

THE CULTURAL AND HISTORICAL SIGNIFICANCE OF
MESOAMERICAN CODICES: AN EXTERNAL PERSPECTIVE

Presented at symposium entitled “The World Digital Library and Mesoamerican Codices:
Expanding Access and Promoting International Cooperation”
Mexico City, May 20, 2010.

Karl Taube, Department of Anthropology, U.C. Riverside

The topic of ancient Mesoamerican pictorial manuscripts, commonly referred to as “codices”, is both complex and vast, not only in terms of the many extant examples, but also the history of their study. For an extensive register of documented examples, an extremely valuable resource is by Charles Glass (1975), who previously published a volume devoted to the major collection of codices in the Museo Nacional de Antropología in Mexico City (Glass 1964). Another classic work is Donald Robertson’s *Mexican Manuscript Painting of the Early Colonial Period*, which concerns the origin and patronage of 16th century pictorial documents, including the *Aztec Codex Borbonicus*. More recently, Gordon Brotherston (1995) published a very useful synthesis of pictorial manuscripts in the United Kingdom, including the *Mendoza*, *Kingsborough*, *Nuttall*, *Laud* and *Féjérváry-Mayer* codices. In addition, *Códices de México* by Carmen Aguilera (2001) provides excellent descriptions of the major codices in the libraries of Mexico and Europe.

At the onset, it should be noted all of the known 16th century pictorial manuscripts derive from Mexico, and, as of yet, none can be documented for Guatemala, Belize, El Salvador or Honduras, countries that also comprise the region of ancient Mesoamerica. Although scenes in ceramic vessel art make it clear that the Classic Maya of the Peten of Guatemala clearly had screenfold books, none have survived the conditions of this humid

jungle region. (See Coe 1978; Coe and Kerr 1998.) However, the relatively recent finding of the ancient *Codex Grolier* reportedly from a cave in Chiapas suggests that additional manuscripts may be found in dry caves in the future (Coe 1973).

I organized my presentation for the World Digital Library (www.wdl.org) session in Mexico City into two parts to address how Europeans and researchers in the United States have studied and documented the rich corpus of pre-Hispanic and early colonial Mexican codices. For the first half, I describe the volatile and violent period in the 16th century, which was a time of mass destruction of pre-Hispanic manuscripts, but was also a period when many of the most important extant documents were created (Slides 1-45). The second part of the presentation addresses the major 19th and early 20th century research following the independence of Mexico from Spain in 1821 (Slides 46-126). Since I was invited to address an “external perspective” on this topic, I do not mention and acknowledge the very important body of Mexican research at this time, including the tireless efforts of Francisco del Paso y Troncoso, who not only published an important commentary and facsimile of the *Codex Borbonicus*, but also brought the monumental work of Fray Bernardino de Sahagún to the light of academic scholarship. (See Zavala 1938.) Finally, the presentation ends with more recent scholarship of the 20th century to the present, including the study of Mixtec codices and recent breakthroughs in the decipherment of Maya hieroglyphic writing.

The Spanish conquest and the 16th century:

For the topic of an external perspective, nothing came to my mind sooner than the Spanish of the 16th century, including Hernan Cortés and his fellow *conquistadores*. The

first image I illustrate is a scene from the *Codex Azcactitlan*, with armored *conquistadores* and native porters following Hernan Cortés and the Nahuatl and Yukatek Maya translator, Malinztin (a.k.a. Doña Marina to the *conquistadores* and Malinche today). Although I do not mention them in my presentation, there are a number of 16th century pictorial documents that provide unique views into what was one of the greatest confrontations between two world civilizations. Brotherston (1995: 21-44) provides a very useful summary of native books concerning the conquest and notes the striking prominence of Malintzin in many of these early documents, including the aforementioned *Codex Azcatitlan*. Compiled by Fray Bernardino de Sahagún some forty years after the Spanish Conquest, Book 12 of the *Florentine Codex* provides a profoundly moving Aztec perspective of their defeat and the fall of the capital of Tenochtitlan. However, there is also the perspective of the Tlaxcaltecs, who served as soldiers and role models of Spanish colonization well after the 16th century in New Spain and as far north as the American Southwest. In fact, a scene in Diego Muñoz Camargo's early colonial account of Tlaxcala depicts Tlaxcaltecs assisting Coronado in his attack on Zuni, New Mexico. (See Brotherston 1995: fig. 37.)

In Mesoamerican codical studies, *lienzo* typically refers to a painted sheet of cotton *manta* cloth. Although such examples are only known for the colonial period, in a paper originally presented in a Dumbarton Oaks symposium at the Library of Congress, I (Taube 2010) suggested that similar cloth paintings were a major means by which complex scenes were spread over broad regions of Mesoamerica during the Late Postclassic period (A.D. 1250-1521). Although the original *Lienzo de Tlaxcala* is now lost, there are two versions copied in very different styles during the 18th century. The

copy by Diodoro Serrano appears to be rendered in a more native style, and for that reason could be considered as more “authentic.” The other version copied by Juan Manuel Yllañes in 1773 is much more in the baroque style of 18th century Mexico and has a very significant component not found in the other document, this being secondary glosses in Nahuatl. Both extant versions of the *Lienzo de Tlaxcala* portray in great detail the Tlaxcaltecan contributions to the Spanish conquest, including specific regions of central and western Mexico, as well Guatemala, when they accompanied the conquest of Guatemala led by Pedro de Alvarado. Quite recently, it has been determined that another *lienzo* in the Casa de Alfeñique museum in Puebla provides remarkably detailed scenes of the conquest of Guatemala (van Akkeren 2007). In this document, men of Quauhquechollan, formerly part of the Aztec empire, are shown accompanying the Spanish in the 1524 conquest of the K’iche’ with many Guatemalan communities, including Olinstepeque, Chichicastenango, and Chimaltenango graphically illustrated with glyphic place names. In other words, very soon after the fall of Teotihuacan, former Aztec and Tlaxcaltecan were fighting in the same campaign with the Spanish.

For the discussion of the colonial period, I note that there were actually several Spanish “foreign perspectives” concerning New Spain. In his classic work, *Spain in America*, Charles Gibson (1966: 49) notes that there were three major Spanish factions vying for the governance and control of native populations in 16th century New Spain:

The first is the *encomendero* class, consisting of former conquistadores, leading civilian colonists, and other privileged Spaniards. These formed an early colonial aristocracy exercising its power in the institution known as *encomienda*. The second is the colonial church, dedicated to the tasks of converting Indians, preventing Indian exploitation by *encomenderos*, and establishing a Christian society. And the third is the Spanish secular state with its expanding colonial officialdom and its monarchical insistence on state control over all persons and parties in America.

To stress the sharp differences between early colonial Spanish interests, I contrast the views of Gonzalo Fernández de Oviedo y Valdés with the Dominican Bartolomé de Las Casas (Slides 2 and 3). In his *Historia general y natural de las Indias*, Oviedo plainly expresses his deep contempt for native peoples, describing them as “dirty, lying cowards who commit suicide out of sheer boredom, just to ruin the Spaniards by dying... (translation in Keen 1971: 79).” Las Casas, on the other hand, was a strong defender of native rights and had this to say about Oviedo and his *Historia General*: “one of the greatest tyrants, thieves, and destroyers of the Indies, whose *Historia* contains almost as many lies as pages.”

One of Las Casas’ most influential works is his *Brevísima relación de la destrucción de las Indias* published in 1552. The image I illustrate of Spaniards dogging natives is by the noted engraver Théodore de Bry, who in the late 1500s supplied this and other illustrations for a publication of Las Casas’ *Brevísima relación* (Slide 4). A Walloon Protestant with no love for Spain and its political interests, De Bry published the illustrations separately in a work that in English reads as *Brief Explanation of the Horrible Deeds Done by the Spaniards in Various Parts of the New World* (Keen 1971: 164). Gruesomely detailed in scenes of torture and mutilation by the Spanish against hapless natives, De Bry’s prints circulated widely in Europe, and were among the major promulgators of *La Leyenda Negra*, or “Black Legend.” First coined by Julián Juderías in 1914, the Black Legend refers to the virulently anti-Spanish propaganda promulgated by then competing political and religious forces in Europe, including England, Flanders, and Germany (Juderías 1914; Gibson 1971). In terms of the Black Legend, Spain was branded as an empire of brutality, bigotry, and intolerance that annihilated all New World

peoples that it encountered. With some irony, it should to be noted that Las Casas himself was a Spaniard. In addition, the colonial record for England in North America documenting native traditions is far more tragic in comparison to the Spanish in New Spain. For this reason, I include a De Bry illustration for Harriot's *A brief and true report of the new found land of Virginia* (Slide 5). If only a devoted scholar and linguist such as Fray Bernardino de Sahagún had been in such a village, our understanding of native cultures of the eastern United States at first contact would be very different indeed.

In my presentation, I note that in the 16th century, the *encomenderos*, the Spanish crown, and the religious orders caused the creation of particular pictorial manuscripts. The first group that I discuss is the *encomendero* class, who were granted by the crown *encomiendas*, that is, native populations deemed to the early Spanish colonists, who were ostensibly responsible for their care and conversion. (See Simpson 1966.) In New Spain, as well as the Antilles and Peru, however, this readily became no more than legalized slavery. As taxpaying citizens of the crown, native peoples did indeed have legal rights; nevertheless, all too often, these were difficult to protect from the frequently brutal behavior of powerful *encomenderos*. Among the pictorial manuscripts that have survived are legal documents prepared by native communities documenting in great and vivid detail abuses by the *encomenderos* and other Spaniards in New Spain.

