Mesoamerican Manuscripts

The Early Americas: History and Culture

VOLUME 8

Mesoamerican Manuscripts

New Scientific Approaches and Interpretations

Edited by

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Cover illustration: MS. Laud Misc. 678 page 13, courtesy of The Bodleian Libraries, University of Oxford.

The Library of Congress Cataloging-in-Publication Data is available online at http://catalog.loc.gov
LC record available at http://lccn.loc.gov/2018960592

Typeface for the Latin, Greek, and Cyrillic scripts: "Brill". See and download: brill.com/brill-typeface.

ISSN 1875-3264
ISBN 978-90-04-36425-7 (hardback)
ISBN 978-90-04-38811-6 (e-book)

This book is printed on acid-free paper and produced in a sustainable manner.

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CHAPTER 2

The Codex Mendoza and the Archaeology of Tenochtitlan

Leonardo López Luján

Introduction

In 2015, I received an email message from the archaeologist Iván Rivera, on behalf of Professor Maarten Jansen and Head Conservator Virginia Lladó-Buisán, inviting me to participate in a meeting of experts on Mesoamerican manuscripts that would take place at Oxford University in 2016. The first line of the message gave me a bit of a shock, for surely they must know that I am field archaeologist and not a historian specialised in codices. But Iván quickly clarified that my mission would be "to reflect on the relevance of the Codex Mendoza for understanding the archaeology of the Templo Mayor of Tenochtitlan." He specifically asked, "What would it be like for archaeologists to excavate in the ruins of the Mexica capital without the existence of this pictorial manuscript made in Mexico City twenty years after the conquest of the last Triple Alliance?"

Around the same time, the journal *Art History* published an article by Daniela Bleichmar on this codex treasured at the Bodleian Library, where she analysed the document as an "object in motion" and explained how it underwent a radical transformation after Samuel Purchas first published it in London in 1625. According to this Argentine historian of science (Bleichmar 2015: 696):

> Print not only gave the Codex Mendoza legs, it also made it malleable. Authors' particular interpretations of the material and its significance created multiple versions of the codex as they used it to pursue interests in history, religion, pictographic writing, the civility of New World populations, the history of languages, and other topics.

Further on, Bleichmar (2015: 699–700; see also Delmas 2016) concluded that:

> From the mid-sixteenth century to the turn of the nineteenth century (and beyond), the codex evoked descriptions, comments, questions, and numerous reproductions that in their selective rendition of material

 | DOI:10.1163/9789004388116_003

> created different versions of the document itself. The Codex Mendoza thus moved across languages, cultural categories, space, media, time, and interpretive horizons …
>
> This changeling object could be used to ask numerous different questions and to provide numerous different answers. In various places and moments, viewers turned the pages and poured over the images and the words, creating their own Codex Mendoza.

Reading this last phrase made me think about Professor Jansen's challenge and motivated me to undertake an exercise that not only turned out to be quite enjoyable, but also productive. In the few pages that I have, I shall pour over those same images and words in order to create "my own *Codex Mendoza*." I will make a series of observations that you should consider imperfect reflexions from the trenches of a dirt archaeologist …

The Great Temple Project

Before I begin, in the interest of giving you a bit of the context in which my comments are rooted, I would like to describe briefly the setting and particularities of our work at the Templo Mayor. Generally speaking, the archaeology of Tenochtitlan occupies a very unique place in the field of Mesoamerican studies (López Luján 1999; 2013a). Constrained by its circumstances, it faces the same kind of challenges as archaeology in Rome, Jerusalem, Istanbul, Alexandria, and other sites of the ancient world whose remains lie buried beneath a modern metropolis. In order to study the Mexica imperial capital, one must overcome the enormous obstacles presented by Mexico City, one of the largest demographic concentrations on our planet in the twenty-first century. The problem is compounded daily, as the growth rate of the urban area increases at a dizzying pace. Thus Tenochtitlan, along with its contemporaneous surrounding lakeside communities, has been buried nearly irretrievably under tonnes of asphalt and concrete.

