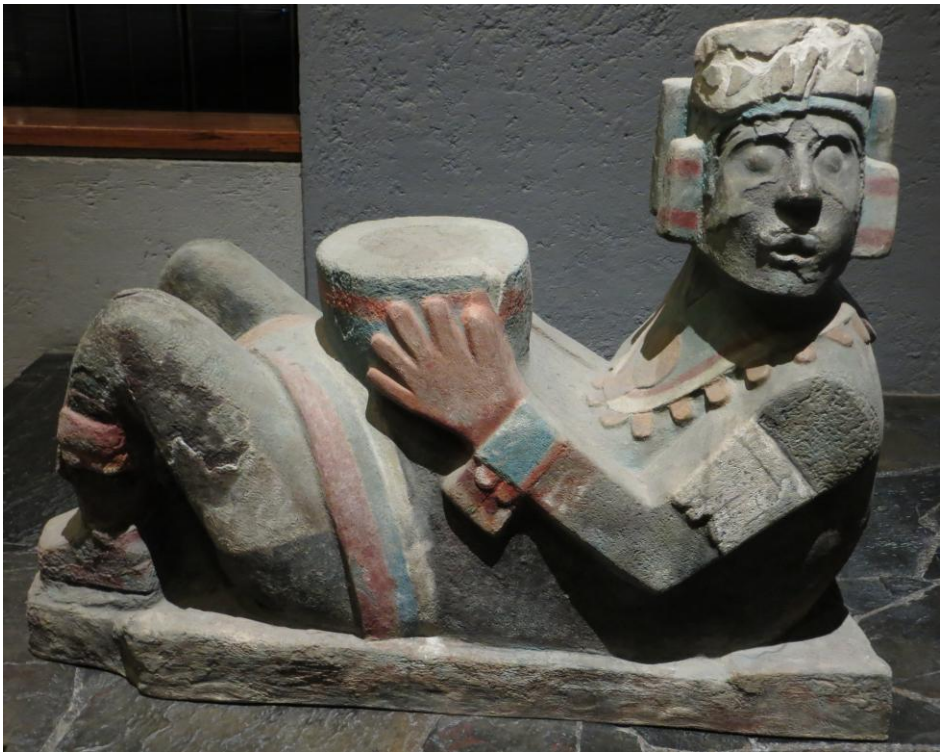
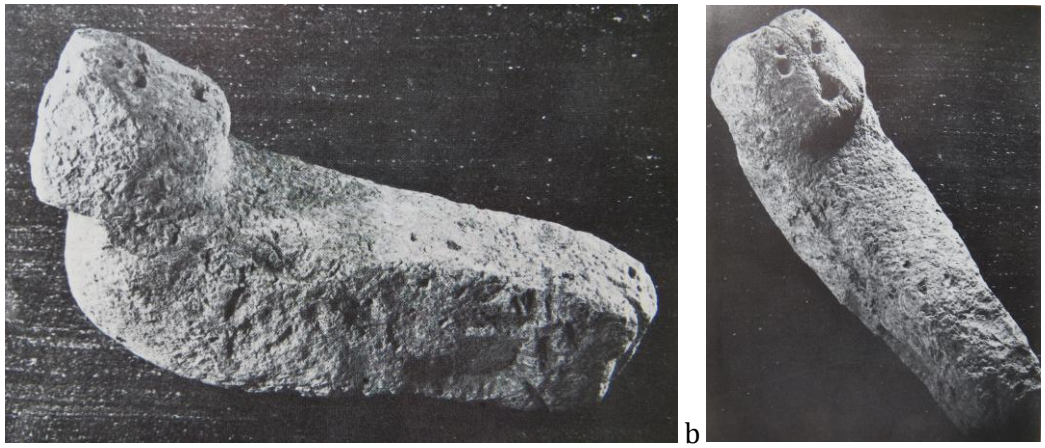


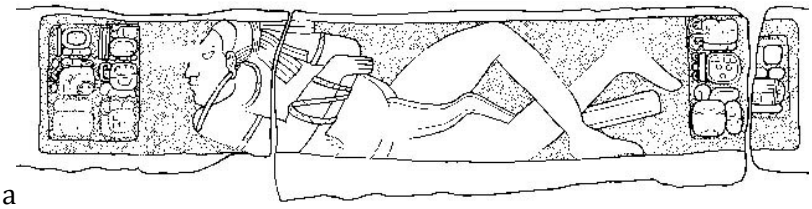
Figure 4.55. Chacmool sculpture from Stage 2 of Templo Mayor. Museo Templo Mayor.

Figure 4.56. Chacmool from Tula. Tula site museum.



a b

Figure 4.57. Possible chacmool sculpture from Cerro del Huistle, Jalisco. a) From Hers 1989:fig. 8. b) From Hers 1989:fig. 9.



a

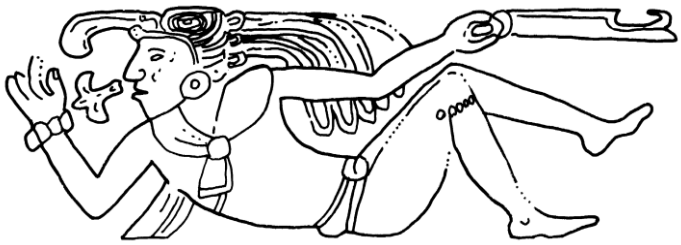


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Figure 4.58. Reclining figures in Maya and Toltec art. a) Late Classic Maya bound captive on Tamarindito Hieroglyphic Stair 1. Drawing by Sven Gronemeyer. b) Figure on Pabellon Molded-Carved vessel. After drawing by Cherra Wyllie from Werness 2003:fig. 1.34. c) Chacmool from Chichén Itzá. From Schmidt 2007:. d) Reclining figure on plaque from Palacio Quemado, Tula. From Taube n.d.:fig. 11e.

a

b

Figure 4.59. a) Codex Borgia page 33. b) Detail of reclining figures on roof of Codex Borgia page 33.

Figure 4.60. Late Classic Maya sculptures from Campeche in the form of sacrificial victims. a) Sculpture of unknown provenience. Museo Regional de Campeche Fuerte San Miguel. b) Jaina-style vessel. From Schele and Miller 1986:pl. 94.

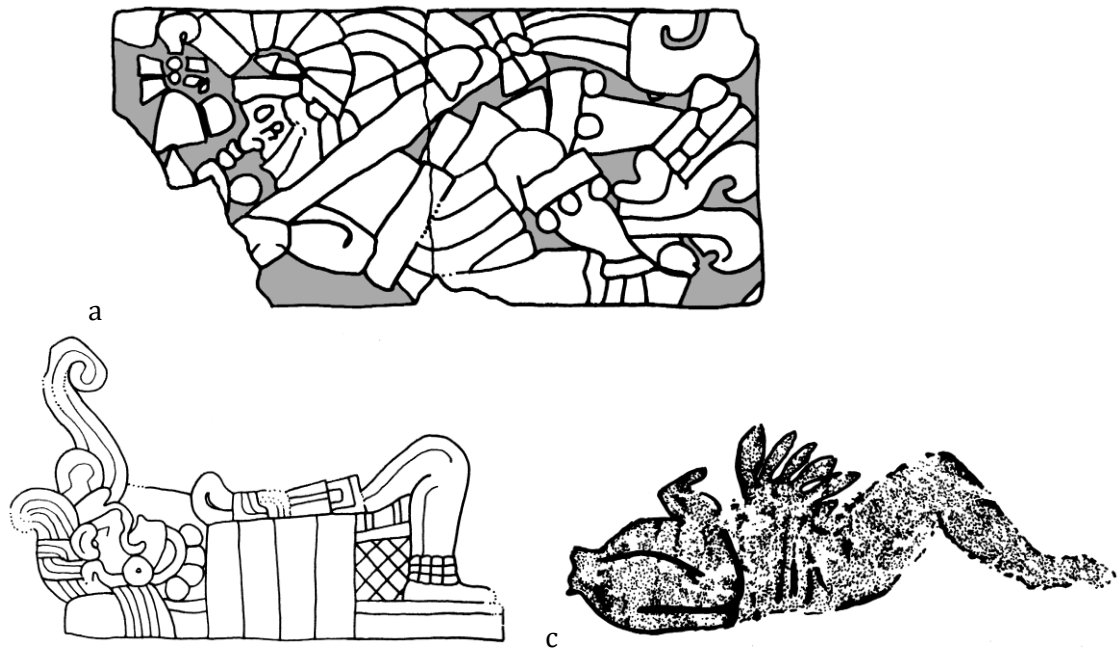

Figure 4.61. Recumbent figures in Late Classic art. a) Plaque from Tula Chico. After Mastache et al. 2009:fig. 20. b) Detail of South Ballcourt Panel 6, El Tajín. After Kampen 1972:fig. 25. c) Glyph from western talud of Battle Mural, Cacaxtla. After Brittenham 2013:fig. 5.74a.

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Figure 4.62. Sacrificial stone from Xochicalco. Museo Cuauhnahuac, Cuernavaca. a) Right view. b) Left view. c) Upper torso. d) Lower torso.

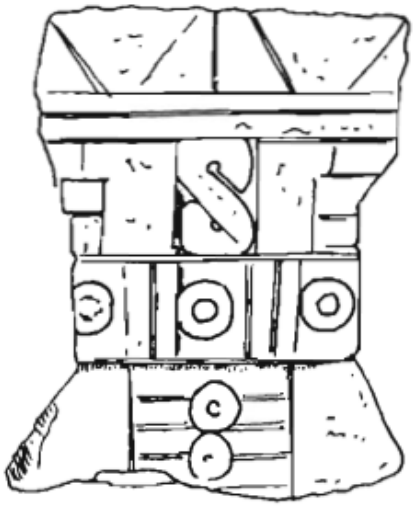
a  b

Figure 4.63. The "Manta Compound" in Teotihuacan art. a) Stone brazier from the Pyramid of the Sun. From von Winning 1979:fig. 2i. b) Stone panel from Pyramid of the Sun. MNA.

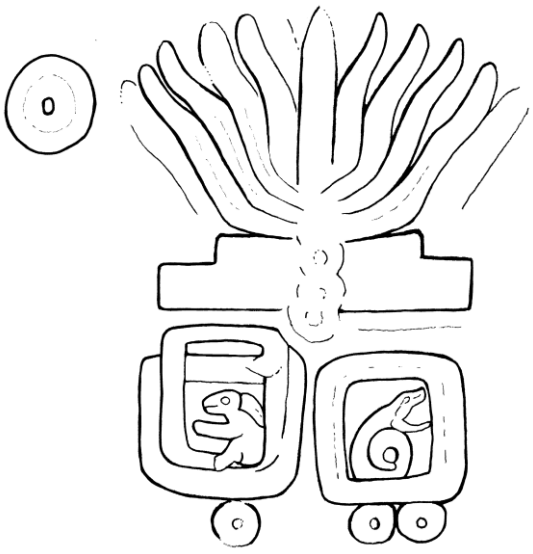
a b 

Figure 4.64. New Fire Monument from Xochicalco. a) Photo. Museo Cuauhnahuac, Cuernavaca. b) Illustration based on same photo.

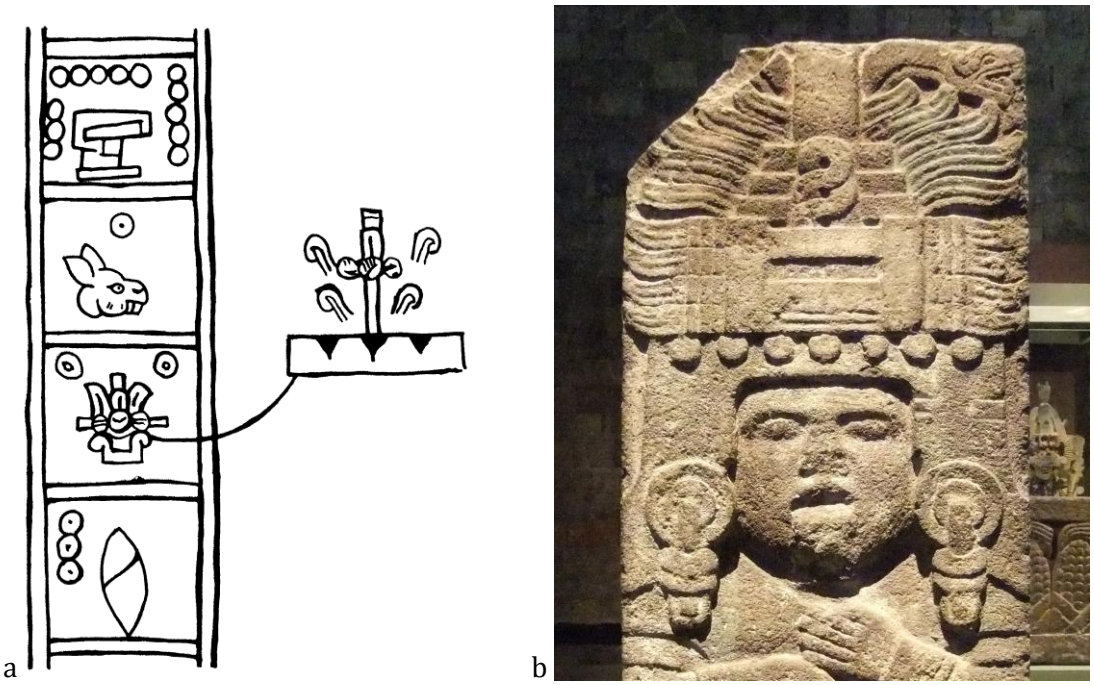


Figure 4.65. Aztec representations of fire drills. a) Detail from Codex Mendoza, page 15v. b) Detail of Lápida de Chinola. MNA.