The first of the legal documents that I discuss is the *Codex Osuna*, a manuscript of the mid-16th century commissioned by former Aztec of Tenochtitlan, that is, Mexico City. For my first image of this document, a native is protecting his household estate against Spaniards, and the inclusion of the wife and infant makes this a particularly moving scene (Slide 6). The small volute emanating from the face of the landholder not

only denotes that he is speaking, but also that he acts as an authority or “lord” of his dominion. Thus in Nahuatl, the term *tlatoani*, or “lord”, signifies “one who speaks.” For the next portion of the *Codex Osuna*, I display a portion of a page illustrating the repugnant behavior of Doctor Puga and his equally unpleasant wife. In the scene on the left, Doctor Puga is shown mistreating *alguaciles*, native authorities formally provided with a staff of office, a theme to which we will return soon. In the image to the right, the wife of Doctor Puga is shown abusing a poor servant because the oranges did not meet her expectations. (Note that these fruits of discord are carefully illustrated and labeled to the far right of the scene.)

In the following scene of my presentation (slide 8), the Viceroy of New Spain presents the wooden staffs or *varas* of authority to native officials, staffs of office that continue to be used today in native communities of Latin America and Puebloan peoples of the American Southwest. Of special interest is the Spaniard behind the kneeling native official, who is glossed as a *nahuatlato*, that is, a trained translator of the Aztec language, or Nahuatl. Clearly, such bilingual translators must have been in great demand in early colonial New Spain. For the next scene of the *Codex Osuna*, I present a page illustrating youths of the former Aztec accompanying a Spanish military expedition to Florida. In the accompanying Nahuatl text, they are referred to as *mexica tenochca*, or Aztec of Tenochtitlan, and a particularly interesting detail is their flag marked with the place name of Tenochtitlan, an eagle perched on a *nopal* cactus growing from a rock. The final image from the *Codex Osuna* portrays natives placing the stone foundations of the first church at the Zocalo in Mexico City, not the version which we see today, which dates to the 17th century.

Another pictorial legal document, the *Codex Kingsborough*, is named after the 19th century antiquarian, Lord Kingsborough, mentioned later in the presentation. Created in the community of Tepetlaoztoc, the *Codex Kingsborough* begins with a scene of the region and the nomadic Chichimec founders and then relates in graphic detail the violent misdeeds by a number of *encomenderos*, whose names are often written phonetically with Aztec glyphs as well as glosses in Latin orthography. Many of the images are disturbingly violent, including the first scene illustrating an *encomendero* burning four indigenous subjects at the stake and the second slide depicting two scenes of Spaniards brutally beating natives (slides 11-12). However, a great many scenes also provide unique glimpses into native artistry of the 16th century, including careful renderings of specific gold jewelry and feather ornaments, some of which can be seen in the first and last illustrated images of the *Codex Kingsborough* (slides 11 and 13). The final slide from this document also portrays on the left a Spanish water-wheel, but with the falling water rendered in pre-Hispanic, Aztec style.

For the following section concerning works commissioned by the Spanish crown, I focus on one particular document, the great *Codex Mendoza*, named after the first Viceroy of New Spain, Antonio de Mendoza. For many years, complete published versions of this critically important document were extremely rare, these being either in Lord Kingsborough's *Antiquities of Mexico* (1831-1838) or in James Cooper Clarke's (1938) three-volume version. Unfortunately, most of the Cooper Clark editions were destroyed during World War II when a bomb struck the London warehouse where they were stored. Thus, the four volume *Codex Mendoza* work prepared by Frances Berdan and Patricia Anawalt (1992) is a welcome and important contribution to the field of

Mesoamerican studies.

Probably commissioned by Viceroy Mendoza for Charles V, the *Codex Mendoza* was seized by French brigands shortly after its creation, and eventually became part of the collections in the Bodleian Library at Oxford. Although it might seem strange that pirates would be interested in rare manuscripts, this item was of immense value, as it documented in great detail the new territory of New Spain, including the history and culture of the Aztec, and, most importantly, the tribute goods of their empire. The painting to the viewer's left is a portrait of Viceroy Mendoza, and that on the right is the first illustrated page of the manuscript (Slide 14). Fittingly enough, this initial page portrays the founding of the Aztec capital, Tenochtitlan, in the year 2 House, appearing in the upper left corner of the page, a date corresponding to A.D. 1325. The scene has in the center the toponym for Tenochtitlan, or "place of the nopal cactus rock", with the four wards of the city presented in a very pre-Columbian fashion in terms of the four directions and world center, or *axis mundi*. The following slide continues the initial historical portion of the manuscript, in this case recording communities conquered by the emperor Ahuizotl, each town with its specific toponym accompanied by a burning temple, an Aztec scribal convention denoting conquest. Each place name is accompanied by Nahuatl glosses with Latin orthography, serving much like a "Rosetta Stone" for reading particular Aztec glyphs.

The next image depicts the second portion of the *Codex Mendoza*, which concerns tribute acquired from particular provinces under the control of the Aztec empire (slide 16). This particular page records tribute from the Soconusco of southern Chiapas and nearby Guatemala, a region rich in such materials as quetzal plumes, jade, amber, cacao,

and jaguar pelts. The main town, or *cabezera*, of the tribute province appears at the upper left corner of the page, a nopal cactus denoting Soconusco, or Xoconochco. The other two signs at the top of the page are the Aztec months Ochpaniztli and Tlacaxipehualitzli, referring to the two times a year that this tribute was acquired.

The third portion of the *Codex Mendoza* in the following image concerns daily life, and provides a unique contact period “ethnography” of the Aztec. The page that I selected concerns Aztec marriage ceremonies, with the bride being carried to her new home at the base of the scene and, in the center, the groom and bride literally “tying the knot” before the household hearth. The blue dots above denote their age, which is fifteen years. Aztec ritual speech for marriage is recorded in the *Florentine Codex*, which will be discussed below. (See Sahagún 1950-82, bk. 6: 127-33.)

The following five slides concern my own research based on the Aztec glyphs and accompanying glosses in Latin script occurring in the *Codex Mendoza* and the closely related *Matrícula de Tributos* (slides 15-22). For the first two images, I note that the blue disk with interior red elements denotes turquoise, or *xihuitl*, with the second slide comparing an actual Aztec turquoise mosaic excavated at the Templo Mayor with the same device appearing in the headdress of the wind god, Ehecatl-Quetzalcoatl, from the *Aztec Codex Borbonicus*. The next slide illustrates creatures with oddly segmented bodies, labeled with the Nahuatl term *ocuila*, meaning “caterpillar,” and prominent forelimbs that are entirely consistent with the thoracic legs of these pupate butterflies. From these glosses in Latin orthography, I argued that the Aztec Xiuhcoatl, or “turquoise serpent” illustrated in the following slide is actually a meteoric caterpillar (Taube 2000). Indeed, a widespread belief in both ancient and contemporary Mesoamerica is that upon

striking the Earth, meteorites transform into caterpillars or “worms” (Köhler 1989; Taube 2000). Although this may appear to be an extremely arcane bit of lore, it has direct bearing on one of the most renowned of extant Aztec monuments, this being the great Calendar Stone -- the centerpiece of the Museo Nacional de Antropología in Mexico City. As can be seen in the following slide of a photo and drawing of the object, two massive Xiuhcoatl caterpillars with forelimbs and segmented bodies surround the central image of the sun (Slide 22).

The next portion of my presentation focuses on the pivotally important role of the church – especially the Franciscans – in the documentation of native religion. Although the Catholic mendicants in 16th century New Spain have been widely vilified as book-burning zealots, they were responsible for creating some of the most important pictorial manuscripts pertaining to Aztec religion, including the *Borbonicus*, *Telleriano-Remensis*, *Vaticanus A*, *Magliabechiano*, and *Tudela* codices, as well as the critically important corpus of Sahaguntine material. The first slide is an illustration by Fray Diego Valadés, a Franciscan of Tlaxcaltecan as well as Spanish descent, appearing in his *Rhetorica Christiana* that illustrates the peregrination of the church to New Spain (Slide 23). The first of the mendicant orders were the Franciscans, with the initial twelve arriving in 1524, only several years after the fall of the Aztec capital of Tenochtitlan (Ricard 1966). The scene portrays the church as a verdant garden, and, with the four cupolas and central building, it is notably similar to pre-Columbian plans concerning the four quarters and world center, or *axis mundi*, as can be seen in the previously illustrated page 1 of the *Codex Mendoza* (Slide 14). However, as pointed out by Jaime Lara (2004: 128-33), similar plans appear in the work of the 14th century Franciscan scholar Nicholas of Lyra,

that is, before the discovery of the New World. As George Baudot (1995) and others have noted, the Franciscans were strongly influenced by Sir Thomas More and his concepts of Utopia, and, for this reason, he appears in the following image (Slide 24).

For the early Franciscans of New Spain, there was a sincere belief that, with the successful conversion of the native population, a true new world order would begin, without the misery and accumulated sins of the old world (Phelan 1970; Peterson 1993; Baudot 1995; Lara 2004). For the Franciscans, it was of critical importance that the natives be taught doctrine in their own languages, as, otherwise, true conversion would be impossible. Many of the early Franciscans of New Spain, including Fray Andrés de Olmos, Fray Alonso de Molina, and Fray Bernardino de Sahagún, were highly trained linguists and knew Nahuatl fluently. The following image (Slide 25) is another scene by Fray Diego Valadés illustrating his beloved mentor Fray Pedro de Gante preaching to natives of New Spain with accompanying scenes, which he refers to with a pointer. In fact, Fray Pedro de Gante appears in the upper left corner of the previously illustrated scene from *Rhetorica Christiana*, also preaching to the natives with images, in this case, on a hanging canvas (Slide 23). Although the series of scenes in Slide 25 suggests a codex, Samuel Edgerton (2001: 118) notes that the scenes were probably painted cloth *lienzos*. Similarly, I (2010) have argued that a major vehicle for the pre-Hispanic spread of complex imagery during the Late Postclassic period were painted cloths, which would have been hung on walls or altars. Thus, the pre-Hispanic murals appearing on altars from such sites as Tizatlan and Ocotelulco in Tlaxcala have textile borders, indicating that they are based on hanging, painted cloths. It is therefore conceivable that Fray Pedro de Gante adopted his new method of teaching from this pre-Hispanic tradition.