The fundamental problem, however, does not stem from the disproportionate expansion of the current city limits, but rather from the particularities of its Historic Centre. This area contains the most artistically and historically rich monumental complex in all of the Americas, where buildings of exceptional quality coexist in their diversity of Baroque, Neoclassic, Porfirian, Art Nouveau, Art Deco, and Neocolonial styles. Such a context gives rise to the paradox that any ambitious attempt to recover the material remains of Tenochtitlan and

reconstruct the history of its inhabitants implies sacrificing an essential part of the colonial heritage and that of the nineteenth and twentieth centuries.

Immediately below the modern surface are located the levels of the colonial capital of New Spain, which date to the period between AD 1521 and 1821. These levels are distinguished by an unusual abundance of cultural elements that attest to the opulent life of the conquistadors and their descendants in imperial Spain's most prosperous overseas centre. Below the colonial levels are those of the Mexica (AD 1325–1521), which were terribly damaged by the armed confrontations against the Spaniards and by the systematic demolition of buildings begun after the Conquest. Consequently, the occasions in which one manages to reach these levels are quite rare. Paving, hydraulic projects, the installation of electrical plants, and the reconstruction of building foundations are among the few opportunities that archaeologists must seize to shed light on minute fractions of the Mexica capital. In these situations, considerable human effort and financial resources are expended knowing that, in the best-case scenario, part of a temple, a house, or a canal will be unearthed in an area that was not chosen by scientific criteria.

The unexpected discovery in February 1978 of the great monolith depicting the moon goddess Coyolxauhqui initiated a series of events that transformed the face of Mexico City and revolutionized our understanding of ancient Mexica civilisation (Matos 1979). In this unique situation, Mexico's National Institute of Anthropology and History has managed to carry out one of the most ambitious and long-running archaeological undertakings of our time: the Proyecto Templo Mayor (PTM-INAH) or "Great Temple Project" (Matos 1982; 1987; 1988; López Luján 2005a; 2006; 2015a; 2017; López Austin and López Luján 2009). Founded by Eduardo Matos Moctezuma, this research project's mission has been the excavation of a large part of the sacred precinct of Tenochtitlan with the expressed objective of reconstructing life in the imperial capital (Matos 1986; López Luján 2001a; López Austin and López Luján 2017). Thus far, eight long field seasons have been carried out; the first three (1978–1989) were coordinated by Matos, and I have been fortunate to oversee the last five (1991–2018). The principal results have yielded 1200 publications and the opening in 1987 of the Great Temple Museum, the headquarters of the project, where eight galleries are devoted to exhibiting the archaeological materials recovered in the excavations (Figs 2.1 and 2.2).

Among the most outstanding discoveries of our project are the vestiges of the Great Temple, a twin-pyramid structure dedicated to the sun god Huitzilopochtli and the rain god Tlaloc; the House of the Eagles, a neo-Toltec style building that possibly served as a hallowed space for the veiling of deceased sovereigns and the penitential bloodletting rituals of their successors; the Red