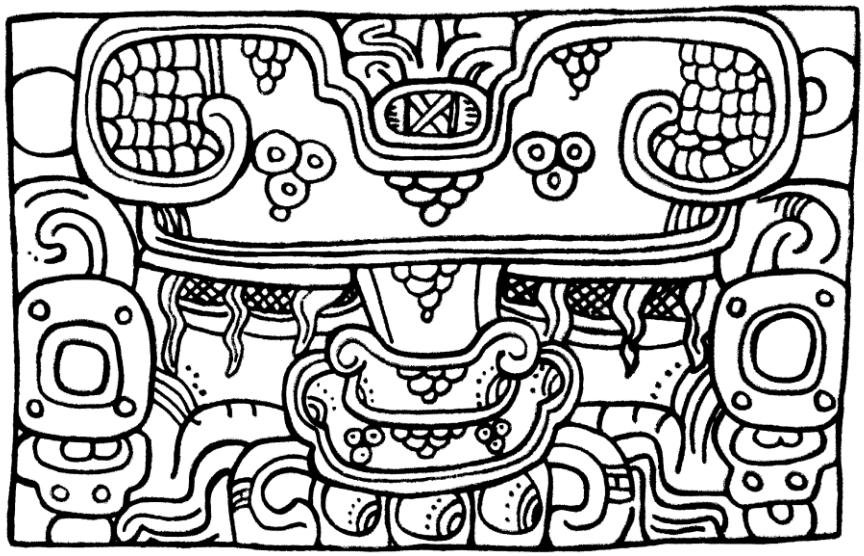


Figure 4.66. Incised scene on Early Classic Maya vessel showing zoomorphic mountain and fire drill. After Stuart and Houston 1994:fig. 93.

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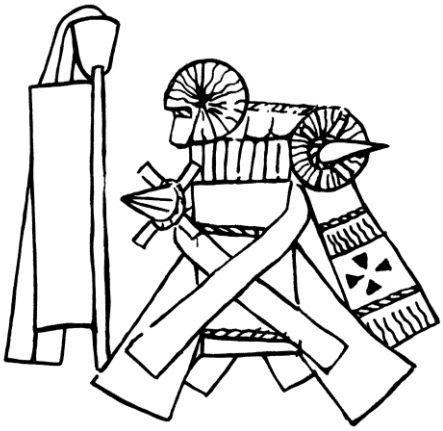

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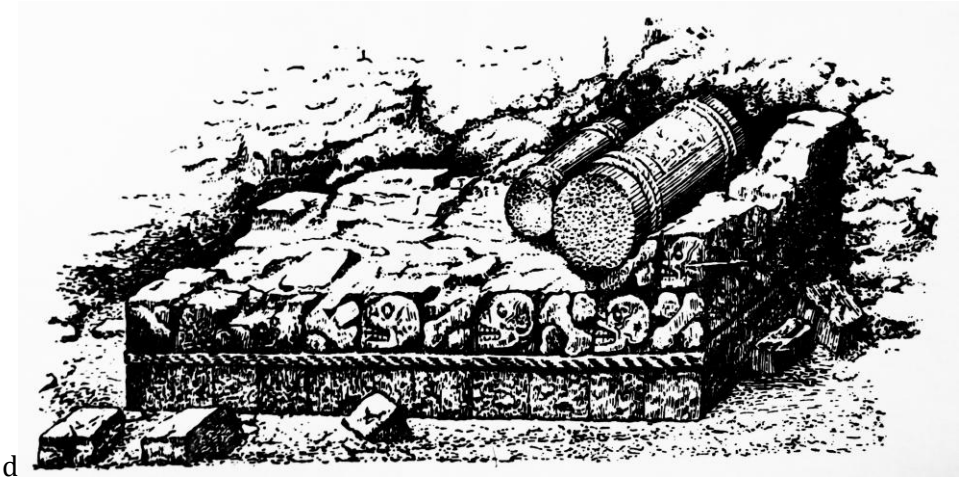

Figure 4.67. Aztec year bundles. a) Aztec year bundle. MNA. b) Side view with 1 Death trecena date. c) Year bundle from Codex Borbonicus page 36. d) "Skull altar" from Calle de las Escalerillas, Mexico City. From Caso 1967:135.

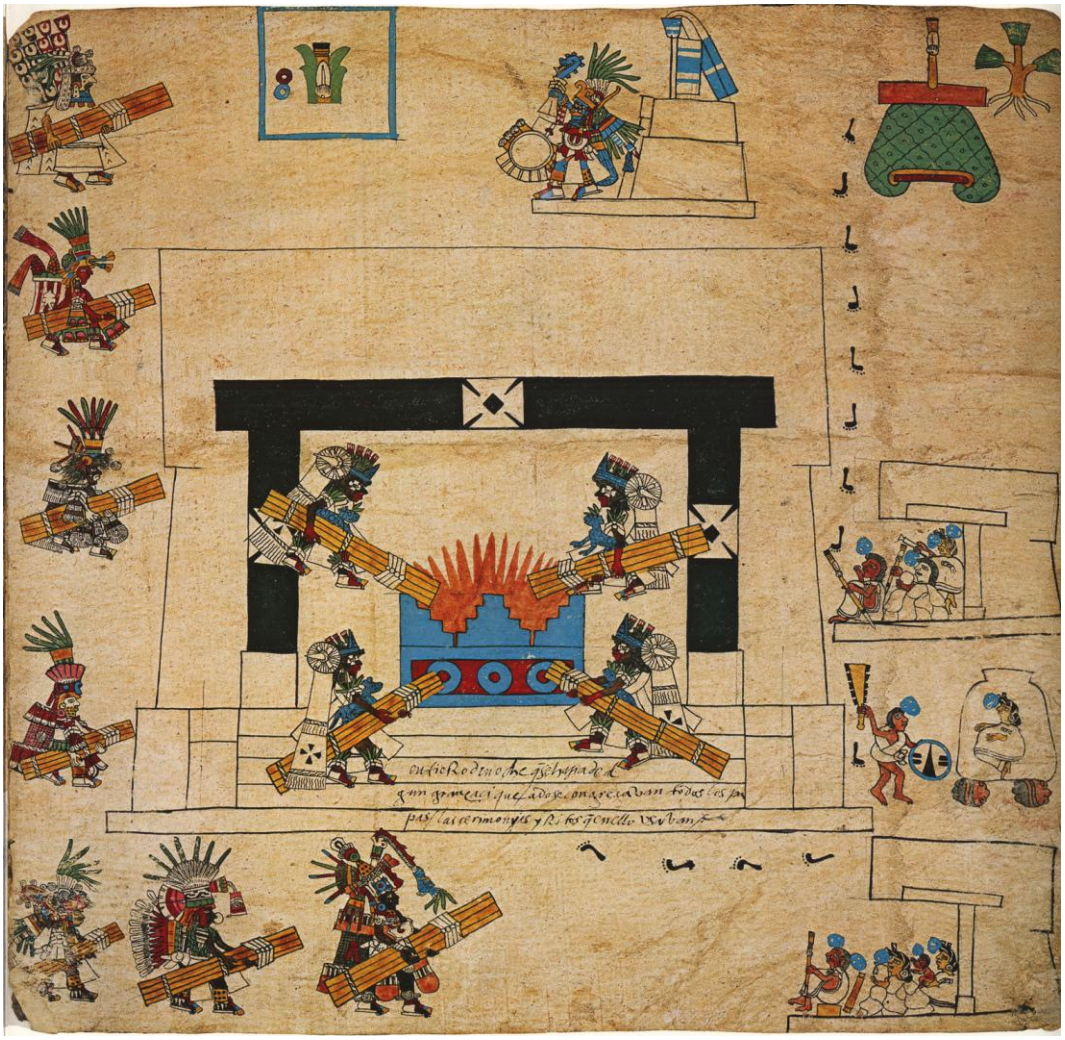

Figure 4.68. Codex Borbonicus, page 34.

a b

Figure 4.69. Possible year bundles effigies from Teotihuacan. a) After Langley 1992:fig. 36. b) From Leon Velasco 2007:cat. no. 143.

a

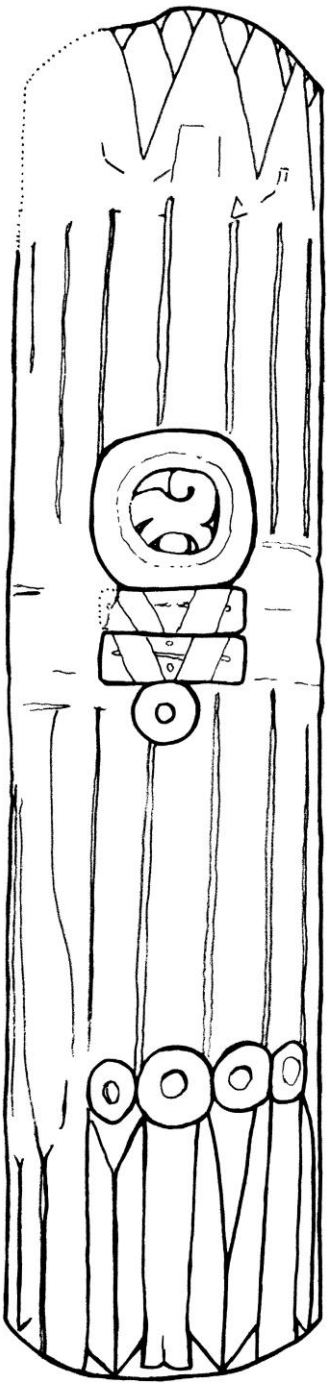
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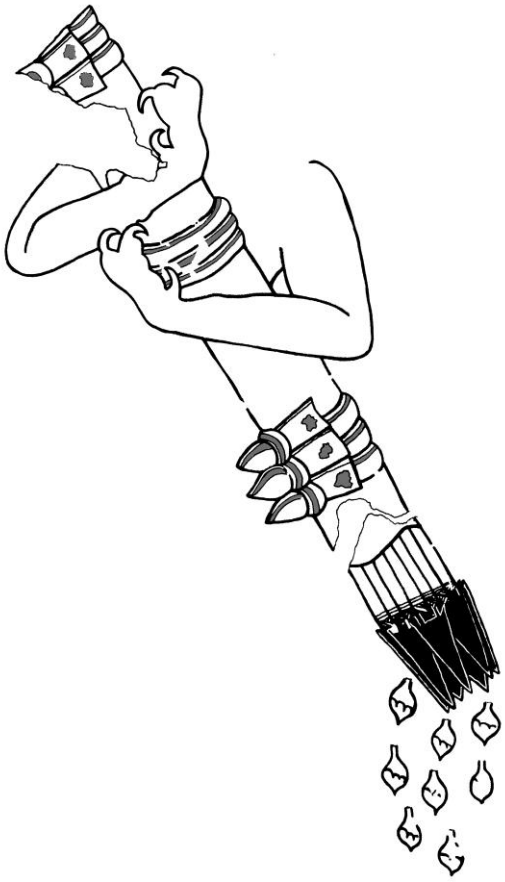
Figure 4.70. Probable *xiuhmolpilli* from Iglesia San Lucas Evangelista, Iztapalapa. a) *In situ*. b) Line drawing.

a



b

c

Figure 4.71. Spear and dart bundles. a) Detail of incised vessel from Teotihuacan. After Sugiyama 2005:fig. 62. b) Detail of north portico mural of Structure A, Cacaxtla. After Matos Moctezuma 1987:95. c) Gulf Coast *palma* in the form of a bundle of darts. MNA.

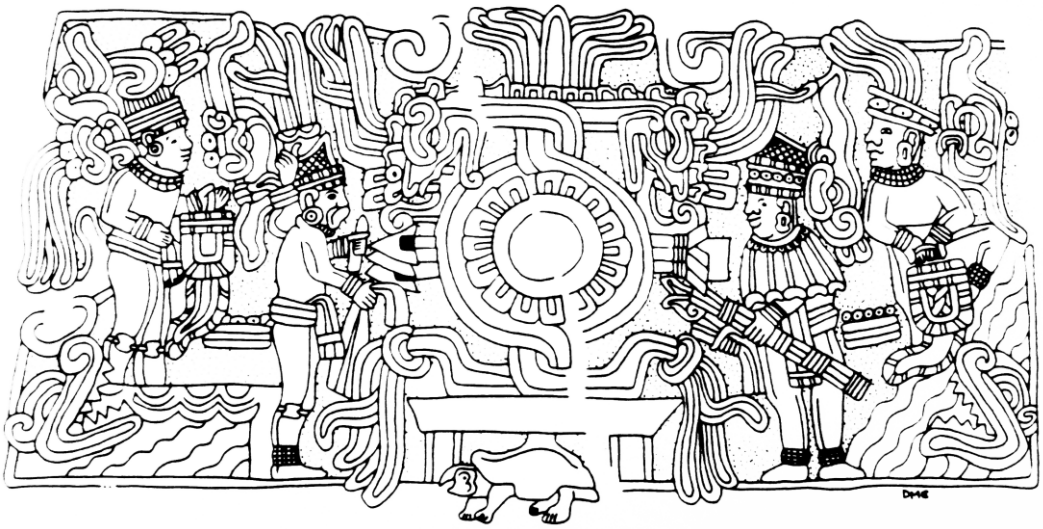


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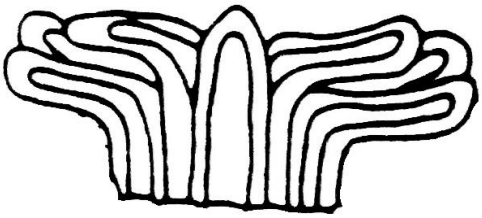
Figure 4.72. a) Slab from Structure 4, El Tajín. From Koontz 1994: fig. 3.3b. b) Detail of South Ballcourt Panel 5, El Tajín. After Kampen 1972:fig. 24. c) Detail of Late Classic Maya bowl depicting Maize god emerging from Kan cross on the back of a turtle. After Taube 2000:fig. 10.25c.