The following image (Slide 26) is from Diego Muñoz Camargo's *Descripción de la Ciudad y Provincia de Tlaxcala*. Of Spanish and native Tlaxcalan descent, Muñoz Camargo was bilingual in Spanish and Nahuatl, and often served as a *nahuatlato*, or translator, for the Franciscans. The scene portrays the burning of the vestments of the native gods, as well as codices or "libros" pertaining to them. It is conceivable that the figure to the far right carries screenfold books, although it is also possible that these are faggots of wood for the fire. The artist of this scene was clearly well versed in pre-Hispanic iconography, and it is readily possible to identify particular deities, including the rain god, Tlaloc, Ehecatl-Quetzalcoatl, the wind deity, Mictlantecuhtli, the god of death, and Xiuhtecuhtli, the god of fire, with his pointed *xiuhuitzollí* turquoise mosaic crown in the center of the conflagration. In the following image, I call attention to a prominent spiral near the base of the fire. Denoting water, or *atl* in Nahuatl, it has no immediate connection to the series of deity portraits and regalia, and seems entirely out of place in terms of the burning of deity regalia and native books. However, it is conceivable that the water element was intended to combine with the torches and flames to denote the well-known Nahuatl phrase for war, *atl-tlachinolli*, or "water and fire." The war in this case would be one of religion, the Franciscans and the Catholic church against the native gods of highland Mexico.

For the limited time of the presentation, it was not possible to cover adequately all of the early colonial manuscripts, and I chose to first start with one of the largest and most magnificent, the *Codex Borbonicus*. Painted on *amate* paper, each page is roughly square and measures some 15 inches across. The manuscript appears virtually pre-Hispanic in style, and many scholars considered it to be pre-contact, which would make it

the only extant pre-Hispanic Aztec manuscript known. However, Donald Roberston (1959: 91-92) marshaled evidence that it is indeed early colonial, including conventions appearing with day name signs and portrayals of birds, and, in addition, intentional spaces for accompanying Spanish glosses. I believe that the extensive illustration of the 20-day *veintena* festivals of the 365-day calendar also suggests an early colonial attribution. Although there is widespread documentation of the *veintena* ceremonies by the 16th century mendicant orders, these do not appear in any known pre-Hispanic codex.

The first image I illustrate from the *Codex Borbonicus* is the first extant page illustrating the 20 *trecenas*, or 13-day “weeks” of the Aztec 260-day divinatory calendar. Also occurring in such pre-Columbian manuscripts as the *Codex Borgia* and the *Codex Vaticanus B*, the *trecenas* are an extremely important source of information concerning particular deities, as there were deity patrons of each 13-day period. The *Codex Borbonicus* has by far the most elaborate and developed rendering of the extant *trecena* series, featuring the 9 Lords of the Night, the 13 Lords of the Day with their associated 13 winged beings, or *volatiles*, and main scenes of the presiding gods and their auguries. The first two pages of the *trecenas*, corresponding to 1 Crocodile and 1 Jaguar are missing, with the extant portion beginning with this third *trecena* of 1 Deer.

The following two images (Slides 30 and 31) concern the 20-day *veintena* ceremonies of the 365-day year appearing on pages 23 to 33 of the *Codex Borbonicus*, with the first slide illustrating the festivals for the *veintena* months Tlaxochimaco and Xocotlhuetzi, the latter denoted by youths dancing around the Xocotl pole topped by an image of a warrior mortuary bundle. The following slide illustrates page 34 of the *Codex Borbonicus*, arguably one of the most important scenes of the manuscript. Although the

page pertains to the Aztec month of Panquetzaliztli, it is also the very special Aztec year of 2 Reed, which concerns the making of new fire at the conclusion of a 52-year cycle, the last of which before the conquest was in 1507. At the top of the page, the year 2 Reed appears prominently in a turquoise frame, the Aztec convention for denoting year, *xiuhuitl*, a term also signifying “turquoise” in Nahuatl. To the right, there is an image of the Aztec tutelary god, Huitzilopochtli, with a temple topped with a paper banner, the Aztec sign for the month Panquetzaliztli. Further to the right, there is a hill with a drill stick and an accompanying willow tree, denoting the hill south of Tenochtitlan now known as “The Hill of the Star”, where the new fire was drilled atop the abdomen of a sacrificial victim. This was a time of extreme danger, because if the new fire were not successfully made, the *tzitzimime* star demons of darkness would descend to destroy the world. The footprints from the hill denote the taking of the new fire to a temple in Tenochtitlan and dominate the center of the scene. The four figures flanking the turquoise-colored hearth deliver bound bundles of wood, as do the god impersonators at the left of the scene.

Another important manuscript probably commissioned by the Franciscans of New Spain is the *Codex Magliabechiano*, and Slide 32 features an illustration of Tlaloc pertaining to the month Etzalcualiztli. Part of the collection of the Biblioteca Nazionale Centrale of Florence, the manuscript is a compendium of various topics richly illustrated with images and accompanying glosses and texts in Spanish. Among the themes are the *veintena* festivals, other rites pertaining to the 260-day calendar, patron gods of the alcoholic beverage pulque, and even textile designs, each carefully labeled with their names translated from Nahuatl into Spanish. Many of the themes also appear in related

manuscripts, the whole of which are often referred to as the Magliabechiano Group. (See Glass 1975: 155-56.) The most similar to the *Codex Magliabechiano* is the *Codex Tudela*, in the Museo de América in Madrid, the rediscovery of which was only announced as recently as 1947. Many scenes are clearly parallel to the *Codex Magliabechiano*, including the examples provided in Slide 33, which illustrate the aforementioned *tzitzimime* demons — the one on viewer’s left from the *Codex Magliabechiano*, and the right from the *Codex Tudela*. However, as with the other manuscripts in the Magliabechiano Group, there are topics not present in the *Codex Magliabechiano*, including the following slide, which features a list of the 13 *volatiles* appearing in the pre-Hispanic *Codex Borgia* and the early colonial *Codex Borbonicus* and the *Aubin Tonalamatl*. It is likely that both are 16th century copies of an original compendium by Fray Andrés de Olmos (Baudot 1994: 214).

A great deal of the early Franciscan work documenting native religions took place at the Colegio de Santa Cruz in Tlatelolco, founded in 1536 with the support of Viceroy Antonio de Mendoza. Slide 35 illustrates the area of the Colegio de Santa Cruz, although the original building no longer stands. The college at Tlatelolco was the first in New Spain for the higher schooling of native youths, and was based on the pre-Hispanic tradition of the Calmecac, the school for Aztec nobility (Baudot 1995: 106). As I note, the Colegio de Santa Cruz was “a material testimony to the moral, intellectual, and political promise of native New Spain (Slide 35).” One of the initial instructors at this school was Fray Bernardino de Sahagún, who arrived in New Spain shortly after the first twelve Franciscan “apostles.” Although he left the college for missionary duties several times, he continued to work there until shortly before his death in 1590 (León Portilla

1994: 14). In a short commentary such as this, it is difficult to summarize the importance of Sahagún's work to the field of Mesoamerican studies. (See Edmonson 1974; León Portilla 2002; Nicolau D'Owler 1987; Nicolau D'Owler and Cline 1973; and Schwaller 2003.) Simply put, there is a no better record of contact New World culture to the present time. Slide 34 illustrates a portrait of Sahagún along with a quotation from him mentioning that he consulted pre-Hispanic codices for his research. One of his first efforts was the *Primeros Memoriales*, which I did not illustrate in my presentation. (See Sahagún 1993; 1997.) However, an even more important work is the magnificent *Florentine Codex*, or *Historia general de las cosas de Nueva España* (Sahagún 1950-1982). Composed of twelve books bound in three volumes, the *Florentine Codex* is in the Biblioteca Medicea Laurenziana in Florence. A virtual encyclopedia of Aztec culture, the manuscript is written in Nahuatl, with a roughly parallel text in Spanish, and is richly illustrated with more than 1,800 accompanying images. Slides 37 to 39 provide examples of the illustrations, with the first being from Book 1, concerning Aztec gods, the second from Book 2 describing the *veintena* celebrations of the 365-day calendar, and the third from Book 11, devoted to the natural world, including plants, animals, and valued stones.

For the contact period Maya, the only document that remotely approaches the scope of the *Florentine Codex* is the *Relación de las cosas de Yucatan* by the Franciscan Fray Diego de Landa. The two images in Slide 40 are a portrait of Landa in the monastery of San Antonio in Izamal, Yucatan, and a photo of the open church at Maní. It was at Maní, Yucatan, in 1562 that Landa engaged in the notorious *auto de fe* where thousands of local Maya accused of idolatry were tortured, whipped, and fined, with many of them dying because of the abuses (Tozzer 1941: 79, n. 342). As a result of this

auto de fe, Landa was summoned to the Council of the Indies in Spain to justify his actions, especially the charges of usurping the office of bishop and acting as the judge of Inquisitions. Composed around 1566 while Landa was in Spain, the *Relación* is a lengthy account describing many aspects of Yucatec Maya culture, including rituals, calendrics, and writing, as well as daily life. However, it is also clear that Landa has little intellectual interest in native traditions and was in fact a self-acknowledged book-burner, as he blandly states in the following passage from his *Relación*:

These people also made use of certain characters or letters, with which they wrote in the books their ancient matters and their sciences, and by these and by drawings and by certain signs in these drawings, they understood their affairs and made others understand them and taught them. We found a large number of books in these characters, and as they contained nothing in which there were not to be seen superstition and lies of the devil, we burned them all, which they regretted to an amazing degree, and which caused them much affliction (Tozzer 1941: 169).