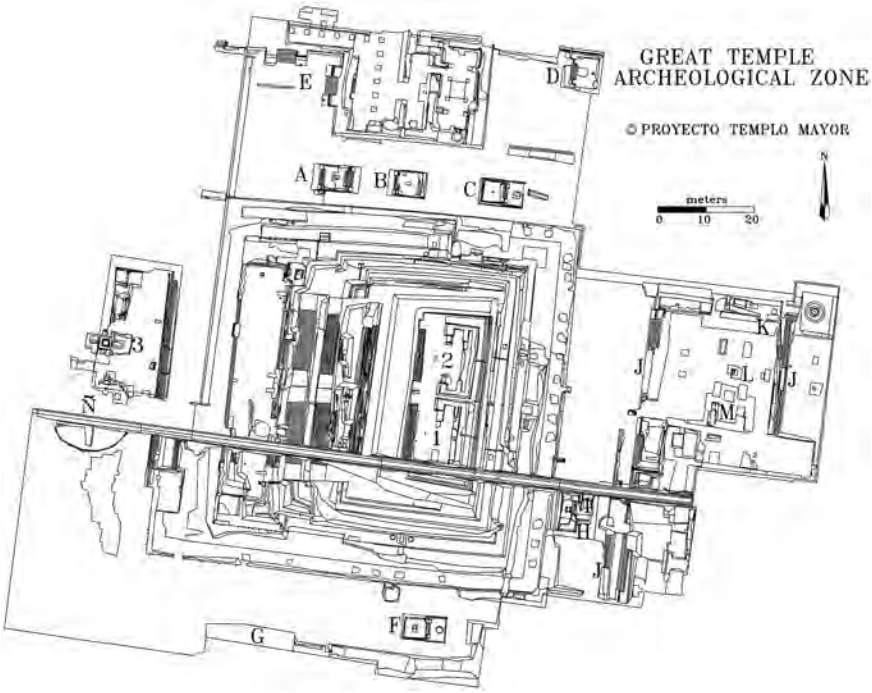

FIGURE 2.1 The Great Temple Archaeological Zone in Mexico City

FIGURE 2.2 Ruins of the Tenochtitlan's Great Temple

Temples, neo-Teotihuacan shrines associated with the cult of Xochipilli, patron of music, song, dance, and amusements; the Huei Tlachco or Great Ballcourt, where ritual competitions took place that emulated the eternal cosmic battle between day and night; the Calmecac, a temple-school where nobles were educated in all areas of knowledge; Ehecatl's Temple, a conical-shaped structure built in honour of the wind god; and the Huei Tzompantli, a large rack where the skulls of sacrificial victims were displayed (Matos 1981a; 1984; 1987; 2001; López Luján 1989; 2006; 2013b; Olmedo 2002; Barrera and López Arenas 2008; Matos and Barrera 2011; López Austin and López Luján 2009; Barrera, in press; Trejo and Vázquez, in press). Associated with these splendid constructions, now in ruins, is a multitude of small shrines, sculptures, mural paintings, as well as 210 buried offerings (Matos 1982; 1988; López Luján 1998; 1999; 2005a; 2006; López Luján et al. 2005).

The offerings are deposits of gifts for the gods and they are generally cosmic models in miniature composed of extraordinary riches (López Luján 2001b) (Fig. 2.3). We have found tens of thousands of jade, flint, obsidian, ceramic, turquoise, wood, and copper artefacts, which come from throughout the Mexica empire, in addition to earlier Olmec, Mezcala, Teotihuacan, and Toltec relics that were uncovered by the Mexica themselves in the ruins of these venerated civilisations (López Luján and López Austin 2009; López Luján 1989; 2013b). I must also mention the skeletal remains of dignitaries, sacrificed warriors, and children (López Luján 2005a: 172–183; López Luján et al. 2010; Chávez 2007; 2014), as well as more than 450 animal species from diverse habitats: high mountains, temperate forests, tropical rainforests, swamps, and coastal areas (Polaco 1991; López Luján 2005: 99–105; López Luján et al. 2014).

The First Folio of Codex Mendoza

That said, I begin my brief analysis of the Codex Mendoza (1992: 1r-16v) with the sixteen folios that make up the section on Mexica history. As Frances Berdan and Patricia Anawalt (1992: 3–7) rightly noted, the first scene in this section is one of the most complex in the document, for it combines myth and history concerning the founding of Tenochtitlan in the year 2 House, or AD 1325 (*Codex Mendoza* 1992: 2r). The first thing that jumps out at me in this image is that the configuration of the original island emulates the old Mesoamerican cosmogram of the earth's surface (Fig. 2.4). It is represented as a saltire, or Saint Andrew's Cross, dividing the territory into four large triangles associated with the cardinal directions. Archaeologically, however, we know that the island was not organized by two diagonal axes, but rather orthogonally like a Greek Cross and