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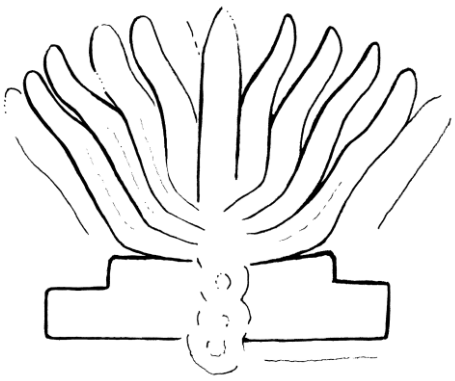

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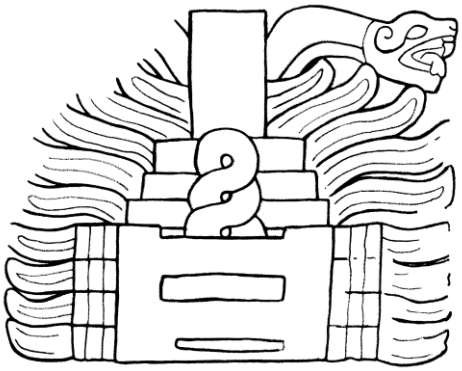

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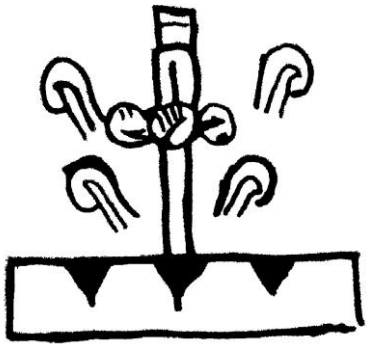
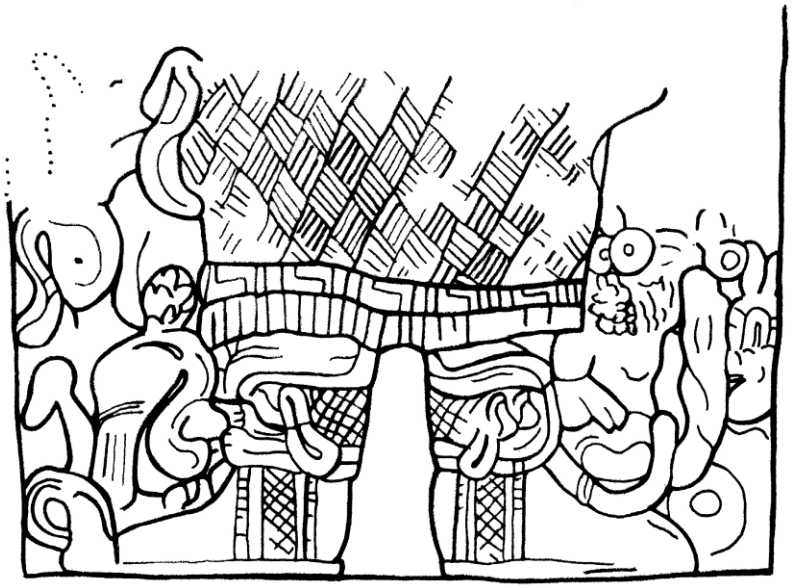


f

Figure 4.73. Fire drills in Mesoamerican art. a) Probable example on slab from Structure 4, El Tajín. From Koontz 1994: fig. 3.3b. b). Stone panel from Pyramid of the Sun, Teotihuacan. MNA. c) New Fire Monument from Xochicalco. d) Detail from Maya incised vessel showing drill and probable bundle. After Stuart and Houston 1994:fig. 93. e) Detail of Lápida de Chinola. MNA. f) Detail from Codex Mendoza, page 15v.

Chapter 5 Figures



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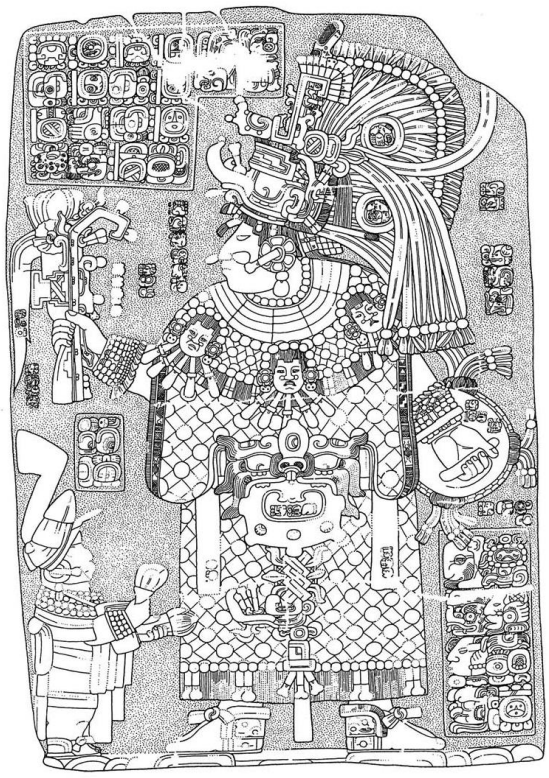


c

Figure 5.1. a) Stuccoed pilaster from Structure E, Cacaxtla. b) Naranjo Stela 24. Drawing by Ian Graham. c) El Peru Stela 34. Drawing by John Montgomery.

a b

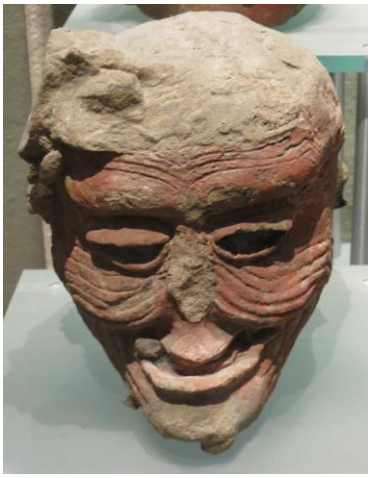
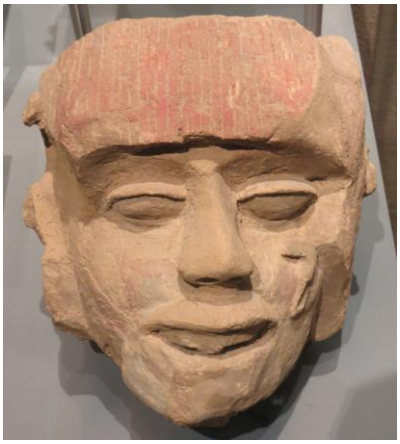
c  d  e

Figure 5.2. Life-sized unfired clay sculptures from Cacaxtla. a) Anthropomorphic head. b) Anthropomorphic male head. c) Head of possible Huehueteotl. d) Head of possible solar deity. e) Sculpture of possible Fat God.

Figure 5.3. Unfired clay relief from Cacaxtla, Structure A. a) From Brittenham 2015:fig. 303. b) Line drawing.

a b

Figure 5.4. Los Once Señores de Cacaxtla sculptures. a) Tlaloc. b) Figure in avian headdress.

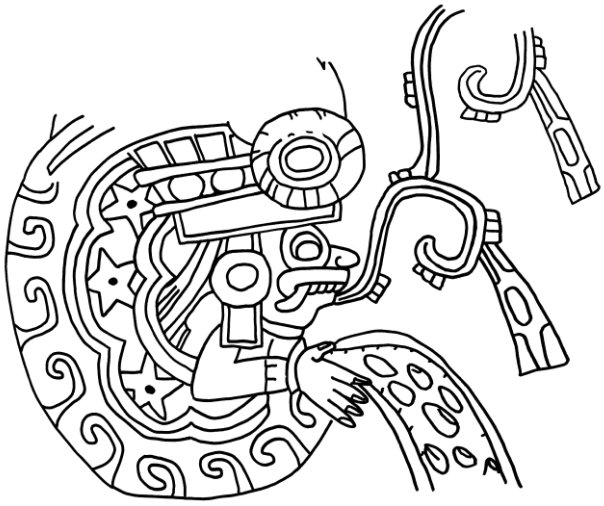
a  b

Figure 5.5. Scrolls in Teotihuacan art. a) Detail of mural from Zacuala compound, Teotihuacan. After Ruiz Gallut 2006:pl. 37. b)Broken stela from Teotihuacan. Teotihuacan site museum.

Figure 5.6. Volutes surrounding figures in Maya art. a) Late Preclassic mural fragment from Tikal Str. 5D-sub 10-1st. After Houston and Taube 2011:fig. 7b. b) Late Preclassic stucco from Uaxactun Str. H-Sub 10. After Taube 2004:fig. 65b. c) *Wahy* figure from Late Classic vessel. Photograph by Justin Kerr. K3831. d) *Wahy* figure from Late Classic vessel. Photograph by Justin Kerr. K4963.

a b

c

Figure 5.7. a) Flanged brazier from Xochicalco. Note conch-shaped volutes on flanges. Xochicalco site museum. b) Figure with avian headdress. Note possible conch shells on either side of the figure. Xochicalco site museum. c) Ceramic fragment with conch shells. Teotenango site museum.

Figure 5.8. Aztec brazier. MNA.

a b

Figure 5.9. Braziers from Tapijulapa, Tabasco. a) Chahk seated within a cave. Photo courtesy of the Museo Regional de Arqueologia Carlos Pellecer Camara, Villahermosa, Tabasco. b) Jaguar God of the Underworld surrounded by volutes. Photo courtesy of the Museo Regional de Arqueologia Carlos Pellecer Camara, Villahermosa, Tabasco.

a b

Figure 5.10. Late Classic Maya braziers. a) Flanged brazier from Ocosingo. MNA. b) Flanged brazier from Building 3, Group B, Palenque.

a b

c d

Figure 5.11. Blue eyebrows in Late Classic Maya art. a) Stucco centipede head on solar cartouche from House A, Palenque. b) Detail of figurine from Palenque. c) Ceramic vessel lid from Toniná. d) Detail from north mural of Xultun, Structure 10K-2. From Saturno et al. 2015:fig. 6.

a b

Figure 5.12. Jamb figures from Structure A, Cacaxtla. a) North jamb. b) South jamb.

a

b

Figure 5.13. Figures with foliage sprouting from their waists. a) Cerro de las Mesas Stela 6. Museo Anthropologico de Xalapa. b). Detail of West Wall mural of San Bartolo. From Taube et al. 2010:fig. 45a.

Figure 5.14. Structure A, South Portico mural, Cacaxtla. From Brittenham 2015:Fig. 278.

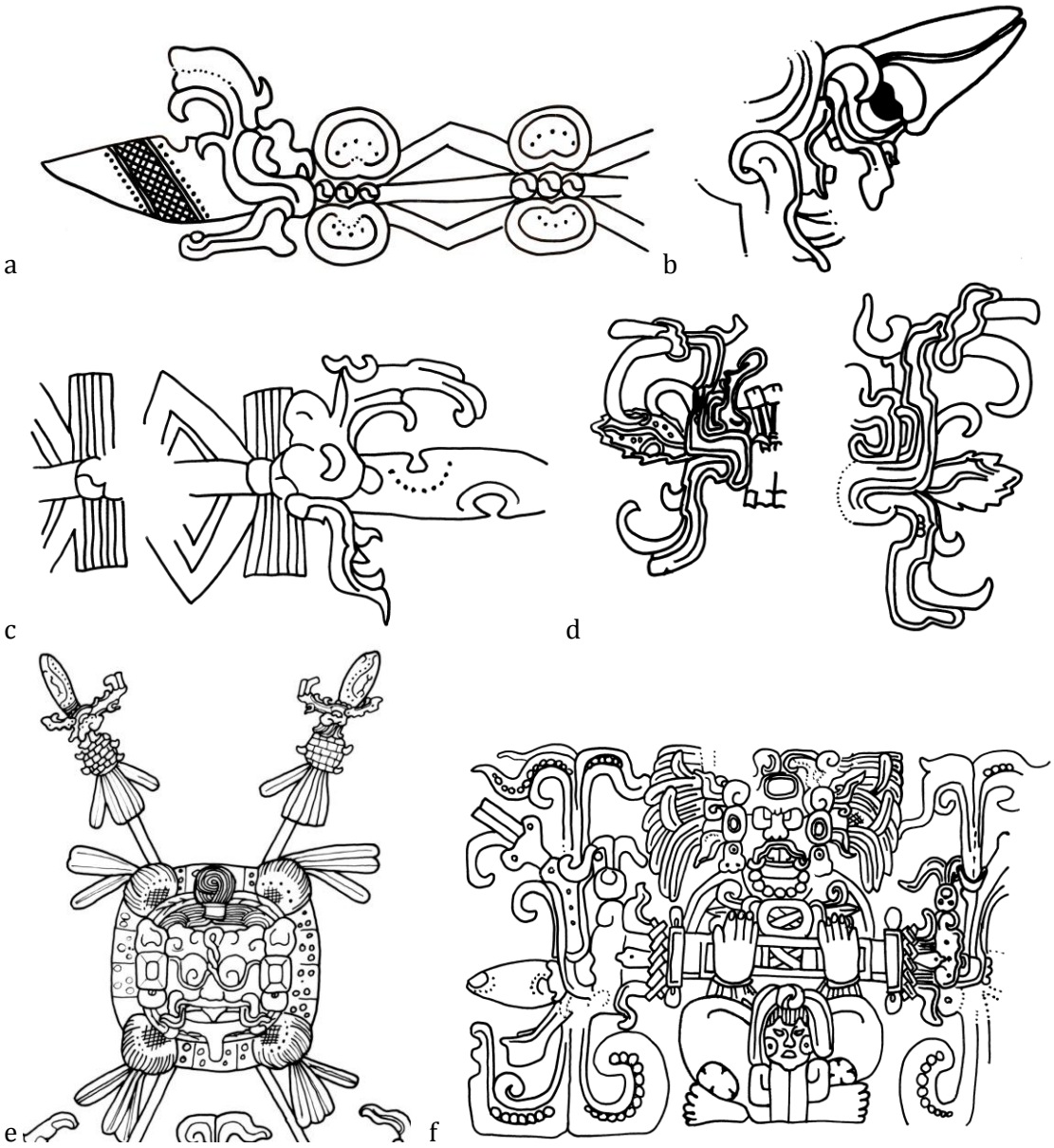
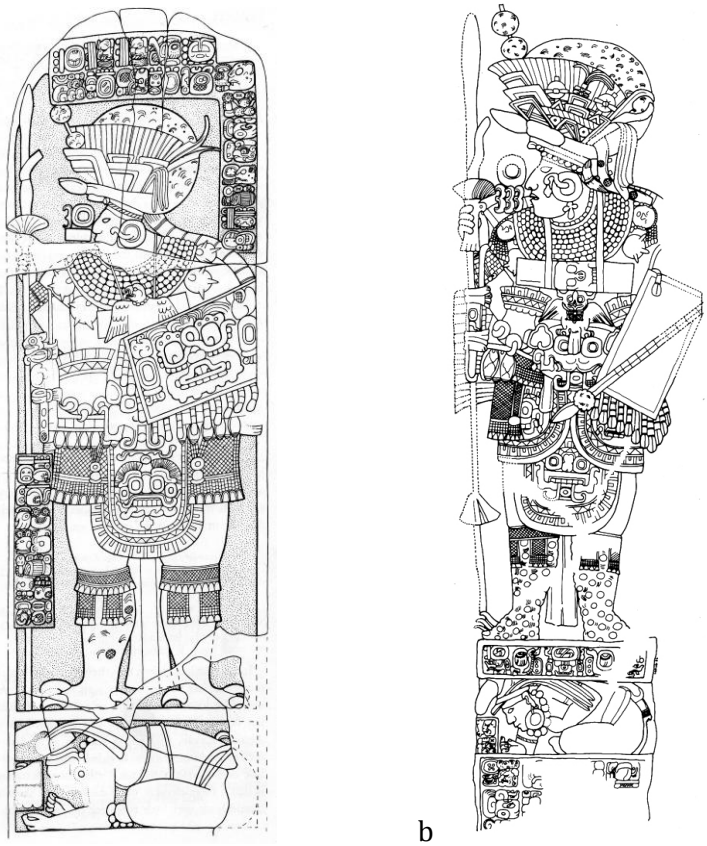