Clearly, there were 16th century Spanish scholars who did not agree with such brutal tactics, including the Franciscan linguist Fray Antonio de Ciudad Real, who in a work of 1588 states:

because in these books there were mixed many things of idolatry, they burned almost all of them, and thus was lost the knowledge of many ancient matters of the land, which by them could have been known (translation in Tozzer 1941: 78, n. 340).

In his 1590 work *Historia natural y moral de las Indias*, the Jesuit scholar Fray José de Acosta is less circumspect, although Landa again is not specifically mentioned:

In the province of Iucatan ... there used to exist some books of leaves, bound or folded after a fashion, in which the learned Indians kept the distribution of their times and the knowledge of plants, animals and other things of nature and the ancient customs, in a way of great neatness and carefulness, It appeared to a teacher of doctrine that all this must be to make witchcraft and magic art; he contended that they should be burned and those books were burned and afterwards not only the Indians but many eager-minded Spaniards who desired to know the secrets of that land felt badly. The same thing has happened in other cases where

our people, thinking that all is superstition, have lost many memories of ancient and hidden things which they might have used to no little advantage. This follows from a stupid zeal.. (translation in Tozzer 1941: 78, n. 340).

Although these cited accounts suggest that all Yucatec screenfold books were burned by Spanish friars in the 16th century, this is by no means the case. Aside from several examples surviving in libraries in Europe, codices continued to be confiscated by ecclesiastical investigators well into the 17th century (Chuchiak 2001: 141-45; 2004b).

Although pictorial documents have survived in indigenous Mesoamerican communities even to the present (See Parmenter 1982), by the latter portion of the 16th century there was a sharp decline in their creation, partly due the proselytizing efforts of the mendicant orders and the sharp decline in native populations due to disease and colonial abuse. However, another major reason was the changing policies of the Spanish Crown towards New Spain. Whereas Charles V was supportive of the Franciscans and the training of native nobility at the Colegio de Santa Cruz in Tlatelolco, his successor, Philip II, had a very different attitude about New Spain and its indigenous populations. The province was to be a New World extension of Spain itself, with native culture being a direct challenge to this program. Thus, documents pertaining to native traditions, including history, art and language, as well as religion, were therefore considered especially pernicious. On April 12, 1577, Philip II issued the following decree:

you must proceed with much care and diligence to seize those books, without any copy remaining, and to send them carefully guarded at the first opportunity to our Council of the Indies, so that they may be examined there. Do not allow any person to write things having to do with the superstitions and the way of life of the natives, in any language... (translation from Baudot 1995: 500).

It was a decree intended to negate the great legacy of the pre-Hispanic and early colonial pictorial manuscripts of Mexico, as is succinctly noted by Baudot (1994: 525) in the

following statement: “With this policy, in 1577 Philip II maimed Mexico by amputating a great part of its personality and identity....” The 1577 decree was notably successful, and it was not until after the independence of Mexico from Spain in 1821 that many pre-Hispanic and early colonial pictorial manuscripts began to be rediscovered and studied after centuries of neglect.

The second half of my presentation concerns 19th and early 20th century research in Europe and the United States concerning Mexican pictorial manuscripts (Slides 46-126). One of the first major 19th century works devoted to ancient Mexican codices and antiquities was *The Antiquities of Mexico*, commissioned by the Irish nobleman Edward King, Viscount Lord Kingsborough (Kingsborough 1830-1848). The first image in this portion of the presentation (Slide 46) illustrates the title page of the first volume and a photograph of a set of all nine volumes, which are truly “elephant folio” in size, each weighing between roughly 20 to 40 pounds (Coe 1992: 80). For his publication efforts, Lord Kingsborough died in debtor’s prison, with the last volumes published posthumously (ibid.). Among the codices published in this early series are the *Codex Borgia*, the *Codex Mendoza*, and the aforementioned legal document from the community of Tepetlaoztoc, now referred to as the *Codex Kingsborough* (see Slides 11-13). For the first several volumes, the codices were rendered in color by the artist Agostino Aglio, and Slide 47 illustrates Aglio’s rendering of *Codex Borgia* page 17 with a photograph of the page in its present condition. In comparing the two images, it is readily apparent that not only is the Aglio rendering extremely accurate, but he also documented details no longer visible in the present condition of the manuscript. Although Aglio was a renowned artist, he certainly was not aware of certain details of the day

names now missing in the original.

Clearly, the *Antiquities of Mexico* was a major contribution to the study of Mexican codices. However, as indicated by the eventual fate of Lord Kingsborough, the series was prohibitively expensive, and, therefore, rare, with little opportunity for study aside from wealthy collectors and major and often private institutions. Michael Coe (1992: 80) notes that according to the newspaperman B.H. Norman in 1843, there was only one copy of the series in the entire United States. In contrast, the Dover Publications edition of the Gisele Díaz and Alan Rodgers color rendering of the *Codex Borgia* is a very welcome and important contribution, allowing many individuals to acquire copies of this priceless manuscript for study (Díaz and Rodgers 1993). Thus, I recently was able to use this edition for a large college freshman class concerning Aztec art and religion. However, as in the case of Aglio's copy, artistic renderings are not the same as photographic or analog images, as the artists' perceptions will always influence the images that they copy. For example, in Slide 48, I contrast a photographic image of the Huastec Maya pulque god Patecatl appearing on page 13 of the *Codex Borgia* with the Díaz and Rodgers version below. For the Díaz and Rodgers rendering, the brow piece of Patecatl strongly resembles a spider monkey, which resonates well with Aztec concepts of monkeys and licentiousness. However, the same item on the photographic image more resembles a shrunken human head, with no overt monkey attributes. Such trophy heads often appear in Late Classic Maya art, including the scene from Yaxchilan Lintel 24 illustrated on the right side of Slide 48. Photographic and scanned analog versions are especially important, since, aside from the original documents, they provide the most accurate versions from which both artists and researchers can derive their work.

The next series of images, Slides 49 to 74, concerns ancient Maya pictorial manuscripts, which have been not described before, in part, because, after the Spanish “pacification” of Yucatan in 1546, there was little interest by the Franciscans in this region to save pre-Hispanic documents, much less to commission new pictorial manuscripts documenting native traditions. This is a particularly unfortunate situation when one considers the many surviving Maya scribes who were surely present at the time. The early colonial Spanish may well have realized the ability of Maya scribes to write virtually anything in hieroglyphs without the aid of images, a tradition that they surely had no desire to support. Slide 49 illustrates the three extant pre-Hispanic screenfold codices from Yucatan, all composed of pounded *amate* paper covered with white lime gesso and with scenes and texts painted largely in black and red. Along with these three examples, the *Dresden*, *Paris*, and *Madrid* codices, there is also fourth (Slide 50), often referred to as the *Codex Grolier*, due to the fact that it was first publically announced and exhibited at the Grolier Club in New York (Coe 1973). As it was reportedly discovered in a cave in Tabasco, the authenticity of this manuscript continues to be a subject of debate. However, it is quite likely that this is the oldest surviving version of a Maya codex, with a number of conventions, including back mirrors worn by a number of deities, strongly evoking Early Postclassic traditions (A.D. 900-1250).

The French scholar León de Rosny is commonly credited for rediscovering the *Codex Paris* in 1859 in the Bibliothèque Nationale in Paris, where it remains today. Over the centuries, the codex has suffered considerable loss of its painted surface, especially at the outer edges of the pages. The first image of the *Codex Paris* (Slide 51) illustrates three pages of the best-known portion of the manuscript, this featuring the 13

supernatural lords of the roughly 20-year *k'atun*. The lower portions of each of the *K'atun* pages depict the god of the *k'atun* atop a raised throne, much as if the scene depicts the moment of his accession for the newly installed *k'atun* period. In the following slide, one of the *k'atun* scenes is compared to a stela from the site of Mayapan, the capital of the Yukatek Maya for much of the Late Postclassic period. With the enthroned lords, attendant figure, and flying bird, the scenes are notably similar, suggesting that the *Codex Paris* may have been created at Mayapan. In fact, Landa mentions that priests trained at Mayapan were sent with books from the capital to outlying communities:

They provided priests for towns when they were needed, examining them in the sciences and ceremonies, and committed to them the duties of their office, and the good example to people and provided them with books and sent them forth (translation in Tozzer 1941: 27).

Clearly, as the capital of Late Postclassic Yucatan, Mayapan was also the center for books and learning.

Along with calling attention to the importance of the *Codex Paris*, León de Rosny was one of the first 19th century scholars to successfully decipher glyphs appearing in the Maya codices. In an 1867 publication, he correctly deciphers Maya glyphs for the cardinal directions, which are illustrated in Slide 53 along with the associated colors subsequently identified by Eduard Seler. In contrast to Late Postclassic writing of central Mexico and Oaxaca, it is readily possible to relate the texts of the Late Postclassic Maya codices to the earlier Classic period (A.D. 250-900). The following two slides feature directional glyphs in a spectacularly painted 5th century tomb from the site of Rio Azul in northern Guatemala. Not only are the cardinal glyphs similar to the series of signs known for the Late Postclassic codices, but they are also correctly oriented in terms of the

directional orientation of the four walls, as can be seen in Slide 55.

Slides 56 to 61 of my presentation concern the *Codex Madrid* which, as in the case of the previously mentioned *Codex Tudela*, is in the Museo de América in Madrid. Along with being the longest of the extant Maya codices, the manuscript is also somewhat crudely rendered, and is in striking contrast to the finely executed texts and figures appearing in the *Codex Dresden*. As in the case of the other two Late Postclassic Maya codices in Europe, much of the codex is of divinatory auguries based on the 260-day calendar, with Slide 56 featuring two pages concerning farming and rain, while other passages pertain to hunting, bee-keeping, and long distance trade. One of the first to work closely and successfully with the *Codex Madrid* was the American scholar Cyrus Thomas (Slide 57). Thomas (1882) demonstrated that pages 34-37 of the *Codex Madrid* closely matched Landa's detailed descriptions of the pre-Hispanic Yucatek Maya new year celebrations, including particular dances and sacrifices held on the same years mentioned by Landa (Slide 58). Slides 59 to 61 concern recent research by the historian John Chuchiak (2004a) regarding an early colonial Spanish fragment of paper glued into the *Codex Madrid*. A highly-trained paleographer, Chuchiak was able to determine that not only was the fragment from a papal bull, but that it was probably written by Sánchez de Aguilar, who worked out of the community of Chancénote, Yucatan. The presence of this fragmentary text suggests that the *Codex Madrid* may have been confiscated from local Maya in this area of northeastern Yucatan in the latter half of the 16th century.