FIGURE 2.3 Templo Mayor's offering box 126

that the north-south axis had a deviation of 7 degrees, 42 minutes, to the east, which the streets in the Historical Centre of Mexico City still retain (Zantwijk 1985: 58–66; Aveni et al. 1988; López Luján 2005a: 54–55; 2006, v1: 79–81). In the intersection of these canals we see in the Codex Mendoza a celestial, solar, bellicose golden eagle that, when combined with the prickly pear alluding to the house of the rain god Tlaloc (Heyden 1988; López Luján 2005: 63–69; 2015b), gives rise to the binomial designation of the future city: Mexico-Tenochtitlan, that is, the place of Mexi (another name of the patron god Huitzilopochtli) and the place of *tenochtli* (stone prickly pear). This double toponym emerges from an emblem representing the military power of the Mexica: the shield with white down feathers characteristic of Huitzilopochtli and a bundle of arrows (Berdan and Anawalt 1992: 3–4; López Austin and López Luján 2009: 302–303, 510–511). Interestingly, the toponym and emblem have an archaeological

FIGURE 2.4 Island of Tenochtitlan
CODEX MENDOZA, FOL. 2R

correlate in the *Teocalli* ("Temple") of Sacred War, a stone monument from the reign of Motecuhzoma Xocoyotzin, which was uncovered in 1831 in the ruins of his royal palace (Caso 1927; 2015; Townsend 1979).

Leaving for another occasion the ten personages and sixteen plants depicted in this scene (see Berdan and Anawalt 1992: 4–5), let us focus our attention on the only two existing constructions pictured here. Above, we see a house made of perishable materials that in the past has been identified as a palace or council house, but is actually Huitzilopochtli's original temple, as Elizabeth Boone (1992: 36; Berdan and Anawalt 1992: 4) has proposed. This primordial building is described by Fernando Alvarado Tezozómoc (1949: 73) and Friar Diego Durán (1984, v2: 49–50) as a humble earthen and wooden shrine. On the right is a *tzompantli*, or wooden rack where the skull of a sacrificial victim

is displayed. Unfortunately, we archaeologists have not been able to reach the island's deepest levels to find these ancient religious structures, since we are prohibited from pumping out the groundwater for fear of detrimentally affecting the surrounding colonial churches and mansions. In the case of the Templo Mayor, however, we have managed to uncover a total of thirteen enlargements –total and partial expansion phases– that were constructed over the course of 130 years. The so-called Phase II probably dates back to AD 1375–1427 and Phase VII was surely built during the reign of Motecuhzoma Xocoyotzin, i.e. AD 1502–1520. This last expansion measures 84 by 77 metres at its base and likely would have reached a height of 45 metres (López Austin and López Luján 2009: 171–214).

As for the *tzompantli*, members of the Urban Archaeological Program (PAUINAH), last year, during the construction of the future Museum of Chocolate on 24 Republic of Guatemala Street, found a masonry platform, 6 metres wide and 34 metres long (Barrera, in press; Trejo and Vázquez, in press). Constructed in the late fifteenth century, the upper face of this platform has several lateral post holes around 25–30 centimetres in diameter, spaced about 60–80 centimetres apart. Inside the structure were found at least 350 human skulls, many of them with pierced parietals. Although some were identified as belonging to women and children, most of them were of young adult males. The platform's position between the Ballcourt and the Great Cuauhxicalco (Sahagún 1993: 269r; Matos 2001; López Luján and Barrera 2011; López Luján, in press), suggests that it is the Great Tzompantli of Tenochtitlan.

Codex Mendoza's First Section

But let us get back to the Codex Mendoza (1992: 2v-16v). The other folios in this first section are of great interest, for they describe the history of Tenochtitlan, year by year, divided by the reigns of its supreme rulers, from Acamapichtli, the founder of the dynasty in 1376, to Motecuhzoma Xocoyotzin, who died in 1520. Unfortunately, it is not a detailed secular history like the one contained in the Codex Telleriano-Remensis (1995: 25r-44r) which records the birth, accession, and death of each ruler; natural phenomena such as earthquakes, eclipses, comets, droughts, snowfalls, and floods; military triumphs, and the ends of calendrical cycles, in addition to the construction programs and dedications of temples. In contrast, history in the Codex Mendoza is reduced to a "victory chronicle," as it only presents images of the sovereigns, the years of their respective reigns, the symbol for war, and lists of the communities they subjugated, along with the dates of New Fire ceremonies (Boone 1992: 43–50).