Figure 5.15. Classic Maya centipede lances with protruding flint "tongues." a) Detail from Naranjo Stela 8. After drawing by Ian Graham. b) Detail from Copan Stela M. After drawing by Claude Baudez. c) Detail from Reitberg Stela. After Looper 2003:fig. 3.39. d) Detail from Quirigua Stela J. After Looper 2003:3.37-3.38. e) Detail from Tablet of the Sun, Palenque showing crossed centipede lances and JGU face on shield. f) Detail from Yaxchilan Stela 1 showing seated Maya diurnal sun god with centipede heads emerging from ceremonial bar. After Tate 1992:fig. 27a.

Figure 5.16. Structure A, North Portico mural, Cacaxtla. From Brittenham 2015:Fig. 277.

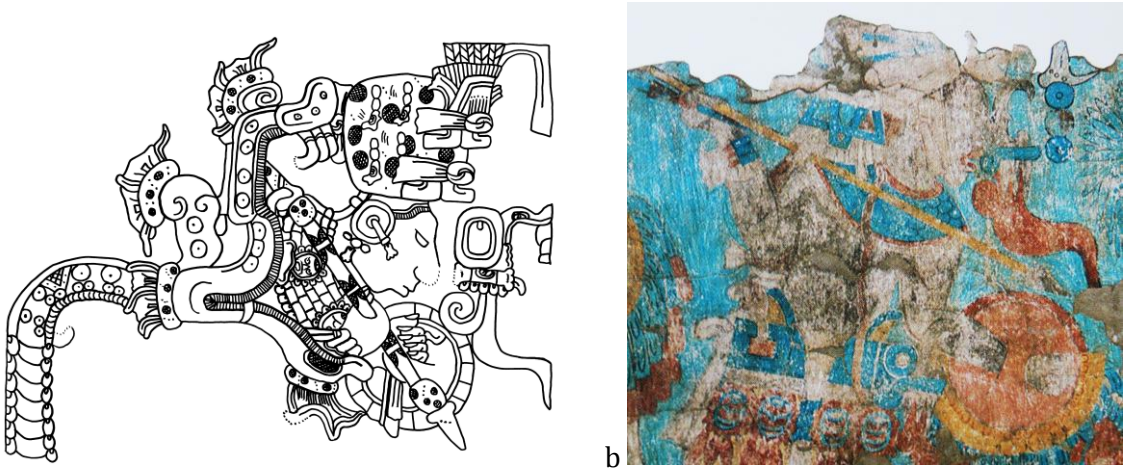
a b

Figure 5.17. 3 Deer represented on the Battle Mural at Cacaxtla. a) Eastern talud. From Matos Moctezuma 1987:59. b) Western talud. From Matos Moctezuma 1987:74.



a b

Figure 5.18. Late Classic Maya Tlaloc regalia. a) Aguateca Stela 2. Drawing by Ian Graham. b) Dos Pilas Stela 16. Drawing by Linda Schele.



a b

Figure 5.19. a) Detail of Yaxchilan Lintel 25. After drawing by Linda Schele. b) Detail of eastern talud of Battle Mural, Cacaxtla. From Matos Moctezuma 1987:59.

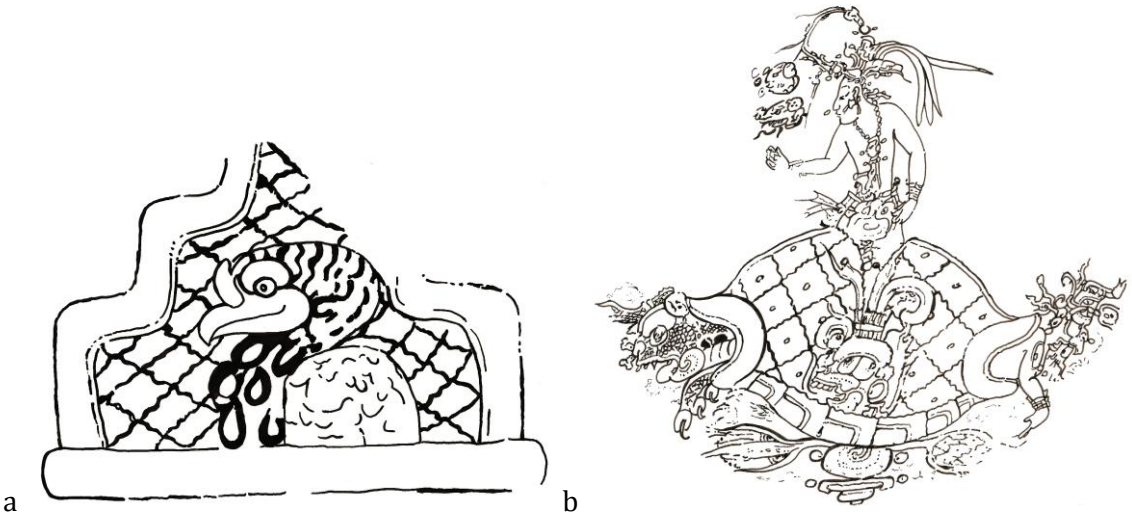
a b

Figure 5.20. a) South and b) north column figures, Temple of Venus, Cacaxtla. From Brittenham 2015:Fig. 138.

a b

Figure 5.21. Late Classic Maya deity with pointed cranium, star symbol, and scorpion tail. a) Plate showing figure with star sign and scorpion tail. Photo by Justin Kerr, K4565. b) Relief of Maize god with star symbol and scorpion tail from Skyband Bench on Structure 8N11 of the Sepulturas Group, Copán. From Uriarte Castañeda and Velázquez García 2013:fig. 14.3.

Figure 5.22. Captive Stair, Cacaxtla. From Brittenham 2015:fig. 7.



a b

Figure 5.23. The Earth Net motif. a) "Turkey Hill" glyph from Captive Stair, Cacaxtla. b) Detail of Late Classic Maya plate. After photograph by Justin Kerr. K1892.

Figure 5.24. God L from Red Temple mural, Cacaxtla. From Brittenham 2015:fig. 214.

a b

c d e

Figure 5.25. The Late Classic Maya God L. a) Detail of Codex-style vessel. Photo by Justin Kerr, K2796. b) Detail of Chama-style vessel. Photo by Justin Kerr, K0702. c) East jamb sculpture, Temple of the Cross, Palenque. Drawing by Linda Schele. d) Column from Bakná, Campeche. MNA.

a b c

Figure 5.26. Flanged censer fragments from Ahualulco, Tabasco. Museo Regional de Antropologia Carlos Pellicer Camara, Villahermosa, Tabasco. a) Palenque-style fragment. b) Palenque-style fragment. c) Frontal anthropomorphic figure.

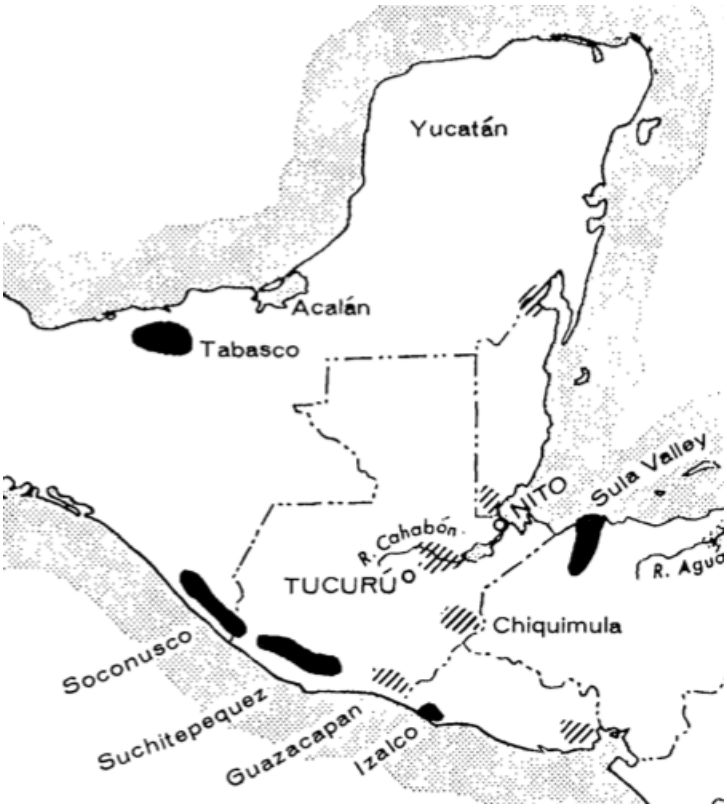


Figure 5.27. Map showing the distribution of major cacao producing regions (in black) in pre-Hispanic Mesoamerica. From Bergmann 1969:fig. 1.

Figure 5.28. Façade of the Pyramid of the Plumed Serpents, Xochicalco.

Figure 5.29. Jade plaque portraying Maya ruler. British Museum. From http://www.britishmuseum.org/explore/highlights/highlight_objects/aoa/j/jade_plaque_of_a_maya_king.aspx.

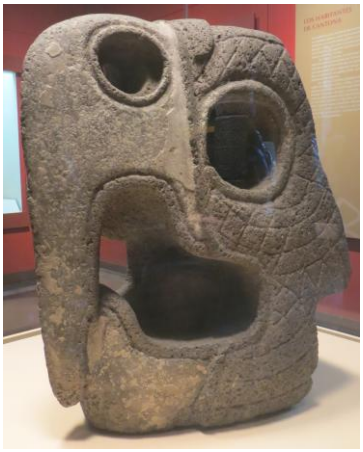
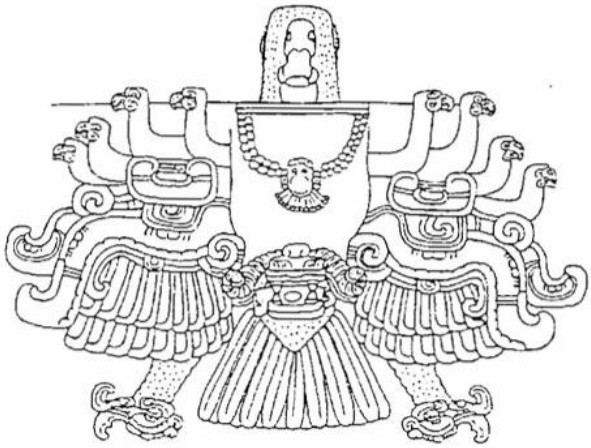
a  b

Figure 5.30. Macaw imagery from Xochicalco. a) Macaw "ballcourt marker." MNA. b) Stone macaw heads. Xochicalco site museum.

a  b

c d e

Figure 5.31. Macaw imagery from Copán. a) Early Classic stucco relief from ballcourt. From Taube 2005:Fig. 4b. b) Macaw from corner of ballcourt façade. From Fash 2011:fig. 142. c) Tenoned stone macaw head from Ballcourt I. From Fash 2011:fig. 109. d) Tenoned stone macaw head from Ballcourt IIB. From Fash 2011:fig. 111. e) Tenoned stone macaw head from Ballcourt III. From Fash 2011:fig. 112.