Of the three extant codices, the *Dresden Codex* in the Sächsische Landesbibliothek in Dresden is widely considered to be the finest in execution and to have the most elaborate texts concerning calendrical cycles (Slides 62-74). The first slide

illustrates two of the more elaborate pages, with the one to the left concerning a mythic flood and that to the right being a page beginning another series of the roughly 20 year K'atuns, such as appears in the *Codex Paris*. Unfortunately, only this first page is present in what is now one end of the manuscript, with the other twelve K'atuns of the series now lost. The manuscript suffered further damage in the bombing of Dresden during World War II. Slide 63 compares a 19th century photo of *Codex Dresden* page 28 on the left with its present water-damaged condition of the right. Michael Coe (1963; 1992: 79) notes that an early reference to the *Codex Dresden* appears in a 1796 publication by Joseph Friedrich, the Baron von Racknitz, with a fanciful illustration of a room decorated with elements from the manuscript, including seated deities, eclipse signs, and bar and dot numeration on the ceiling (Slide 64).

Because of its exceptional beauty and reference to Classic period Long Count dates, it has been widely assumed that the *Codex Dresden* is the earliest extant Maya codex. However, Slide 65 features a scene from *Codex Dresden* page 4 illustrating a Maya version of the central Mexican wind god Quetzalcoatl, meaning “quetzal snake,” grasping a serpent and wearing a quetzal bird on his back. His headdress, formed of the aforementioned turquoise sign flanked by two disks, is wholly Aztec, as can be seen for the two early colonial examples at the lower right portion of the slide. Since the founding of Tenochtitlan did not occur until 1325, the *Codex Dresden* dates to the Late Postclassic period (A.D. 1250-1521), that is, roughly contemporaneous with the other two extant codices in Europe (Taube and Bade 1991). Slide 66 illustrates another example of Late Postclassic influence in the manuscript, here appearing in the Venus pages passage to be discussed below. The scene features a deity wielding a spearthrower and darts as one of

the five aspects of Venus as Morning Star. With his banded face, bird brow piece, and turquoise pectoral, this being can be readily identified as Xiuhtecuhtli, the turquoise fire god of Late Postclassic central Mexico. In addition, in the accompanying Mayan text, he is named *xiwitei*, a clear reference to the Nahuatl Xiuhtecuhtli.

The preeminent 19th century researcher working with the Maya codices was Ernst Förstemann, Royal Librarian of the Electorate of Saxony, who, in 1867, was appointed to the same library that houses the *Codex Dresden* (Slide 67). Using Landa's 16th century account of Yucatek calendrics, he brilliantly elucidated the basic numerical, calendrical, and astronomical systems appearing in the *Codex Dresden*. (For a summary, see Coe 1992: 108.) One of his major achievements was to demonstrate that the series of deities, numbers, and day names commonly appearing in the *Codex Dresden* and the other two codices are almanacs based on the 260-day calendar, which are read across in horizontal registers. Slide 68 illustrates three of these almanac pages from the *Codex Dresden*, with the following slide focusing on one 260-day almanac at the upper left. To the right is the Maya 260-day calendar, with the glyphs of the 20 consecutive day names beginning with Imix and ending with Ajaw on the left side. The numbered chart refers to all positions in the 260-day calendar, beginning at the upper left with 1 Imix, and then 2 Ik', and finally ending with 13 Ajaw at the lower right corner. Following 13 Ajaw, the calendar begins again with 1 Imix. Förstemann also identified tables concerning lunar cycles that are now known to have been used for predicting solar eclipses. Slide 70 is a detail from these tables, and the illustration portrays a solar eclipse with the head of the sun god below a sky band containing celestial motifs.

An especially important contribution to Maya archaeology was Förstemann's

elucidation of Long Count dates appearing in the *Codex Dresden*, with an example of two such dates on page 62 of the manuscript in Slide 71. The two dates presented in vertical columns of bar and dot numbers correspond to the Late Classic period, but the two final dates at the base of these columns refer to 4 Ajaw 8 Kumk'u, the mythic beginning of the present Long Count cycle in 3114 B.C. Although rare during the Postclassic period, Long Count dates are common on Classic period monuments in the Maya lowlands, including stelae, such as the massive Stela D of Quirigua (Slide 72, note standing human figure for scale). The image to the right of Stela D is an example of a Long Count based on a text from Quirigua Stela E. The photograph of Stela D is from the first comprehensive publication and illustration of Classic Maya monuments, this being A.P. Maudslay's *Archaeology* volumes in *Biologia Centrali-Americana* (Maudslay 1880-1902). In an appendix to these volumes, Joseph Goodman noted the presence of Long Count, and, in 1905, provided a correlation of Long Count dates to the Christian calendar, which, with minor emendations, continues to be widely used by Maya archaeologists to this day. (See Coe 1992: 111-14.) This correlation has made it possible not only to date the dedication of monuments to the very day, but also to date to the day specific events in Classic Maya history, including the births of kings, marriages, deaths, and warfare. In the case of the Quirigua Stela D Long Count, the dedicatory date corresponds to January 22nd, A.D. 771.

Another crowning achievement of Förstemann was his identification of texts and mathematical tables pertaining to Venus appearing on pages 44 to 50 of the *Codex Dresden*. Slide 73 illustrates this passage with the central images being Venus gods wielding darts and spearthrowers and with their wounded victims below at the base of the pages. The aforementioned image of Xiuhtecuhtli as a Venus deity appears on page 49,

the fourth from viewer's left. (See Slide 66.) The uppermost scenes are gods seated on sky bands, evidently as celestial observers of the events below. The following slide is a detail of a text that appears at the base of all five pages, recording in remarkable accuracy to the day the phases of a Venus year, with 236 days being Venus as Morning Star, 90 days referring to Superior Conjunction, 250 days constituting Venus as Evening Star, and, finally, 8 days, the most relevant to the spearing scenes when Venus disappears during Inferior Conjunction only to rise in the east for the first dawn as Morning Star.

Although Förstemann mastered the mathematical aspects of the *Codex Dresden* Venus tables, it was another German, Eduard Seler, who first determined their cultural significance (Slide 75). Seler is widely recognized as one of the preeminent Mesoamerican scholars of the late 19th and early 20th centuries. A skilled linguist trained in both Nahuatl and Yucatek Maya, Seler also had an encyclopedic knowledge of Mesoamerican culture from antiquity to the present. He clearly also had a photographic memory of ancient Mesoamerican iconography. Although he published widely and extensively on many Mesoamerican cultures, he was especially interested in Late Postclassic central Mexico. Along with being well-versed in the rich corpus of Sahaguntine material, Seler also focused his academic attention on pre-Hispanic codices. In his research and publications, he was strongly supported by his benefactor, Joseph Florimond, a wealthy American who bore the papal title of Duc de Loubat. From 1900 to 1909, Florimond financially supported the lavish publication of central Mexican codices with accompanying interpretations by Seler (Nicholson 1973). The English edition of Seler's commentary to the *Codex Fejérváry-Mayer* appears in Slide 76, and the following slide illustrates page 1 of this manuscript, a mandala-like image of the four directions and

world center and the 260-day and the 365-day calendars, the latter referred to by the descending birds with four days that name the years on their torsos. Along with the photofacsimile on the right, I included the illustration of this page from Seler's publication of the *Codex Fejérváry-Mayer* (Seler 1901-1902). In Seler's work, explanatory labels accompany each of the finely copied pages, and, to his great credit, almost all of his commentaries have stood the test of time. The original publications are quite rare, but a Spanish language edition of his most important volume concerning the *Codex Borgia* is readily available (Seler 1963).

Following Förstemann's original identification of Venus tables in the Maya *Codex Dresden*, Seler (1904) found similar passages in three codices of the Borgia Group, these being in the *Codex Cospi*, the *Codex Vaticanus B*, and the *Codex Borgia* (Slides 78 to 80). Although all five Venus years are included in these codices, I only illustrate the entire series for the *Codex Cospi* (Slide 78). As in the *Codex Dresden*, these three passages also illustrate aspects of Venus spearing particular deities or objects including Cinteotl, the maize deity, and the goddess of terrestrial water, Chalchiutlicue. Seler related these spearing scenes in the three Borgia Group codices and the *Codex Dresden* to an early colonial account appearing in the Central Mexican *Anales de Cuauhtitlan*, which mentions that when Venus first appears as Morning Star after Inferior Conjunction, it shoots its baleful rays as darts, thereby harming groups of people or natural forces, such as children, nobles, and the rain: "As they (the ancients, the forefathers) learned. When it appears (rises). According to the sign, in which it (rises). It strikes different classes of people with its rays. Shoots them, casts its light upon them (translation in Seler 1904: 384). The series of five Venus years is based on the

remarkable fact that these equal together eight 365-day vague years (without leap years accounting for 365.25 days for a closer solar year), and, with two 52-year cycles, the calendars match perfectly, this being 65 Venus years, 104 vague solar years, and 146 260-day periods. For this reason, the codical Venus calendars are generally oriented to listing in total 104 solar years. It should be noted also that the aforementioned *Codex Grolier* also refers to bellicose gods of the Venus calendar.