Notable in our excavations is the absence of such representations of sovereigns with their name glyphs and of temples consumed by flames identified by their place signs. We have only recovered some slabs on the floors that depict war captives stripped of their rich attire, but bearing the eagle feather martial insignia and wearing astral ear ornaments (Barrera et al. 2012; López Luján and González 2014). Their paper banners and stoles, bound arms, and tears in their eyes tell of their condition as imminent sacrificial victims. The military emblem (shield, bundle of arrows, and banner) appears associated with these captives and with the crude Coyolxauhqui image from Phase IVa of the Templo Mayor (López Austin and López Luján 2009: 298–303, 309). But we are convinced that it does not allude to specific conquests as in the Codex Mendoza, but rather to the mythical combat of the solar Huitzilopochtli with his lunar sister and astral siblings.

We also have discovered calendrical dates embedded in the facades of the Templo Mayor (León-Portilla 1981; Matos 1981a; 1981b; López Luján 2005: 52–54; Umberger 1987; López Austin and López Luján 2009: 350–358). Some with frames may indicate years in which transcendent events occurred, such as architectural enlargements or conquests. Following this logic, Matos (1981a: 19) has proposed that the 1 House and 2 Rabbit dates carved in Phase II of the pyramid correspond to the years 1389 and 1390, and refer to an enlargement ordered by Acamapichtli. One also could suggest that these reliefs commemorated Mexica triumphs over the communities of Cuauhnahuac, Mixquic, Cuitlahuac, or Xochimilco, and that the decapitated head with closed eyes carved under them has a correlate in the heads of the four sacrificed warriors painted on folio 2 verso of the Codex Mendoza (Fig. 2.5). Moreover, I should add that this same construction phase has a framed 2 Reed date that would correspond to the New Fire celebrated by Huitzilihuitl in 1403 (López Austin and López Luján 2009: 351–352; *cf. Codex Mendoza* 1992: 3v).

Matos (1981a: 27) also suggest that the 4 Reed date in Phase III refers to Itzcoatl's victory over Azcapotzalco in 1431 and to the consequent formation of the ultimate Triple Alliance (*cf. Codex Mendoza* 1992: 5v). The 1 Reed date in Phase IVa, in turn, would correspond to the terrible and long-lasting drought that Motecuhzoma the First faced in 1454 (Matos 1981a: 37; *cf. Codex Mendoza* 1992: 7v), a hypothesis that is corroborated archaeologically by Offering 48 of the same enlargement (López Luján 1982; 2005: 148–157; 2018; Román 1987). It is a ritual deposit that contained eleven pitchers adorned with the visage of Tlaloc, along with the skeletons of forty-two children sacrificed to this pluvial deity, surely as a consequence of the terrible famine that ensued.

And finally I will mention the 3 House date in Phase IVb, which would record the death of Motecuhzoma the First and Axayacatl's accession to the

FIGURE 2.5 Acamapichtli conquests
CODEX MENDOZA, FOL. 2V

throne in 1469 (Matos 1981a: 37; *cf. Codex Mendoza* 1992: 8r). It is well known that the large Coyolxauhqui disk-shaped monolith was discovered in this phase. Michel Graulich (2000: 81–82) had suggested an intriguing connexion between this monolith and the scene that appears on folio 10 recto of the Codex Mendoza (Fig. 2.6). Here, Axayacatl is depicted vanquishing Moquihuix, the lord of Tlatelolco, in 1473, who dies when falling from the Templo Mayor of his city. According to the Dominican friar Diego Durán (1984 v2: 263), Axayacatl was the one who threw him off the top of the pyramid, while Alva Ixtlilxóchitl (1975–1977 v2: 141) and the Codex Cozcatzin (1994: 104) agree that Moquihuix died "hecho pedazos," that is, "broken into pieces" at dawn, just like Coyolxauhqui when confronted by Huitzilopochti. And if this were not enough, the name "Moquihuix" means "He whose face is like pulque" (López