Figure 5.32. Bat from Eastern Ballcourt ring, Xochicalco.

a b

Figure 5.33. Supernatural bats in Late Classic Maya art. a) detail of Chama-style vessel. Photo by Justin Kerr, K4018. b) detail of vessel. Photo by Justin Kerr, K5367.

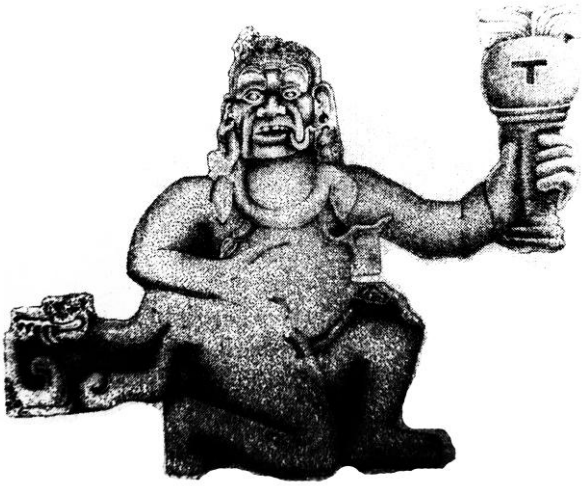
a b 

Figure 5.34. Simian figures from Xochicalco and Copán. a) Ceramic sculpture from Xochicalco commonly referred to as "El Creador." From Garza Tarazona 2010:20. b) d) Supernatural howler monkey sculpture, Reviewing Stand of Copán Temple 11. From Nájera Coronado 2013:Fig. 10.

a b

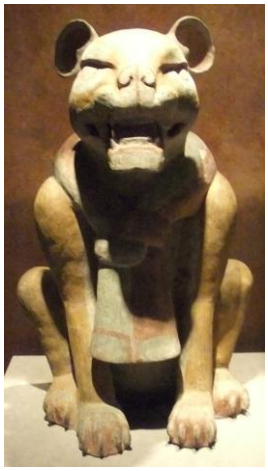
c d  e

Figure 5.35. Felines with scarfs or ropes around their necks. a) Ceramic sculpture from Xochicalco. Xochicalco site museum. b) Brazier from Xochicalco. Xochicalco site museum. b) Ceramic fragment. Teotenango site museum. c) Ceramic sculpture from Monte Albán. MNA. d) Stucco plaque from Coatepantli, Tula.

a b

Figure 5.36. Skeletal felines from Xochicalco. a) Xochicalco site museum. b) MNA.

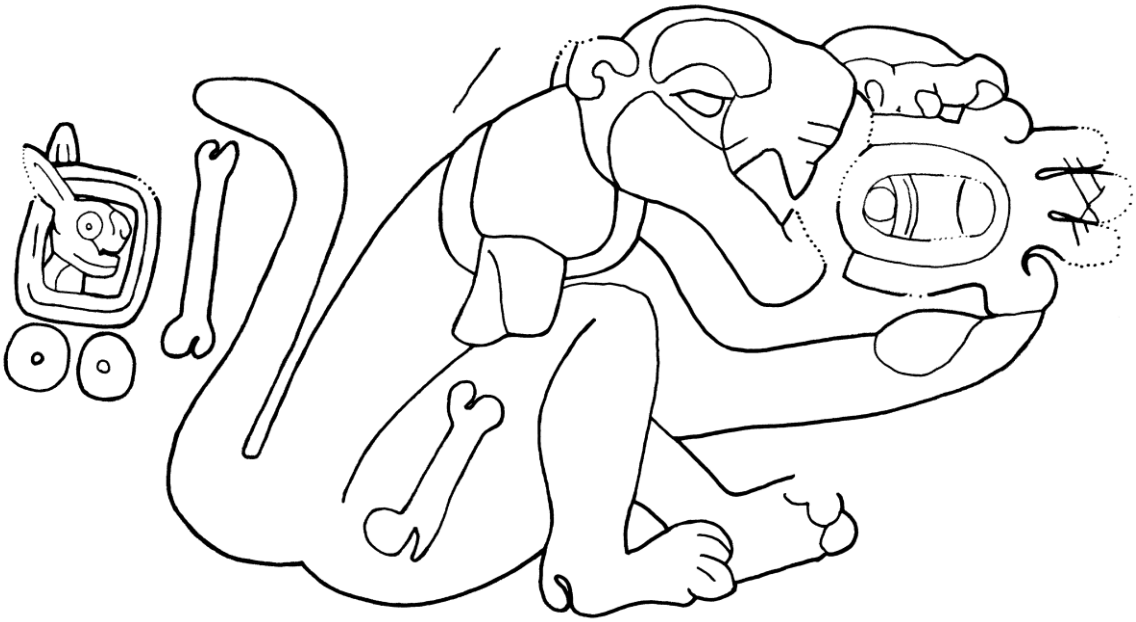


Figure 5.37. Petroglyph from Teotenango.

a

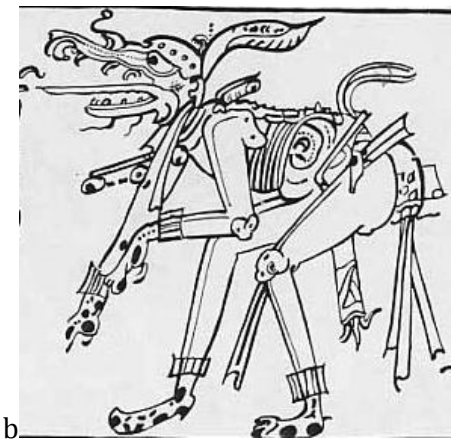


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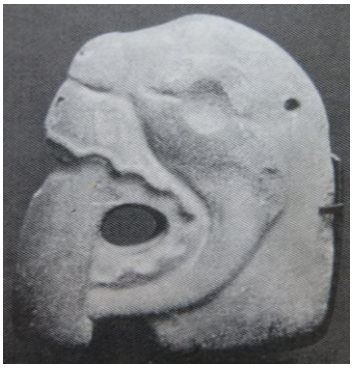
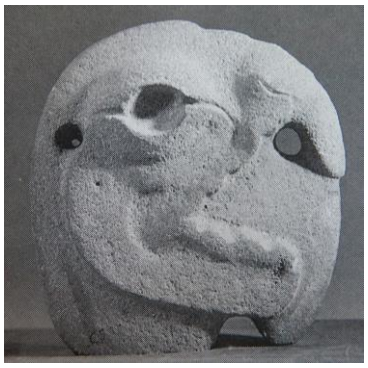
Figure 5.38. Skeletal jaguars in Mesoamerican art. a) Early Classic Maya jaguar with skeletalized jaw from Balamk'u, Campeche. b) *Wahy* figure on Late Classic Maya vessel. Drawing by B. Van Heusen. K3060. c) Aztec sculpture of partially skeletal jaguar. From Gendrop and Díaz Balerdi 1994:fig. 73. d) Detail from Mixtec Codex Zouche-Nuttall, p. 29.



a



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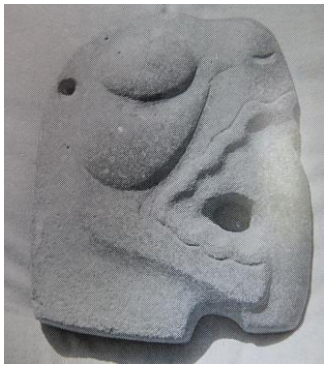


c

Figure 5.39. *Hachas* from southern Guatemala in the form of skeletal felines. a) From Shook and Marquis 1996:Cat. No. J1. b) From Shook and Marquis 1996:Cat. No. J3. c) From Shook and Marquis 1996:Cat. No. J59.

Figure 5.40. Detail of façade of the Pyramid of the Plumed Serpents, Xochicalco.

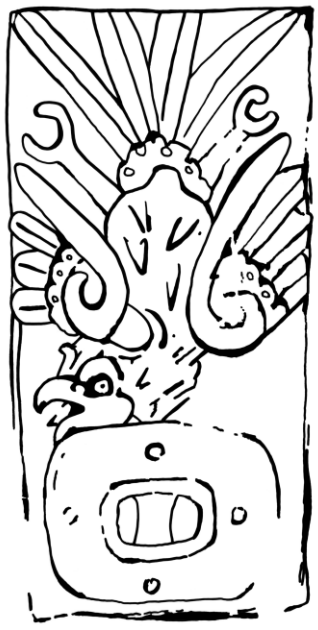
a b c 

Figure 5.41. Descending quetzals in Xochicalco art. a) Probable almena. Xochicalco site museum. b) Probable almena. MNA. c) Detail of tecalli bowl from Xochicalco.

Figure 5.42. Probable almena from Xochicalco in the form of unidentified creature (two views). MNA.

Figure 5.43. Cornice and tablero of Pyramid of the Plumed Serpents, Xochicalco.

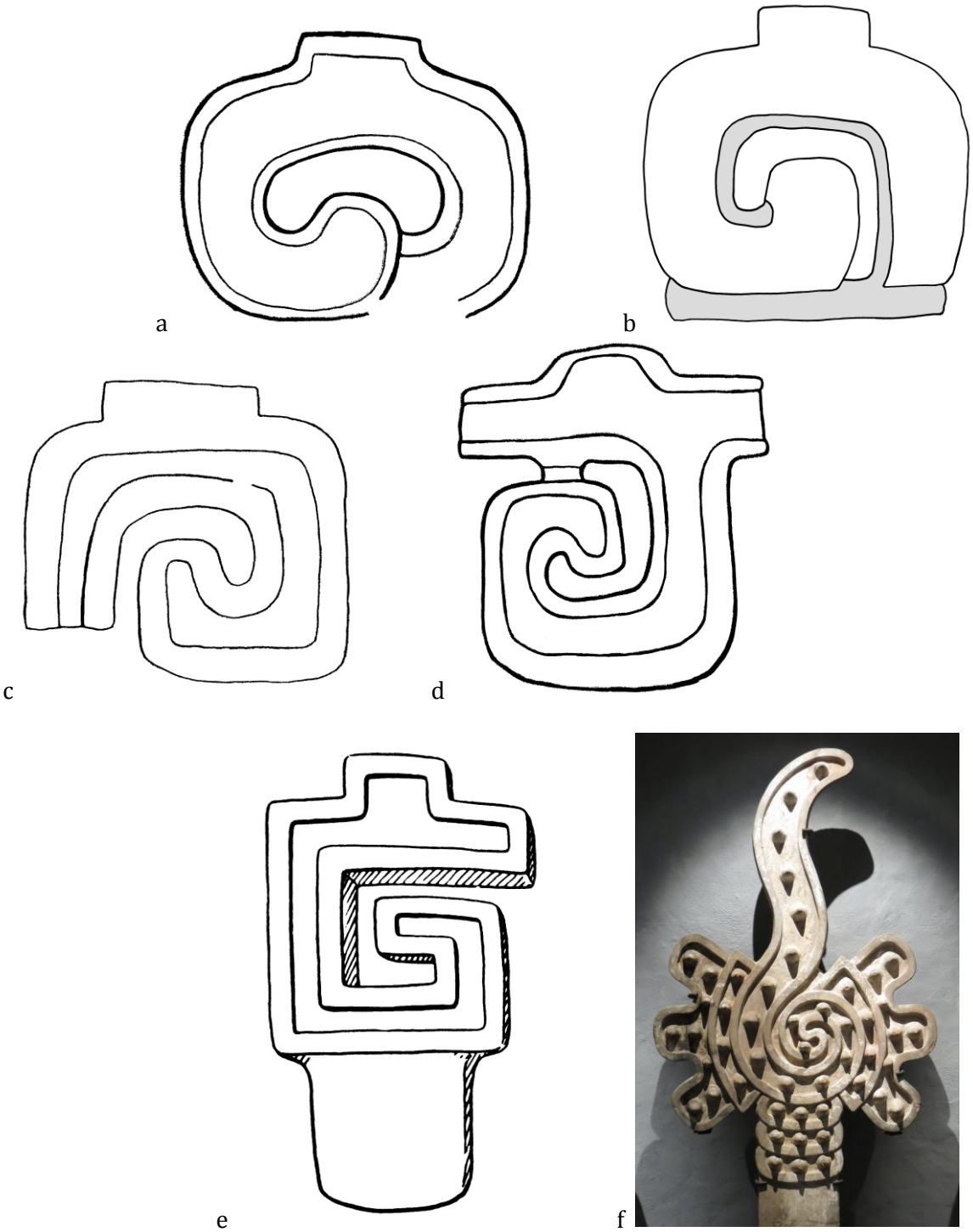
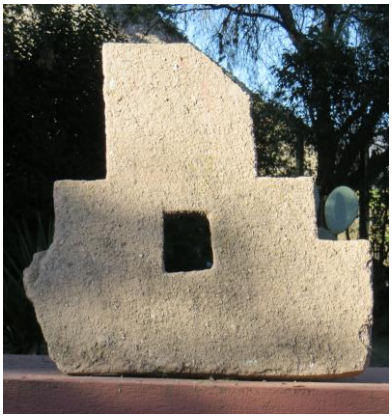
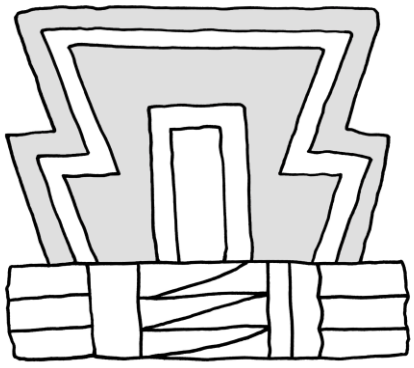


Figure 5.44. Cross-sectioned conch almenas. a) Xochicalco. b) Plazuelas. c) El Cerrito, Queretaro. d) Coatepantli, Tula. e) Stucture 2D7, Chichén Itzá. From Tozzer 1957:II:fig. 77. f) Templo Mayor. Museo Templo Mayor.

a 

b 

c

d

e

f

Figure 5.45. Xi almenas. a) Teotihuacan. b) Plazuelas, Guanajuato. c) Tlalpizahuac, Estado de Mexico. Centro Cultural Mexiquense, Toluca. d) Tula. From de la Fuente et al. 1988:fig. 150. e) Chichén Itzá, Stucture 3C16. From Tozzer 1957:II:fig. 81. f) Templo Mayor. From López Austin and López Luján 2009:Lám. 48.