One of Seler's great contributions was to analyze systematically related passages in a series of five pre-Hispanic screenfold codices, which Seler defined and labeled in 1887 as the "Borgia Group" (Glass 1975: 63), named after the most renowned of these manuscripts, the *Codex Borgia*, in the Biblioteca Apostolica Vaticana in Rome. Although there has been considerable debate where these codices were created, it is likely that they generally derive from the region of Puebla and Tlaxcala in highland Mexico. Of the five screenfolds in the Borgia Group, the *Codex Borgia* is widely considered the finest, and Slide 81 illustrates one page depicting deities appearing with particular world directions. Unlike ancient Maya writing, there are no single glyphs denoting directions in the Borgia Group. Instead, directions are denoted by arranging the series of five day names of each world direction in a scene, with the day names denoting the south at the base of the upper scene and those of the east with the lower half of the page.

The *Codex Borgia* contains a remarkable passage not found in the other four codices of the Borgia Group, this being the "Middle Pages", a series of elaborate scenes portraying creation mythology and gods passing through world regions (Slides 82-85). Appearing on pages 29 to 46 of the codex, the scenes have been discussed in detail by Eduard Seler (1963), Karl Nowotny (2005), and now, most recently, by Elizabeth Boone

(2007). Although a great deal is now known about this extremely complex passage, more discoveries are sure to come. Slides 83 to 85 concern pages 35 to 38, which I (Taube 2001) have argued concern 16th century accounts of the wind or a priest of Tezcatlipoca traveling to the house of the sun to obtain music. On *Codex Borgia* page 35, the wind god Ehecatl-Quetzalcoatl, as well as Tezcatlipoca obtain a bundle from a being in a dark temple, probably that of the nocturnal sun (Slide 83). The following page depicts a stream filled with birds, flowers, and musical instruments flowing out from the bundle and spiraling around the sides of the page (Slide 84). The left side of Slide 85 depicts a scene from the next page in the *Codex Borgia* in which the god of music, Xochipilli (Flower Prince), strikes a drum while blowing a red flute, while the image on the right is a detail from the previous page of the stream of music and flower exiting the bundle. On close inspection, it can be seen that the red item with the bound white knot atop the bundle is the same zoomorphic flute played by Xochipilli in the scene to the right. In other words, the bundle obtained by Tezcatlipoca and Ehecatl-Quetzalcoatl on page 35 is the source of music.

Of the other screenfolds in the Borgia Group, the *Vaticanus B* -- also in the Biblioteca Apostolica Vaticana -- is the most similar in thematic content to the *Codex Borgia*, despite being notably disparate in both style and scale. Slide 86 illustrates parallel passages in these two screenfolds concerning the “Cocijos”, the four 65-day divisions of the 260-day divinatory calendar, each quarter personified by a directional aspect of the rain god Tlaloc with a fifth in the center. Although oriented differently, the auguries associated with each of these Tlaloc figures in the two passages are virtually identical. Slide 87 illustrates another example of a parallel passage in the *Borgia* and

Vaticanus B codices, in this case a squatting figure wearing a deer skin with the signs of the twenty day names. Between the two scenes, the orientation of the day names are mirror images of one another, with the first day name Crocodile with the left foot of the figure in the *Codex Borgia* and the right foot in the *Vaticanus B*, with the 20th and final day name Flower hanging from the mouth of both beings. However, there are also scenes unique to the *Vaticanus B*, including a passage portraying the twenty day names oriented to two temples, one guarded by a centipede, and the other by a coral snake (Slide 88).

Slides 89 to 92 are scenes from the other three codices in the Borgia Group, with the first being the aforementioned Venus passage in the *Codex Cospi*, a manuscript in the Biblioteca Universitaria of Bologna. Along with the Venus tables, another important part in the manuscript concerns gods of the world directions and their temples, each direction denoted by its five associated day names. In contrast to the *Borgia* and *Vaticanus B* codices, the *Codex Cospi* displays the bar and dot numeration better known for the extant Maya codices. This is also true for the other two screenfolds of the Borgia group, the *Codex Laud* in the Bodleian Library in Oxford and the *Féjérváry-Mayer* in the Free Public Museums, Liverpool (Slides 90 to 92). Both manuscripts display a remarkably sharp and even line, almost as if they were drawn with a modern technical pen with a hollow metal nib. They are so similar in style that it is difficult to tell them apart, unless one knows the particular passage, such as the renowned page 1 of the *Féjérváry-Mayer*.

As mentioned, Eduard Seler was very successful in comparing parallel passages in order to elucidate their meanings, including the identification of particular gods and motifs. Slide 93 and 94 illustrate portions of the *Borgia* and *Vaticanus B* codices pertaining to the patron gods of the twenty day names and associated auguries. In contrast

to the other four screenfolds, the *Codex Borgia* is read right to left, rather than left to right. Thus, in Slide 93, the third day name House appears to the left in the *Vaticanus B*, while, in the corresponding scene above in the *Codex Borgia*, the day name is on the right. Both depict a man eating feces while defecating into the moon occupied by a rabbit. The two other scenes concern the fourth day Lizard and portray a quail, a string of jade beads, and the wily old coyote god of dance, Huehuecoyotl, subduing a youth. The following slide illustrates the gods and auguries of the seventh and eighth day names, Deer and Rabbit, the day Deer presided by Tlaloc and the day Rabbit by Mayahuel, the goddess of maguey and the source of the alcoholic beverage pulque.

Along with patron gods of the twenty day names, there were also patron gods of the *trecenas*, the twenty thirteen day “weeks” of the 260-day calendar. Slide 95 illustrates the *trecena* of 1 Flower in the *Borgia* and *Vaticanus B* codices, both presided by Huehuecoyotl and a dancing figure. The thirteen days of this *trecena* frame two sides of each page, with the first day of 1 Flower appearing in the lower right corner. Aside from these two pre-Hispanic codices in the Borgia Group, *trecena* passages also appear in early colonial manuscripts, with the grandest being in the aforementioned *Codex Borbonicus* (Slide 96). The illustrated page is the same *trecena* of 1 Flower, again with Huehuecoyotl, as well as Xochipilli, singing and beating a drum as the god of music. The following slide is the same *trecena* appearing in the *Aubin Tonalamatl*. Although in a cruder style, Huehuecoyotl can be readily recognized, along with celebrants playing music, dancing, and imbibing pulque.

Clearly, having scenes of the same *trecena* in a number of manuscripts aids in determining the meaning of the scenes. As an example, I discuss scenes pertaining to the

trecena 1 Reed, presided by Chalchiutlicue, the goddess of terrestrial water (Slides 98 to 100). The discussion of this *trecena* begins with the corresponding scenes appearing in the *Borgia* and *Vaticanus B* codices (Slide 98). In both scenes, a large stream of water flows from the body of Chalchiutlicue. With the stream, there is a youth grasping darts and a maiden, along with a string of beads and box of the type that holds such precious materials as quetzal plumes and jade beads. In the *Codex Borgia* scene, the maiden appears with the box while grasping precious feathers and the jade necklace. For the same *trecena* of 1 Reed from the early colonial *Codex Telleriano-Remensis*, the stream contains a diminutive pair of male and female figures along with the treasure container, here topped with a jade bead necklace (Slide 99). In the *Codex Borbonicus* version, the stream of Chalchiutlicue contains a boy and girl along with a shield and darts and the cotton headdress of Tlazolteotl, also known as Ixcuina, the goddess of cotton (Slide 100).

Clearly enough, the stream of water containing diminutive figures in these *trecena* passages is suggestive of birth, but the pairing of the weapons and cotton headdress immediately reminded me of the Aztec rites of baptism, where the newborn was ritually bathed and presented with miniature versions of their future implements of adulthood. The *Codex Mendoza* portrays an aged midwife carrying the infant to the basin of water atop a bed of rushes, and the accompanying multi-colored disks denote the child is four days old (Slide 101). The emblems of adulthood appear above and below the basin and rushes. Those of male infants are above, and along with the shield and darts of warriors, there are also emblems of craftsmen, these being sculptors, featherworkers, scribes, and goldsmiths. The broom and spindle whorl below denote the domestic fate of women, this being sweeping and weaving.

Along with the *Codex Mendoza* scene, the Aztec rite of baptism is also portrayed in Book 6 of the *Florentine Codex* (Slide 102). In this case, the shield and weapons indicate that a male infant is being bathed. However, along with this scene, Book 6 also supplies the Nahuatl prayer uttered during the baptism ceremonies for newborns (Slide 103; see Sahagún 1950-1982, bk. 6: 176). In this prayer, the child is presented to Chalchiuhtlicue, the same goddess appearing in the 1 Reed *trecena* scenes. In addition, the infant is referred to in terms of precious items, including necklaces and fine plumes, immediately recalling the jades, feathers, and treasure boxes appearing in the stream of Chalchiuhtlicue. In other words, the cited *trecena* scenes pertain directly to native rites concerning the baptism of newborns.

Mention has been made of early colonial Aztec manuscripts, Maya codices, and the Borgia Group. Another major body of codices pertains to the Mixtec of Oaxaca. In his work on the Borgia Group, Seler would at times refer to scenes in these manuscripts, but he was not aware that many scenes concern historical events, rather than gods and mythology. One of the first to systematically study the Mixtec codices was the American anthropologist Zelia Nuttall, who, in 1902, published a commentary and facsimile of one of the finest of the pre-Hispanic Mixtec screenfolds, which subsequently was named after her as the *Codex Nuttall* (Slide 104). The British Library of the British Museum acquired it in 1917. Slide 105 illustrates one of the more elaborate scenes in the manuscript, including the marriage of Lord 12 Wind and Lady 3 Flint in the center of the page. Because of such scenes, Zelia Nuttall realized that the *Codex Nuttall* was historical, in contrast to the Borgia Group of divinatory codices.