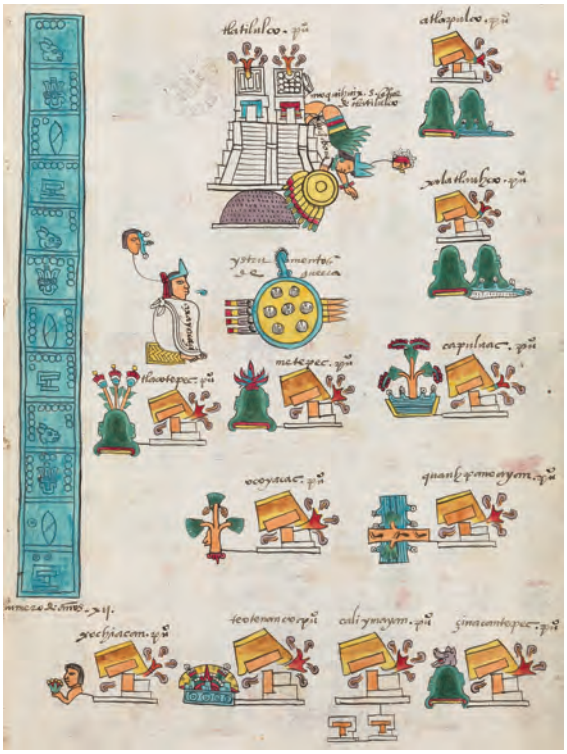

FIGURE 2.6 Axayacatl conquests
CODEX MENDOZA, FOL. 10R

Austin, personal communication, July 2016) and his name glyph in the Codex Mendoza (1992: 10r, 19r) consists of a human head wearing a lunar nose ornament.

Before moving on, allow me one last comment about this section of the document and its relation to our archaeological findings. When analysing the folios corresponding to the forty-five communities conquered by Ahuitzotl between 1486 and 1502, we see that twenty-four of them are distributed along the Pacific coast, from Cihuatlan and Tlapan to Tehuantepec and Xoconochco (*Codex Mendoza* 1992: 12v–13v; Berdan and Anawalt: 22–23). In this manner, the Triple Alliance annexed territories located in the present-day states of Guerrero, Oaxaca, and Chiapas which permitted privileged access to resources from the Pacific Ocean not only through tribute but also through trade. This phenomenon is reflected directly in the content of our ritual deposits. For example, in Offering 125 of the Templo Mayor, which also dates from Ahuitzotl's reign, 72 per cent of the thirty-five species of molluscs, crustaceans, corals, and

echinoderms that we have identified come from the Pacific; 24 per cent originate from the Atlantic, and 4 per cent inhabit both coasts (López Luján et al. 2014: 39–44). In contrast, the majority of marine animals recovered in earlier construction phases come from the Atlantic (Belem Zúñiga-Arellano, personal communication, May 2016a).

Codex Mendoza's Second Section

The next thirty-nine folios of the Codex Mendoza (1992: 17v-55r), which make up the tribute section, are just as interesting, beginning with toponyms (Berdan 1992b: 96–98). These place glyphs are composed of pictographic, ideographic, and phonetic elements that tell us a great deal about the view of the universe prevalent in Postclassic Mesoamerica, for they include all sorts of references to the natural and cultural worlds. In table 2.1, I have gathered those elements in the 612 toponyms of sections 1 and 2 whose actual referents or their representations appear in the offerings buried in Tenochtitlan's sacred precinct: plants, animals, household goods, ornaments, military implements, ritual paraphernalia, architecture, divinities, and various symbols.

Even more suggestive are the connexions that can be made between our archaeological findings and the items paid in tribute to Tenochtitlan by the thirty-eight provinces listed in the Codex Mendoza (Berdan 1992a; Berdan and Anawalt 1992: 32–141). With respect to the buildings we have exhumed, we know that most of the construction materials used are of local origin. I am referring specifically to the volcanic basalts, pyroxene and lamprobolite andesites, tuffs, and scoriae, as well as the sands and clays, whose sources we have identified through a series of petrographic and chemical analyses (López Luján et al. 2003: 140–150). These materials do not appear in the lists of periodic tribute because the sovereigns of Tenochtitlan usually demanded them from their nearest lakeside neighbours when they decided, arbitrarily and normally unexpectedly, to renovate the houses of their deities. What we do see in the third section of Codex Mendoza (1992: 63r, 64r) are scenes of youths bringing earth and stone to repair temples: they travel in canoes that hold between 1,000 and 1,200 kilograms of building material, that is, forty-three to fifty-two times the weight that a person could transport on his back (around 23 kilograms) with the aid of a tumpline and a basket or a wooden frame (López Luján et al. 2003: 140).