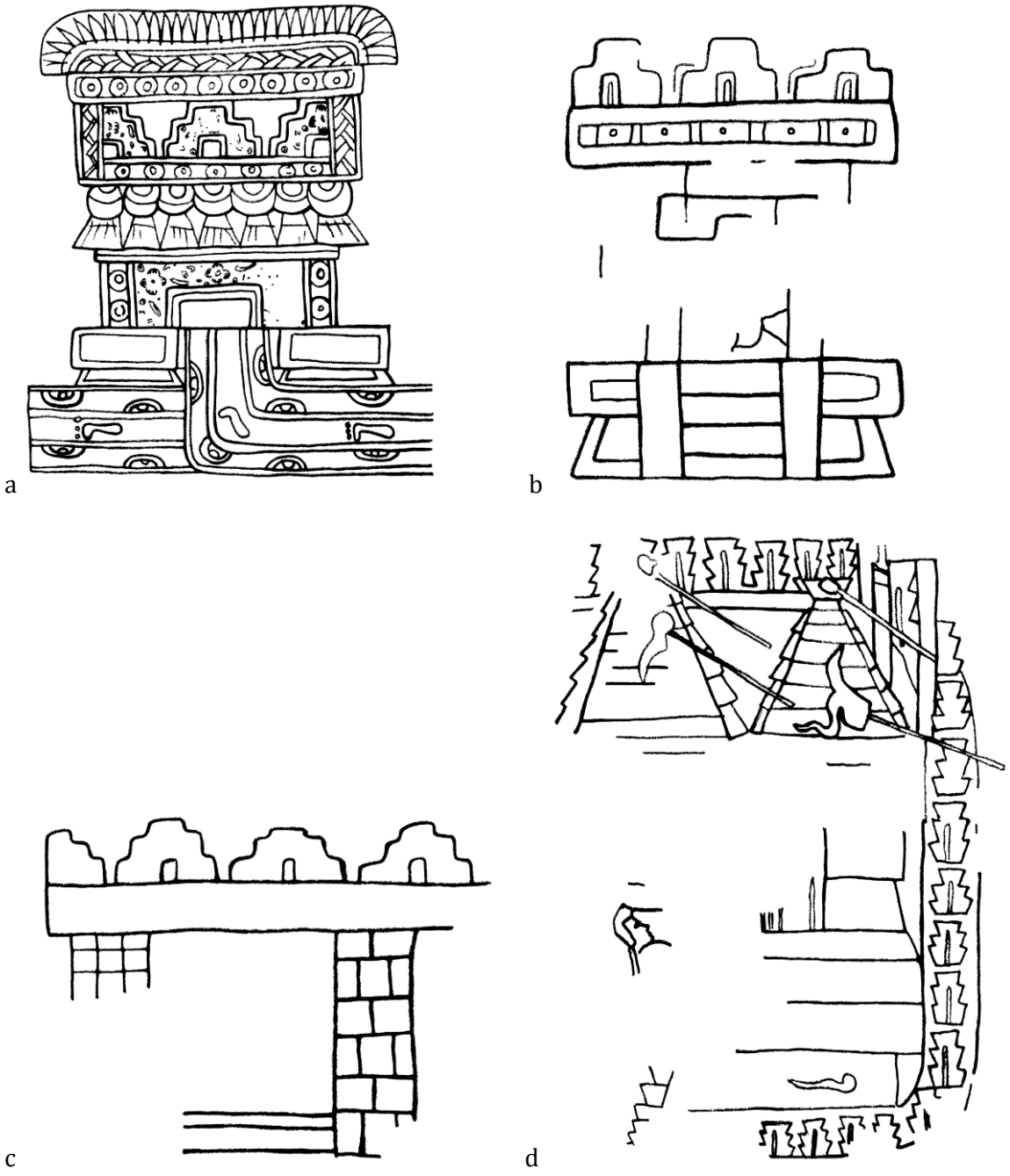


Figure 5.46. Representations of temples with Xi almenas. a) Detail of Room 12, Mural 8, Tetitla, Teotihuacan. After de la Fuente 1996:Lám. 61. b) Detail of Xochicalco Stela 3. c) Detail of El Tajin South Ballcourt Panel 6. After Kampen 1972:fig. 25. d) Detail of mural Las Monjas, Chichén Itzá. After watercolor by Adela Breton.

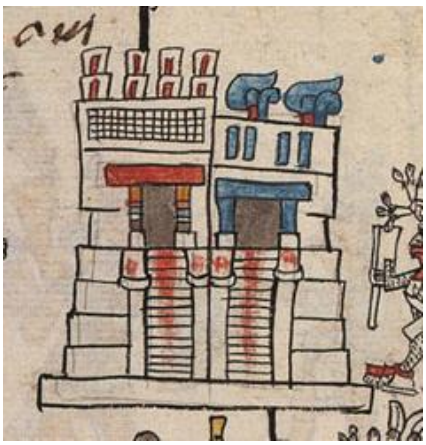
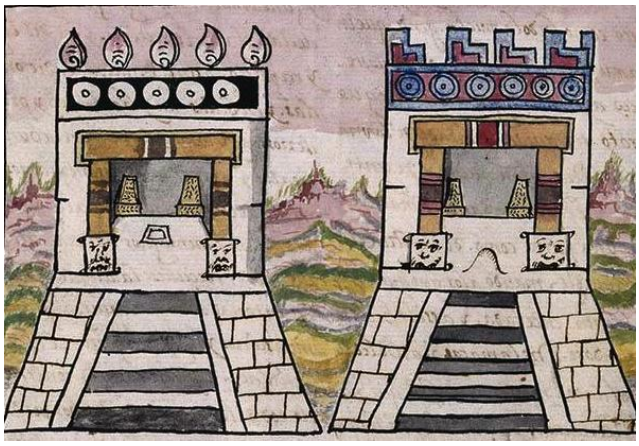
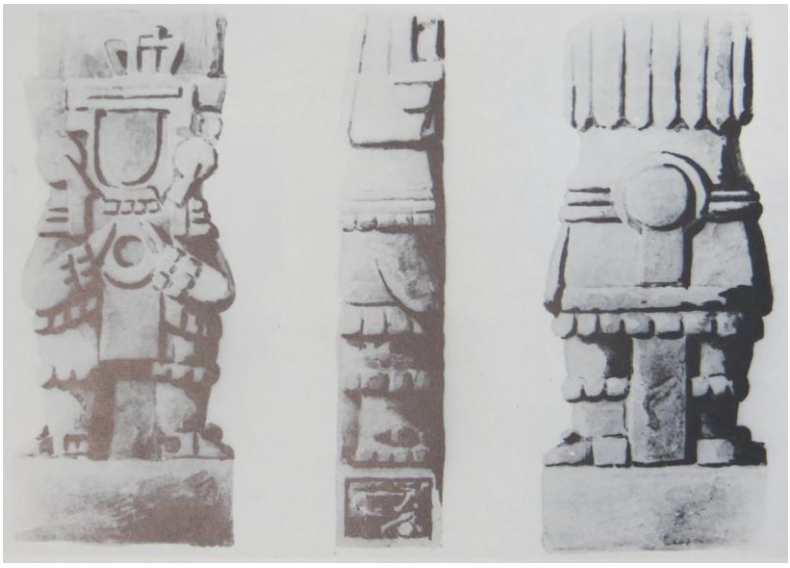
a  b 

Figure 5.47. Detail of Codex Telleriano Remenensis folio 39r. b) Detail of Codex Duran folio 126v.

a b

Figure 5.48. Figures holding mirrors from Xochicalco. a) Xochicalco Stone. Museo Cuaunahuac, Cuernavaca. b) Stone of Miacatlan. From Smith and Hirth 2000:Photo 3.9.

a


b

c

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e

Figure 5.49. Figures holding mirrors. a) Cerro Colhua, Puebla. Museo Regional de Puebla. b) Tlahuililpa, Hidalgo. From Nicholson and Berger 1968:fig. 17. c) Example from near Tlaxcala. From Nicholson and Berger 1968:fig. 18. d) Ixtacamaxtitlan, Puebla. Museo Regional de Tlaxcala. e) Unknown provenience. Anahuacalli.

Figure 5.50. Cylindrical sculptures representing figures holding mirrors. a) Museo Regional de Tlaxcala. b) Museo Regional de Tlaxcala. c) Cacaxtla. After Goñi Motilla 2011:10 and photograph by Mario Martinez. d) Santa Isabel Tetlatlahuca, Tlaxcala. Ocotelulco site museum. e) Santa Isabel Tetlatlahuca. Ocotelulco site museum. f) Cholula site museum.

a b

Figure 5.51. Figure holding mirror from Museo Frida Kahlo, Coyoacan. a) Front. b) Back.

a b c

Figure 5.52. Probable mirror figures from Tlaxcala. a) Cacaxtla site museum. b) Parroquia de San Jose, Tlaxcala (front view). c) Parroquia de San Jose, Tlaxcala (three-quarter view).

a b

Figure 5.53. Figure holding mirror from Colección Stavenhagen, Tlatelolco. a) Front. b) Back.

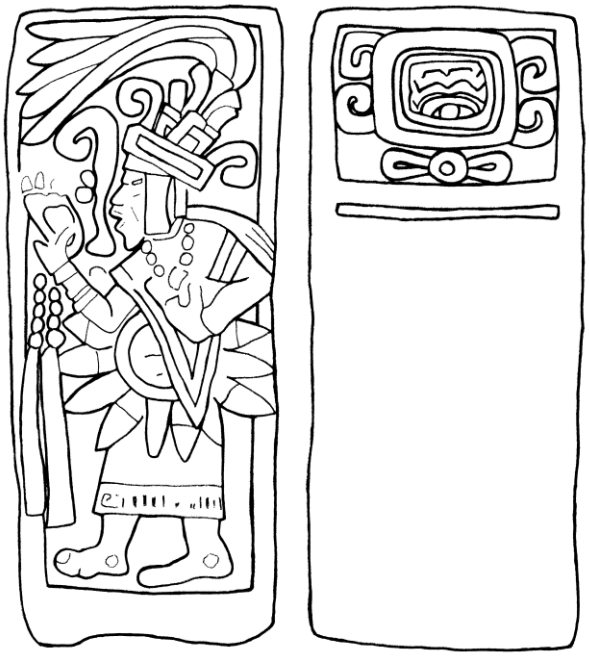


Figure 5.54. Monument from Xico. After de la Fuente et al. 1988:figs. 155-155a.

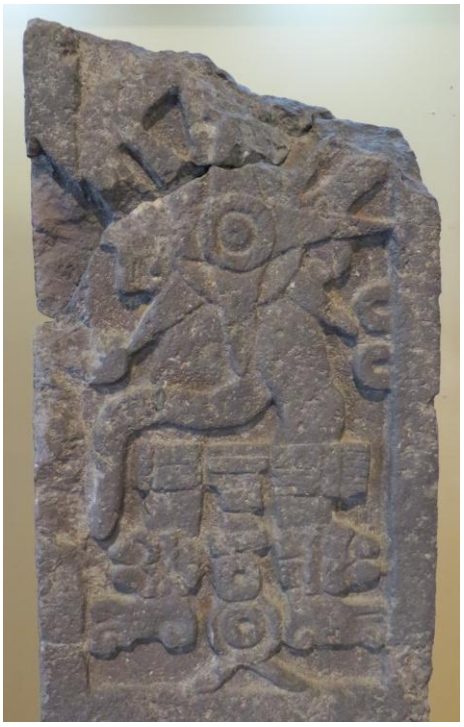
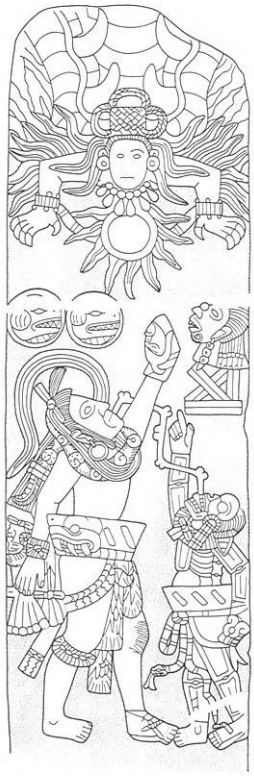
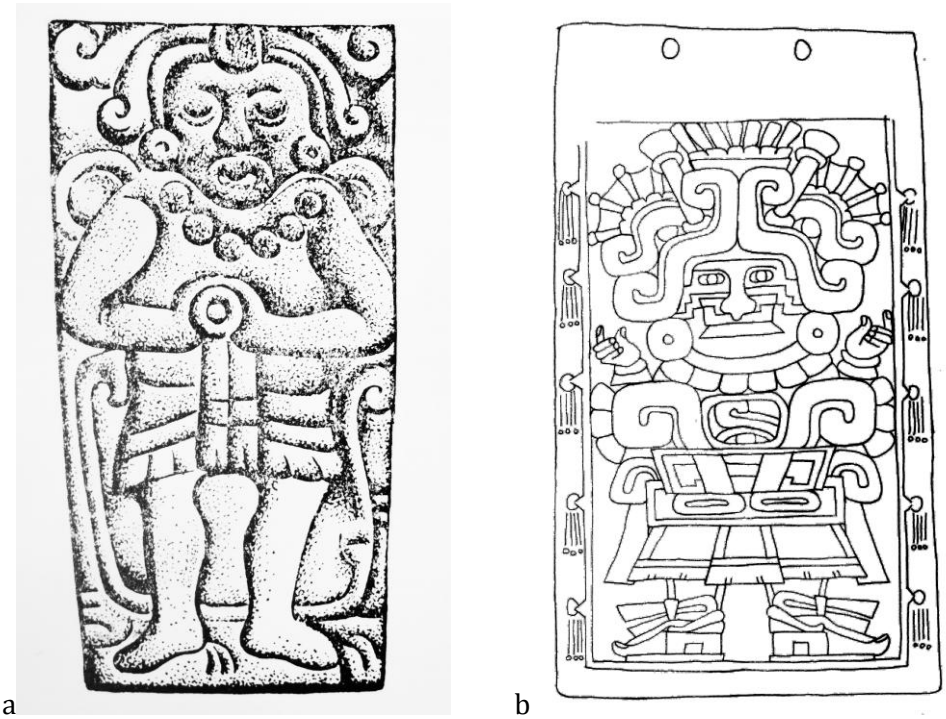
a  b 

Figure 5.55. Figures with possible solar disks. a) Nevado de Toluca Stela. Teotenango site museum. b) Bilbao Monument 3. From Chinchilla Mazariegos 1998:9.