Following Nuttall's publication, James Cooper Clark (1912) delineated the

personal history of the preeminent historical figure in the *Codex Nuttall*, Lord 8 Deer, whom he noted also appears in the *Codex Colombino-Becker* (see Slide 109). However, it remained unknown from where these manuscripts derived, much less the language and culture of the people who painted them. It was the Mexican archaeologist Alfonso Caso, who, in a paper published in 1949, established that these manuscripts concerned the Mixtec of highland Oaxaca (Slide 106). He based his watershed discovery on the *Mapa de Teozacualco*, prepared as part of the *Relaciones Geograficas* for Phillip II and housed with the other documents of this series in the Benson Library of the University of Texas, Austin (Slide 108). Caso observed that the left side of the map provides a genealogy of rulers for the Mixtec communities of Teozacualco and Tilantongo, including Lord 8 Deer. Slide 109 illustrates this portion of the *Mapa de Teozacualco* with the “Temple of Heaven” of Tilantongo appearing at the lower left corner. The image to the right is the same toponym appearing in the pre-Hispanic *Codex Nuttall*. Tilantongo was the polity of Lord 8 Deer, making it clear that the *Codex Nuttall* and other screenfolds where he appears are indeed Mixtec (Slide 109). Slide 110 illustrates the reading order of some of the major Mixtec codices and, in all, there are seven Mixtec screenfolds in pre-Hispanic style, although the *Codex Selden* is early colonial, as its last date corresponds to A.D. 1556. Following his initial insights concerning the *Mapa de Teozacualco*, Caso (1960, 1964, 1966) published a series of facsimiles and accompanying commentaries to the *Codex Selden*, the *Codex Bodley*, and the *Codex Colombino*. Much of Caso’s codical research is summarized in his *Reyes y Reinos de la Mixteca* (Caso 1979).

Scholars in the United States and Europe also have contributed to our understanding of the Mixtec codices, including a work by Mary Elizabeth Smith (1973)

focusing upon place names appearing in pre-Hispanic and early colonial Mixtec manuscripts. Subsequent fieldwork in the Mixteca-Alta by Bruce Byland and John Pohl have identified many of these toponyms with towns and sacred places still known in present day Oaxaca (Byland and Pohl 1990, 1994; Pohl 2007). Rather than recording historical events, the obverse of the *Codex Vienna*, also known as the *Codex Vindobonensis*, provides detailed accounts of Mixtec creation mythology, including the deeds of the culture hero 9 Wind, the Mixtec form of the Aztec deity Ehecatl-Quetzalcoatl. The mythological passages in the *Codex Vienna* have been discussed by many researchers, including Jill Furst (1978), John Monaghan (1990), and H.B. Nicholson (1978). In Europe, a major center of Mixtec codical research has been the Rijksuniversiteit in Leiden, under the direction of Maarten Jansen (1990; 1992).

The final portion of my presentation concerns recent research and developments in technology concerning Maya epigraphy and iconography. A major breakthrough in our understanding of the nature of Maya writing was thanks to the work by the Russian linguist Yuri Knorozov (Slide 111). In the 1950's, Knorozov published a number of works in Russian concerning the decipherment of texts in the Maya codices. (See Coe 1992: 145-66.) Knorozov based many of his glyphic readings on the "Landa alphabet" appearing in the aforementioned *Relación de las cosas de Yucatan* (Slide 112). The following three slides illustrate readings by Knorozov from the Dresden and Madrid codices based in large part on Landa's brief discussion of Maya writing. Today, it is widely recognized that ancient Maya writing is based on syllabic and logographic signs, and among the many noteworthy epigraphers of the United States and Europe there are Alfonso Lacadena, Nikolai Grube, Stephen Houston, Simon Martin, and David Stuart.

The left side of Slide 115 is a photograph I took at Copán, Honduras, in 2000, with David Stuart in the center flanked by the late H.B. Nicholson and the Mexican archaeologist Leonardo López Luján, who currently directs excavations at the Templo Mayor in Mexico City. To the right is a very important reading by Stuart from the *Codex Dresden* for the Mayan term *witz*, signifying “hill” or “mountain.” From this reading, Stuart determined that certain monstrous heads appearing in Classic Maya art and architecture are actually zoomorphic mountains, including stacked examples on the corners of Structure 10L-22 at Copán (Slide 117, left). Moreover, as in the case of the Aztec and Mixtec, mountains commonly appear as place names in Classic Maya texts (Slide 117, right).

Although now taken for granted, the development of photocopy technology, or “Xeroxing”, in the 1970’s was a huge boon to research, as now complex images could be readily reduced or enlarged for drawing and publication. Slide 117 was a photocopy I received from David Stuart back in the 1980’s. The drawing of the text is quite fine and detailed, but it is even more impressive when one reads Stuart’s modest accompanying statement: “Drawn from memory, but I think generally correct.”

During the last several decades, there have been great advances in our understanding of ancient Maya epigraphy and iconography. In part, this is due to high quality documentation of Classic Maya art and writing, including the *Corpus of Maya Hieroglyphic Writing*, formerly directed by Ian Graham, who appears in Slide 118, and currently directed by Barbara Fash of the Peabody Museum of Harvard University. This corpus concerns monuments from Classic Maya sites that are published both with photos and line drawings. Another major corpus pertaining to ancient Maya writing and

iconography are the roll-out photographs of Classic Maya vases by Justin Kerr (Slides 119 and 120). From his website, www.mayavase.com, thousands of rollout photographs are readily available for study in virtually any part of the world.

The last portion of my presentation concerns an example of the technological benefits of scanned digital imagery, in this case of recently discovered murals at San Bartolo, situated in the northeastern Peten of Guatemala (Slides 121 to 125). These slides concern the West Wall mural at San Bartolo, which was excavated in 2004. (See Taube, et al., 2010.) Although most of the mural remains intact on the West Wall, many fallen fragments were also discovered during the 2004 excavations, which were taken to the San Bartolo field camp and placed in trays for refitting (Slide 122). The director of the mural chamber excavations, William Saturno, scanned these various mural fragments both to document them and also to avoid moving them unnecessarily for determining fits. I recall the afternoon when it occurred to Saturno that if it was possible to scan the fragments, why not the entire West Wall mural? Slides 123 and 124 are photos I took in 2004 of Saturno scanning the entire West Wall of the mural chamber with the same mediocre scanner powered with a gas generator. It was a complete success, and, when I left the field that season, I had a disk of the entire scanned mural. Slide 125 is a composite created by Saturno of his scanning of one of the world trees in the West Wall mural wedded with project artist Heather Hurst's line drawing of the same scene, first highlighting the tree, then a standing man letting blood, and, finally, the offering of a fish before a tree.

Clearly, analog digital imagery will be of increasing importance in Mesoamerican studies, including the codices. As in the case of the website of Justin Kerr's rollout photographs, having the codices available on the Internet will make them available to all

that are interested. A noteworthy example is the website of the Sächsische Landesbibliothek – Staats- und Universitätsbibliothek Dresden, which has extremely high resolution scans of the *Codex Dresden* (<http://digital.slubdresden.de/id280742827>). In addition, the entire *Codex Colombino* is available for study on the World Digital Library website (<http://www.wdl.org/en/item/3245>) and the Biblioteca Digital Mexicana website (http://bdmx.mx/manuscritos_colombinos.php). The World Digital Library project (www.wdl.org) of the Library of Congress with the cooperation of UNESCO to digitize and place online Mesoamerican codices has enormous potential for bringing these priceless manuscripts to a broader audience on a truly global level and, thereby, revive part of the “personality and identity” of ancient Mesoamerica that Phillip II and others sought so hard to suppress.

SOURCES CITED

Aguilera, Carmen

2001 *Códices de México*. Consejo Nacional de Ciencia y Tecnología, Mexico City.

van Akkeren, Ruud

2007 *La visión indígena de la conquista*. Serviprensa, Guatemala City.

Baudot, Georges

1995 *Utopia and History in Mexico: The First Chroniclers of Mexican Civilization (1520-1569)*. University Press of Colorado, Niwot.

Berdan, Frances F. and Patricia Rieff Anawalt

1992 *The Codex Mendoza* (4 vols.). University of California Press, Berkeley.

Boone, Elizabeth

1983 *The Codex Magliabechiano and the Lost Prototype of the Magliabechiano Group* (2 vols.). University of California Press, Berkeley.

2007 *Cycles of Time and Meaning in the Mexican Books of Fate*. University of Texas Press, Austin.

Brotherston, Gordon

1995 *Painted Books from Ancient Mexico*. British Museum, London.

Byland, Bruce and John M.D. Pohl

1990 Mixtec Landscape Perception and Archaeological Settlement Patterns. *Ancient Mesoamerica* 1(1): 113-131.

1994 *In the Realm of 8 Deer*. University of Oklahoma Press, Norman.

Caso, Alfonso

1949 El Mapa de Teozacoalco. *Cuadernos Americanos* 8(5): 145-181.

1960 *Interpretación del Códice Bodley 2858*. Sociedad Mexicana de Antropología, Mexico City.

1964 *Interpretación del Códice Selden 3135*. Sociedad Mexicana de Antropología, Mexico City.

1966 *Interpretación del Códice Colombino*. Sociedad Mexicana de Antropología, Mexico City.

1979 *Reyes y Reinos de la Mixteca*, 2 vols., Fondo de Cultura Económica, Mexico City.

Chuchiak, John F. IV

2001 Pre-Conquest *Ah K'inob in a Colonial World: The Extirpation of Idolatry and the Survival of the Maya Priesthood in Colonial Yucatan*. In *Maya Survivalism*, Ueli Hostettler and Matthew Restall, eds. 135-157. Verlag Anton Saurwein, Markt Schwaben.

2004a Papal Bulls, Extirpators, and the Madrid Codex: The Content and Probable Provenience of the M. 56 Patch. In *The Madrid Codex: New Approaches to Understanding an Ancient Maya Manuscript*, Gabrielle Vail and Anthony Aveni, eds.: 57-88. University Press of Colorado, Boulder.