In fact, the only important construction material not available in the Basin of Mexico was the lime used for mortar and architectural coverings (López

TABLE 2.1 Elements in Codex Mendoza's toponyms that appear in Mexica offerings

Plants	
Agave	10r, 33r
Marigold	8r, 24v
Flower	2v, 5v, 6r, 10r, 12r, 13r, 13v, 20r, 23r, 24v, 27r, 30r, 31r, 32r, 44r, 50r
Chilli	37r
Beans	44r
Animals	
Seashell	12r
Snail	12r
Fish	31r, 46v
Toad	43r
Serpent	8r, 17v, 23r, 24v, 32r, 34r, 36r, 42r, 43r, 50r
Turtle	47r
Hummingbird	20r, 21v, 23r, 24v, 32r
Quetzal feathers	16r
Eagle	5v, 10v, 13v, 16v, 22r, 24v, 32r, 42r
Armadillo	51r
Dog	8r, 16r, 32r
Jaguar	13v, 34r, 52r
Household goods	
Molcajete	13r, 54r
Comal	16v
Pot	8r, 13v, 21v, 28r, 30r
Jar	5v, 27v
Tecomate	40r
Bowl	23r, 29r, 33r, 43r, 44r, 45r, 46r
Mat	47r
Spindle whorl	37r
Ornaments	
Earspool	42r
Jade bead	3v, 4v, 6r, 17v, 41r, 54r
Cloak	35r
Bell	44r

TABLE 2.1 Elements in Codex Mendoza's toponyms that appear in Mexica offerings (*cont.*)

Military implements and insignia	
Projectile point	23r
Eagle feathers	13v
Shield	46r, 51r
Ritual paraphernalia	
Flint knife	6r, 8r, 13r, 16r, 24r, 24v, 27r, 30r, 42r
Bark paper	7v, 16r, 20r, 24v, 46r
Copal bag	10v
Agave thorn	13v, 15v, 19r, 39r, 47r
Bone awl	17v, 20v
Obsidian tool	17v, 23r, 24v, 48r, 51r
Maize sceptre	8r, 26r, 31r, 34r, 49r
Vertical drum	24v, 28r
Canoe	27v
Divinities	
Xiuhtecuhtli	13r
Tlaloc	13v, 15v, 46r
Ehecatl	12r, 22r
Xolotl	13v, 51r
Xipe Totec	39r
Symbols	
Human skull	17v, 35r, 43r
Human heart	16v
Rain	7v, 8r, 16r, 40r, 44r, 45r
Cloud	10v, 46r
Pair vertical bands	36r, 38r
Stone	8r, 10v, 12r, 15v, 16r, 18r, 20r, 21v, 22r, 26r, 27r, 31r, 36r, 29r, 40r, 42r, 44r, 48r, 50r, 53r
Turquoise	6r, 7v, 13r, 20v, 23r, 38r
Gold	13v, 44r
Sun disk	10r, 16r, 33r, 34r, 42r, 46r, 49r
Star	6r, 7v, 8r, 16r, 21v, 24v, 33r, 36r, 37r, 39r, 40r, 43r, 51r
Movement	24v, 40r

Luján et al. 2003: 151; López Luján 2006, v1: 61–67). According to the Codex Mendoza (1992: 28r, 42r), lime was provided regularly by the provinces of Atotonilco de Pedraza (which covered the northern part of the state of México and southwestern Hidalgo) and Tepeacac (located in the south-central portion of the state of Puebla). The Franciscan friar Bernardino de Sahagún (1950–1982 b11: 243-244; 2000: 1132), in turn, mentions sources in the Tula region of Hidalgo and the outskirts of Oaxtepec. Give this diversity of historical data, we decided to conduct an investigation with experts from the University of Calabria in Italy to ascertain the precise origins of the lime (Miriello et al. 2011; 2015). We compared the composition of the mortars and coverings from all of the construction phases of the Templo Mayor and Buildings A, B, and D with samples of limestone recovered *ex professo* from fourteen sites in the states of Hidalgo, Puebla, and Morelos. The samples were analysed using SEM/EDS and laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS). The results confirmed that all the lime from these four temples came from the Tula region in Hidalgo. The reason for such a preference may be found in its elevated silicon content which allows the preparation of plasters with more desirable characteristics.