Figure 5.56. Figure holding mirror from El Corral, Tula. MNA.



a b

Figure 5.57. a) Jade plaque from Palacio Quemado, Tula. From Nicholson and Berger 1968:fig. 21. b) Ixtapaluca Plaque. After Berrin and Pasztory 1993:275.

a b

Figure 5.58. Tlaloc figures. a) Sculpture from La Morelia, Guatemala. From Taube 1992:fig. 20e. b) Tlaloc sculpture from Cacaxtla. After Armillas 1995 [1941]:fotos 23-24.

a b c
Figure 5.59. Xochicalco Stela Triad, MNA. a) Stela 1. b) Stela 2. c) Stela 3.

a

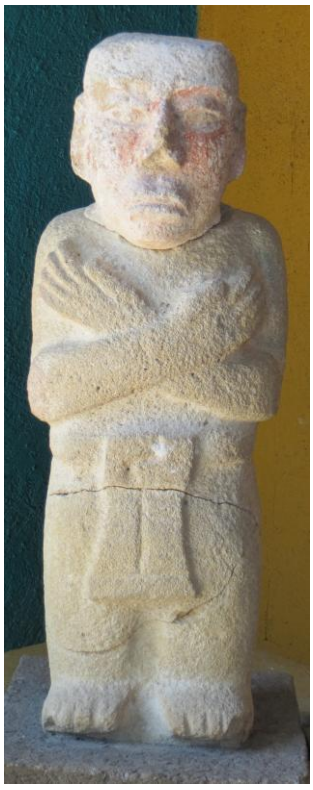
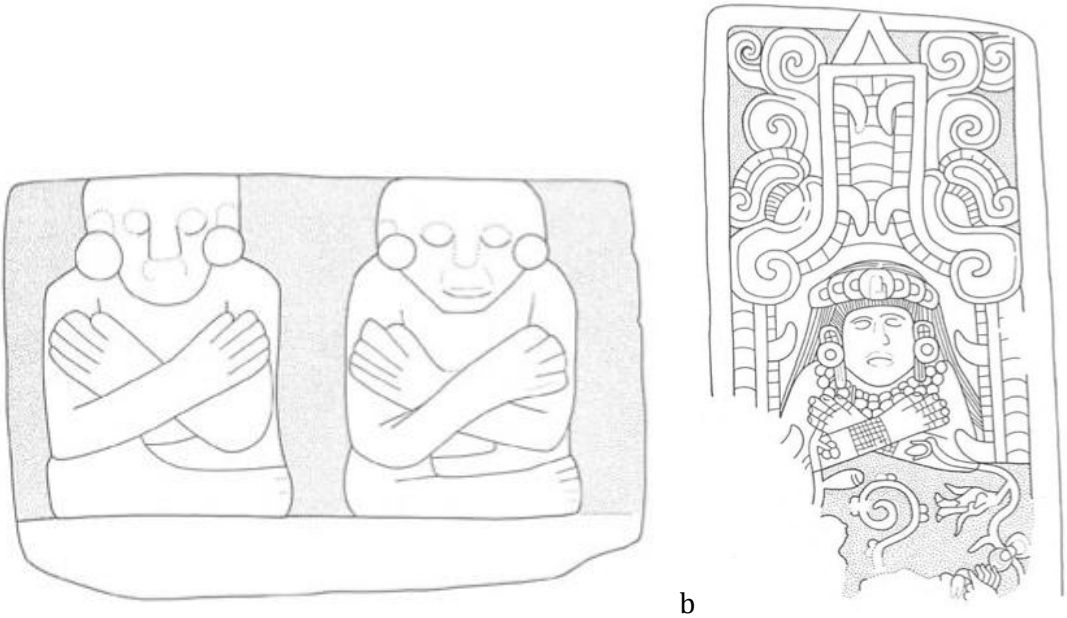
b  c d

Figure 5.60. Figures with crossed arms. a) Three examples from Chaculá, Chiapas. From Navarrete 1979:fig. 9. b) Sculpture from Toniná. Toniná site museum. c) Sculpture from Tenam Rosario. From Navarrete 1979:fig. 27b. d) Sculpture from Tzimol, Chiapas. Museo de Antropologia, Tuxtla Gutierrez.



a b

c d

Figure 5.61. Figures with crossed arms in Cotzumalhuapa art. a) El Baúl Monument 25. From Chinchilla Mazariegos 1998:25. b) Bilbao Monument 7. From Chinchilla Mazariegos 1998:13. c) Sculpture from Bilbao. From Navarrete 1979:fig. 32. d) El Baul Monument 5. From Chinchilla Mazariegos 2012:fig. 29.

Figure 5.62. Figures with crossed arms from Oaxaca. a) Tututepec. b) Juchitan. c) Rio Grande Stela 1. From Navarrete 1979:fig. 48.

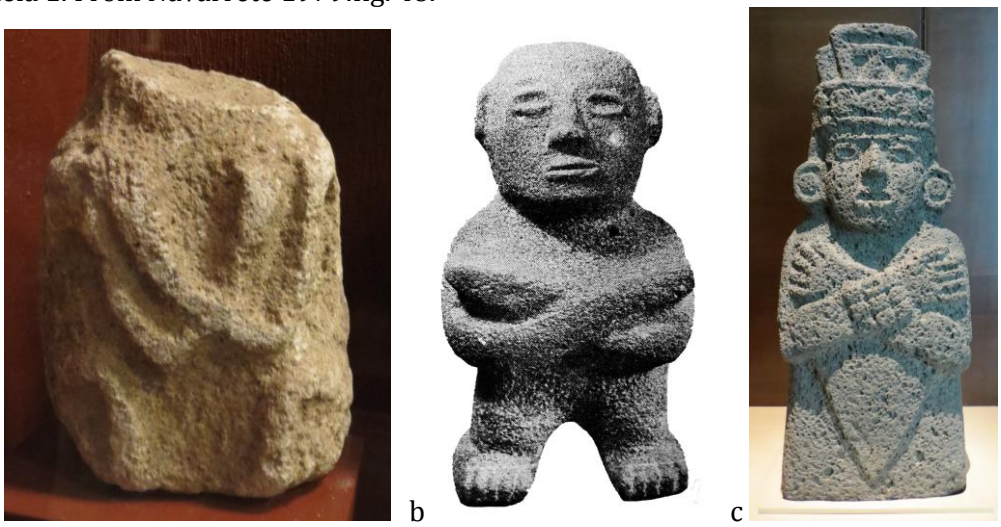


Figure 5.63. Crossed-arms figures from Central Mexico. a) Teotenango. Museo Roman Pina Chan. b) Calimaya, Estado de Mexico. From Navarrete 1979:fig. 44f. c) Tula. MNA.

Figure 5.64. Sculptures representing figures with crossed arms from San Miguel Ixtapan. San Miguel Ixtapan site museum.

Figure 5.65. Smaller scale sculptures representing figures with crossed arms from San Miguel Ixtapan. San Miguel Ixtapan site museum.

a

b

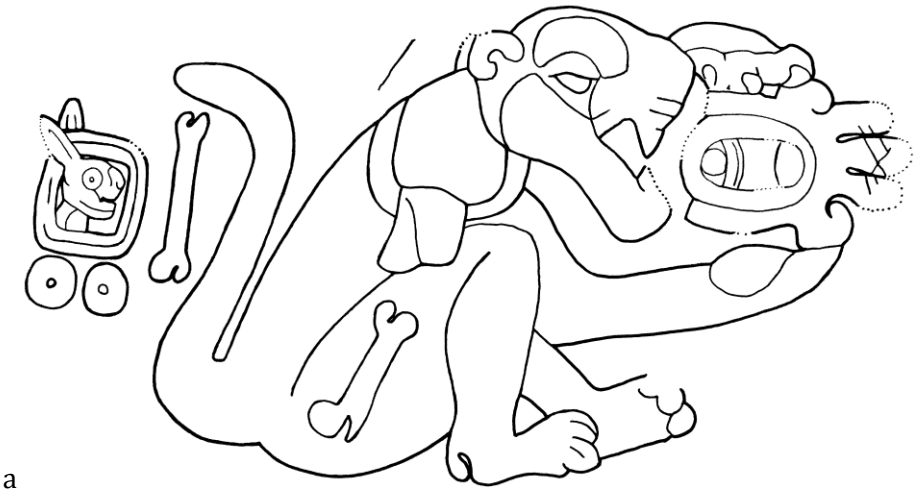
Figure 5.66. a) Recinto de las Esculturas, San Miguel Ixtapan. b) Stone figures found *in situ*.

a b

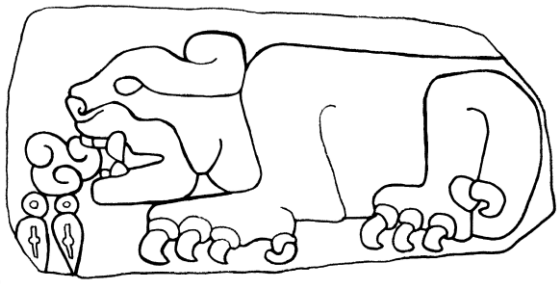
Figure 5.67. Objects found in the Cámara de las Ofrendas, Xochicalco. a) From Sáenz 1962:foto 22. b) Drawing of serpentine figurine. From Sáenz 1962:plate VIIIa.

a b

Figure 5.68. Detail of Battle Mural, Cacaxtla. a) Western talud. From Matos Moctezuma 1987:71. b) Eastern talud. From Matos Moctezuma 1987:77.



a

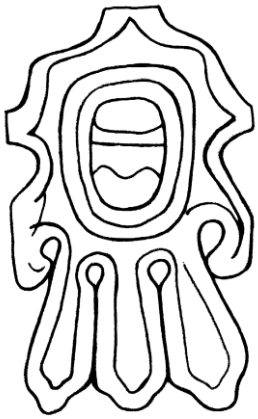


b

c

Figure 5.69. Felines devouring hearts. a) Petroglyph from Teotenango. b) Monument 1, San José de las Huertas, Ejutla. After Urcid 2010:fig. 4. c) Jaguar on Platform of the Eagles and Jaguars, Chichén Itzá.

a



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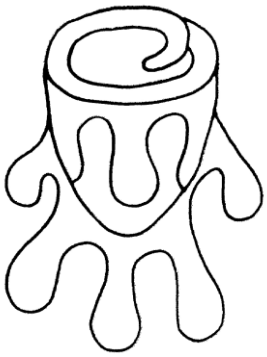


c

Figure 5.70. Representations of hearts with gouts of blood. a) Battle Mural, Cacaxtla. b) Xochicalco Stela 3. c) Zone 2, Portico 14, Mural 1, Teotihuacan. After Miller 1973:fig. 18.

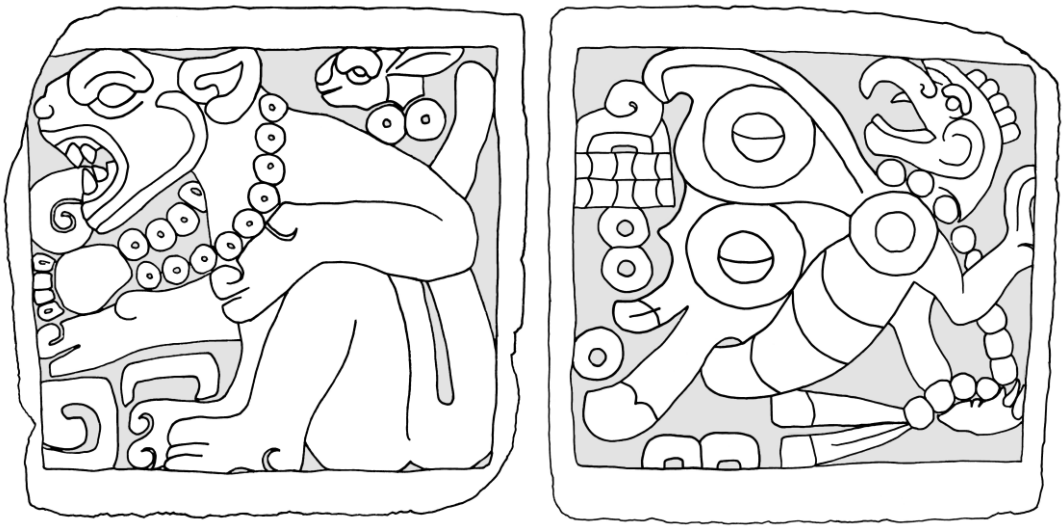


Figure 5.71. Trapezoidal Stone, Teotenango (both decorated faces). Teotenango site museum.