2004b The Images Speak: The Survival and Production of Hieroglyphic Codices and Their Use in Pre-Conquest Maya Religion. In *Continuity and Change: Maya Religious Practices in Temporal Perspective*, Daniel Graña Behrens, Nikolai Grube, Christian M. Prager, Frauke Sachse, Stefanie Teufel and Elizabeth Wagner, eds.: 165-183. Verlag Anton Saurwein, Markt Schwaben.

Clark, James Cooper

1912 *The Story of "Eight Deer" in Codex Colombino*. Taylor and Francis, London.

Clark, James Cooper, editor and translator

1938 *Codex Mendoza: The Mexican Manuscript Known as the Collection of Mendoza and Preserved in the Bodleian Library, Oxford* (3 vols.). Waterlow and Sons, London.

Coe, Michael D.

1963 Una referencia antigua al código de Dresde. *Estudios de Cultura Maya* 3: 37-40.

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

1978 Supernatural Patrons of Maya Scribes and Artists. In *Social Process in Maya Prehistory*, Norman Hammond, ed.: 327-346. Academic Press, New York.

1992 *Breaking the Maya Code*. Thames and Hudson, New York and London.

Coe, Michael D. and Justin Kerr

1998 *The Art of the Maya Scribe*. Harry N. Abrams, New York.

Durán, Fray Diego

1971 *Book of the Gods and Rites and the Ancient Calendar*. Translated and edited by Doris Heyden and Fernando Horcasitas. University of Oklahoma Press, Norman.

Edmonson, Munro S., ed.

- 1974 *Sixteenth Century Mexico: The Work of Sahagún*. University of New Mexico Press, Albuquerque.
- Furst, Jill Leslie
 1978 *Codex Vindobonensis Mexicanus I: A Commentary*. Institute for Mesoamerican Studies Pub. 4, State University of New York at Albany, Albany.
- Gibson, Charles
 1966 *Spain in America*. Harper Colophon Books, New York.
- 1971 *The Black Legend: Anti-Spanish Attitudes in the Old World and the New*. Knopf, New York.
- Glass, John B.
 1964 *Catálogo de la colección de codices*. Museo Nacional de Antropología, Instituto Nacional de Antropología e Historia, Mexico City.
- 1975 A Survey of Native Middle American Pictorial Manuscripts. In *Handbook of Middle American Indians*, Robert Wauchope, gen. ed., vol. 14, pp. 3-80. University of Texas Press, Austin.
- Jansen, Maarten
 1990 The Search for History in Mixtec Codices. *Ancient Mesoamerica* 1(1): 99-112.
- 1992 Mixtec Pictography: Conventions and Contents. *Handbook of Middle American Indians, Supplement 5, Epigraphy*. Victoria R. Bricker, vol. ed.: 20-33. University of Texas Press, Austin.
- Juderías, Julián
 1914 *La Leyenda Negra: Estudios acerca del concepto de España en el extranjero*. Araluce, Barcelona.
- Keen, Benjamin
 1971 *The Aztec Image in Western Thought*. Rutgers University Press, New Brunswick.
- Kingsborough, Edward King, Viscount
 1830-1848 *Antiquities of Mexico*, 9 volumes. James Moynes, and Colnaghi, Con, & Co., London.
- Köhler, Ulrich
 1989 Comets and Falling Stars in the Perceptions of Mesoamerican Indians. In *World Archaeoastronomy*, Anothony F. Aveni, ed.: 289-299. Cambridge University Press, Cambridge.

Lara, Jaime

2004 *City, Temple, Stage: Eschatological Architecture and Liturgical Theatrics in New Spain*. University of Notre Dame Press, Notre Dame.

Leon-Portilla, Miguel

1994 Sahagún's Early Years in Tlatelolco. In *Chipping Away on Earth*, Eloise Quiñones Keber, ed.: 13-20. Labyrinthos, Lancaster, CA.

2002 *Bernardino de Sahagún: First Anthropologist*. University of Oklahoma Press, Norman.

Maudslay, Alfred P.

1880-1902 *Archaeology. Biologia Centrali-Americana*. R.H. Porter and Dulau and Co., London.

Monaghan, John D.

1990 Sacrifice, Death, and the Origins of Agriculture in the Codex Vienna. Mythology and the Vienna Codex. *American Antiquity* 55(3): 559-569.

Nicholson, H.B.

1973 Eduard Georg Seler, 1849-1992. In *Handbook of Middle American Indians*, Robert Wauchope, gen. ed., vol. 13, pp. 348-369. University of Texas Press, Austin.

1978 The Deity 9 Wind "Ehecatl-Quetzalcoatl" in the Mixteca Pictorials. *Journal of Latin American Lore* 4(1): 61-92.

Nicolau D'Olwer, Luís

1987 *Fray Bernardino de Sahagún, 1499-1590*. University of Utah Press, Salt Lake City.

Nicolau D'Olwer, Luís, and Howard F. Cline

1973 Sahagún and his Works. In *Handbook of Middle American Indians*, Robert Wauchope, gen. ed., vol. 13, pp. 186-207. University of Texas Press, Austin.

Nowotony, Karl A.

2005 *Tlacuilolli: Style and Contents of the Mexican Pictorial Manuscripts with a Catalog of the Borgia Group*. University of Oklahoma Press, Norman.

Parmenter, Ross

1982 *Four Lienzos of the Coixtlahuaca Valley*, Studies in Pre-Columbian Art and Archaeology 26. Dumbarton Oaks, Washington, D.C.

Peterson, Jeanette Favrot

1993 *The Paradise Gardens of Malinalco: Utopia and Empire in Sixteenth-Century Mexico*. University of Texas Press, Austin.

Phelan, John Leddy

1970 *The Millennial Kingdom of the Franciscans in the New World*, 2nd ed. University of California Press, Berkeley.

Quiñones Keber, Eloise

1987 *Codex Telleriano-Remensis, Ritual, Divination, and History in a Pictorial Aztec Manuscript*. University of Texas Press, Austin.

Ricard, Robert

1966 *The Spiritual Conquest of Mexico: An Essay on the Apostolate and the Evangelizing Methods of the Mendicant Orders in New Spain: 1523-1572*, Leslie Byrd Simpson, trans. University of California Press, Berkeley.

Roberston, Donald

1994 *Mexican Manuscript Painting of the Early Colonial Period*. University of Oklahoma Press, Norman.

Sahagún, Bernardino de

1950-1982 *Florentine Codex: General History of the Things of New Spain*, translated by Arthur J.O. Anderson and Charles. E. Dibble. School of American Research, Santa Fe.

1993 *Primeros Memoriales*. University of Oklahoma Press, Norman.

1997 *Primeros Memoriales* (paleography of Nahuatl text and English translation by Thelma Sullivan). University of Oklahoma Press, Norman.

Schwaller, John Frederick, ed.

2003 *Sahagún at 500: Essays of the Quincentenary of the Birth of Fr. Bernardino de Sahagún*. Academy of the American Franciscan Society, Berkeley.

Seler, Eduard

1901-1902 *Codex Fejérváry Mayer: An Old Mexican Picture Manuscript in the Liverpool Free Public Museums*, A.H. Keane, trans. Edinburgh University Press, Edinburgh.

1904 Venus Period in the Picture Writings of the Borgian Codex Group. In *Mexican and Central Mexican Antiquities, Calendar Systems, and History*, Charles P. Bowditch ed., pp. 355-391. Smithsonian Institution, Bureau of American Ethnology, Bulletin 28. Washington, D.C.

1963 *Comentarios al Codice Borgia*, 3 vols. Fondo de Cultura Económica, Mexico City.

Simpson, Lesley Byrd

1966 *The Encomienda in New Spain: The Beginnings of Spanish Mexico*. University of California Press, Berkeley.

Smith, Mary Elizabeth

1973 *Picture Writing from Ancient Southern Mexico: Mixtec Place Signs and Maps*. University of Oklahoma Press, Norman.

Stuart, David

1987 Ten Phonetic Syllables. *Research Reports on Ancient Maya Writing* 10. Center for Maya Research, Washington, D.C.

Taube, Karl A.

2000 The Turquoise Hearth: Fire, Self Sacrifice, and the Central Mexican Cult of War. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Great Aztec Temple*, David Carrasco, Lindsay Jones, and Scott Sessions, eds.: 269-340. University Press of Colorado, Niwot.

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*, Virginia M. Fields and Victor Zamudio-Taylor, eds.: 102-23. Los Angeles County Museum of Art, Los Angeles.

2010 At Dawn's Edge: Tulum, Santa Rita and Floral Symbolism of Late Postclassic Yucatan. In *Astronomers, Scribes, and Priests: Intellectual Interchange between the Northern Maya Lowlands and Highland Mexico in the Late Postclassic Period*, Gabrielle Vail and Christine Hernandez, eds. pp. 145-91. Dumbarton Oaks, Washington, D.C.

Taube, Karl, William Saturno, David Stuart and Heather Hurst

2010 *The Murals of San Bartolo, El Peten, Guatemala, Part 2: The West Wall*. Ancient America 10, Center for Ancient American Studies, Barnardsville.

Taube, Karl and Bonnie L. Bade

1991 An Appearance of Xiuhtecuhtli in the Dresden Venus Pages. *Research Reports on Ancient Maya Writing*, no. 35.

Thomas, Cyrus

1882 *A Study of the Manuscript Troano*. Contributions to North American Ethnology 5: 1-237. U.S. Department of the Interior, Washington, D.C.

Tozzer, Alfred M.

1941 Landa's Relación de las Cosas de Yucatan. Papers of the Peabody Museum of American Archaeology and Ethnology, vol. 18. Harvard University, Cambridge, Mass.

Zavala, Silvio

1938 *Francisco del Paso y Troncoso, su misión en Europa, 1892-1916*. Departamento Autónomo de Prensa y Publicidad, Mexico City.