Figure 5.72. Stone monument from Teotenango (illustration and photo). Teotenango site museum.

Figure 5.73. Probable coyotes in Mesoamerican art. a) Frieze fragment from Tula, Pyramid B. b) Pyramid of the Plumed Serpents, Xochicalco. c) Piedra Labrada Monument 3. From Urcid 1993:fig. 18.1. d) Ceramic mold. Note the probable coyote headdress on the figure on the right. From von Winning 1988:II:fig. V9b.

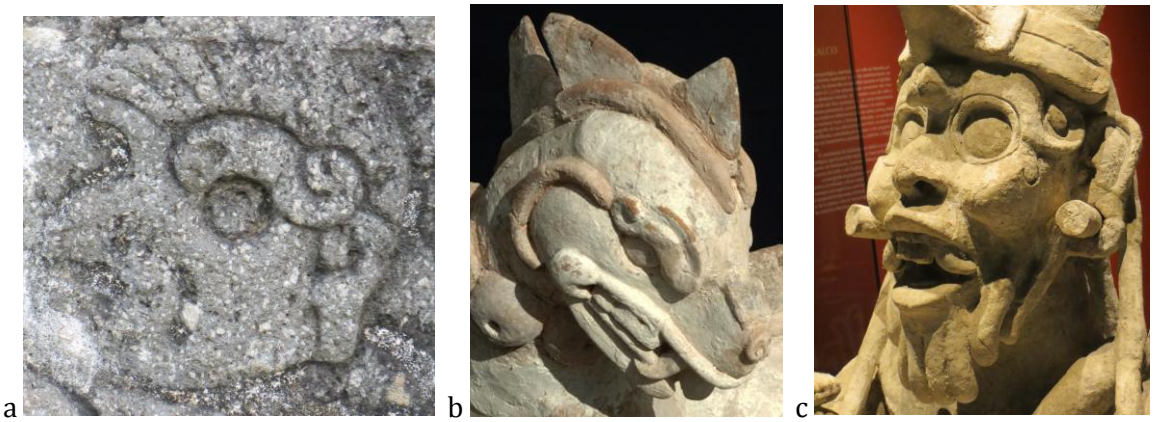


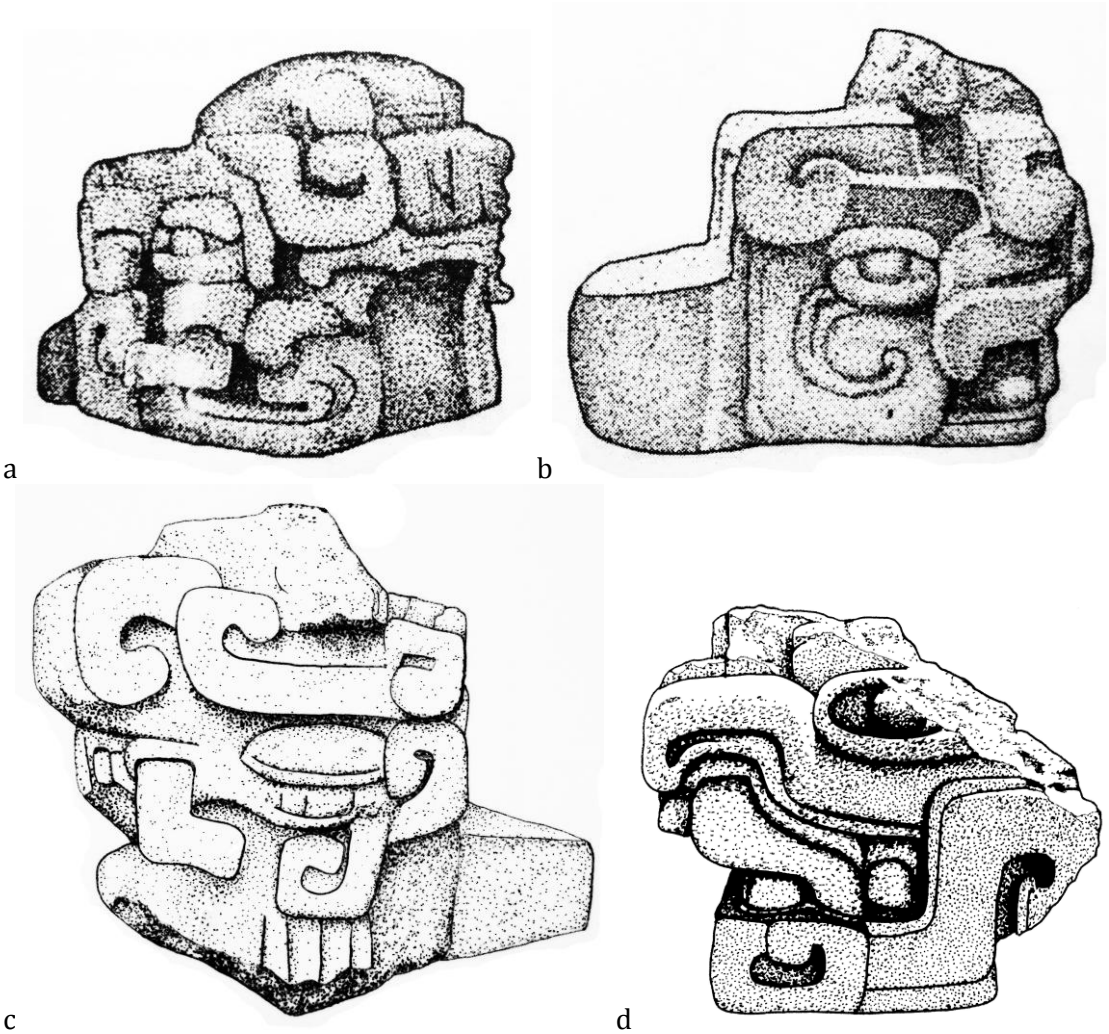
Figure 5.74. Eyebrows with volutes in Xochicalco art. a) Probable Monkey day sign, Pyramid of the Plumed Serpents. b) Ceramic iguana sculpture. c) "El Creador" sculpture. MNA.

a b

Figure 5.75. a) Serpent carving at the base of the Pyramid of the Serpent, Teotenango. b) Ballustrade showing scales and feathers, Pyramid of the Plumed Serpent, Xochicalco.

a b

Figure 5.76. Late Classic representations of starfish. a) Ceramic starfish from Xochicalco. Xochicalco site museum. b) Tenoned stone starfish from Teotenango. Teotenango site museum.



a b c d

Figure 5.77. Tenoned serpent heads from La Peña in the Museo Arqueológico de Valle de Bravo. a) From Reyna Robles 2013:fig. 17a. b) From Reyna Robles 2013:fig. 17b. c) Possible early example. d) Example similar to those shown in Figure 5.78.

a b

Figure 5.78. Tenoned serpent heads from La Peña in the Denver Art Museum.

Figure 5.79. Aztec “archaizing” fire serpent sculpture. MNA.

a b

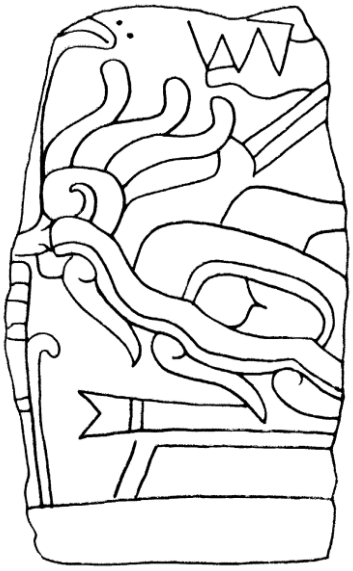
c 

Figure 5.80. Serpents with *S*-shaped fangs in Late Classic art. a) Detail of Structure A mural, Cacaxtla. From Matos 1987:115. b) Pyramid of the Plumed Serpents, Xochicalco. c) Incised *tecalli* bowl fragment, Museo Comunitario de Xico.

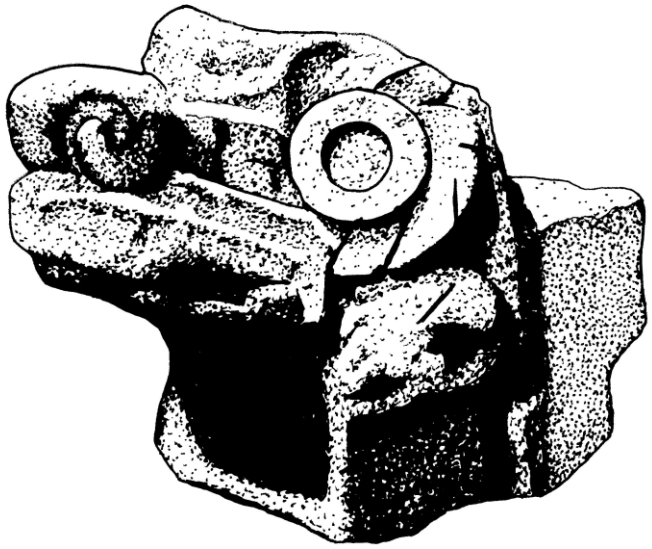


Figure 5.81. Probable War Serpent headdress. Museo Arqueológico de Valle de Bravo.

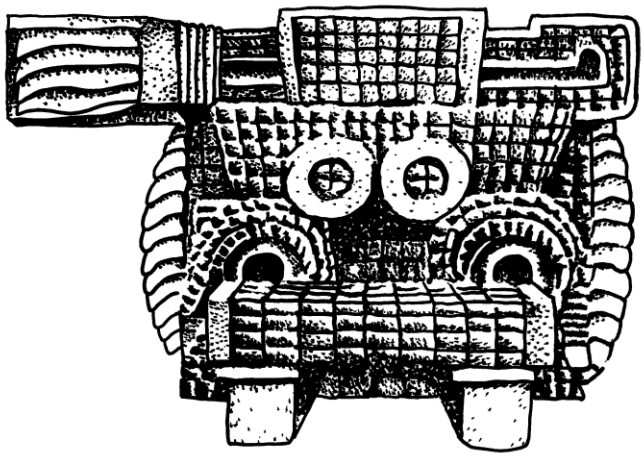


Figure 5.82. War Serpent headdress from façade of Temple of Quetzalcoatl, Teotihuacan. After Caso and Bernal 1952:fig. 184a.

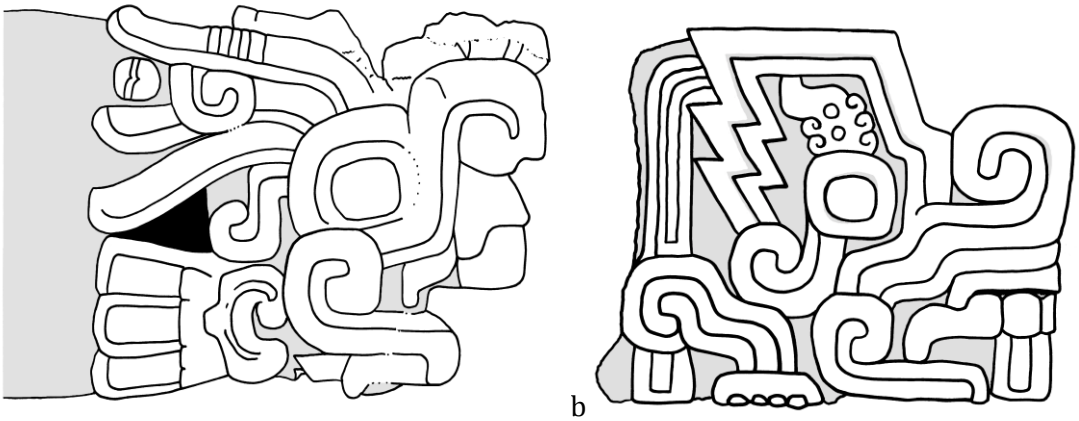
Figure 5.83. Sculpture from Cerro de las Tapazones. Ixtapan del Oro, Estado de México.

a b

c

Figure 5.84. Probable War Serpents with faces emerging from their mouths. a) Xochicalco site museum. b) Museo Cuauhnahuac, Cuernavaca. c) Museo Michoacano, Morelia. From Williams 1992:fig. 200.

Figure 5.85. Stone plaque from San Miguel Ixtapan. After Rodriguez Garcia 2009:foto 9.



a b

Figure 5.86. Ballcourt markers from Plazuelas. a) Eastern marker. b) Western marker.

Figure 5.87. Tenoned sculpture from Zaragoza, Michoacán. Museo de la Ciudad, La Piedad, Michoacán.

a b c

Figure 5.88. Earth Net motif in Late Postclassic International Style art. a) Codex Borbonicus, page 24. b) Codex Borgia, page 6. c) Codex Madrid, page 98.

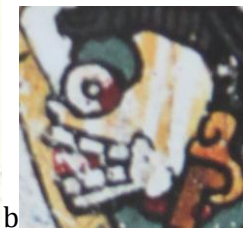
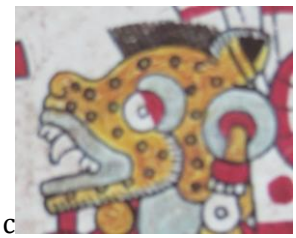
a b  c  d

Figure 5.89. Blue eyebrows in Late Postclassic International Style art. a) Codex Laud, page 39. b) Codex Borgia, page 34. c) Codex Zouche-Nuttall, page 83. d) Codex Madrid, page 16.