In this exercise, I also compared our database of objects buried in the Templo Mayor and the surrounding buildings with the tribute list in the Codex Mendoza (see also López Luján 2005: 99–105, 122–126, 237–348; 2006, v1: 129–223; 2006, v2: 106–128). It is well known that the items recorded in this document fed the coffers of Tenochtitlan, mainly the royal warehouses of the Petlacalco, the armouries of the Tlacochcalco, the artisanal workshops of the Totocalli, and the treasure hall in the Old Houses of Axayacatl (Berdan 1992a; 1992c). These goods served the sovereign for his personal use or were redistributed as raw materials and semi-processed products for the palace artisans; as gifts for the Mexica nobility, soldiers, and merchants; and as presents for distinguished visiting guests who attended coronations, religious ceremonies, or dedications of the Templo Mayor. Relatively few of the tribute goods, however, were destined for the state cult, especially those delivered to the priests to be buried as offerings (López Luján 2005: 75–79). In fact, most of the items listed in the Codex Mendoza, including cloaks, military uniforms, shields, cacao, tobacco, liquidambar resin, ground toasted maize, bees' honey, thick maguey honey, salt, reeds, mats, unspun cotton, amber, cochineal, deer skins, and copper axes, were not found in the 210 offerings we have excavated thus far; obviously, we are aware that some of these products—the organic ones—could have been buried as offerings and that they would have decayed with the passage of time. On the other hand, as we can see in table 2.2, depicted products such as maize, beans, chilli, feathers, jaguar skins, bark paper, rubber balls, ochre, turquoise,

TABLE 2.2 Tribute goods in Codex Mendoza present in Mexica offerings

Items present in small quantities	
Maize	20v, 22r, 23v, 25r, 26r, 27r, 28r, 29r, 30r, 31r, 32r, 33r, 34r, 35r, 36r, 37r, 41r, 42r, 44r
Beans	20v, 22r, 23v, 25r, 26r, 27r, 28r, 29r, 30r, 31r, 32r, 33r, 34r, 35r, 37r, 41r, 42r, 44r
Chilli	52r, 54r, 55r
Feathers	43r, 45r
Jaguar skins	47r
Bark paper	23v, 25r
Rubber balls	46r
Ochre	40r
Turquoise	40r, 52r
Gold	39r, 40r, 44r, 46r
Ceramic containers	23v, 25r, 36r, 37r, 39r, 40r, 47r
Items present in larger quantities (in order of abundance)	
Seashells	38r
Copal resin	36r, 37r
Greenstone beads	37r, 38r, 43r, 46r, 49r, 52r
Copper bells	40r
Chia seeds	20v, 22r, 23v, 25r, 26r, 27r, 28r, 29r, 30r, 31r, 32r, 33r, 34r, 35r, 36r, 37r, 41r, 44r
Amaranth	20v, 22r, 23v, 25r, 26r, 27r, 28r, 29r, 30r, 31r, 32r, 33r, 34r, 35r, 37r, 41r
Eagles	31r, 55r

gold, and ceramic containers are recorded in our archaeological contexts, although in relatively small concentrations. Indeed, the only pictured items found in larger quantities are seashells, copal resin, greenstone beads, copper bells, chia seeds, amaranth, and eagles.

Let us examine some of these cases in greater detail. For instance, according to the Codex Mendoza (1992: 38r), the province of Cihuatlan, located on the Pacific coast in the state of Guerrero, paid in tribute every six months 800 *tapachtli* valves (Fig. 2.7). These molluscs, identified by John Joseph Temple and Adrián Velázquez (2003) as the species *Spondylus princeps, Spondylus calcifer*, and *Chama echinata*, live adhered to rocky substrata at depths of between 3 and 40 metres and are characterised by their spiny surfaces and

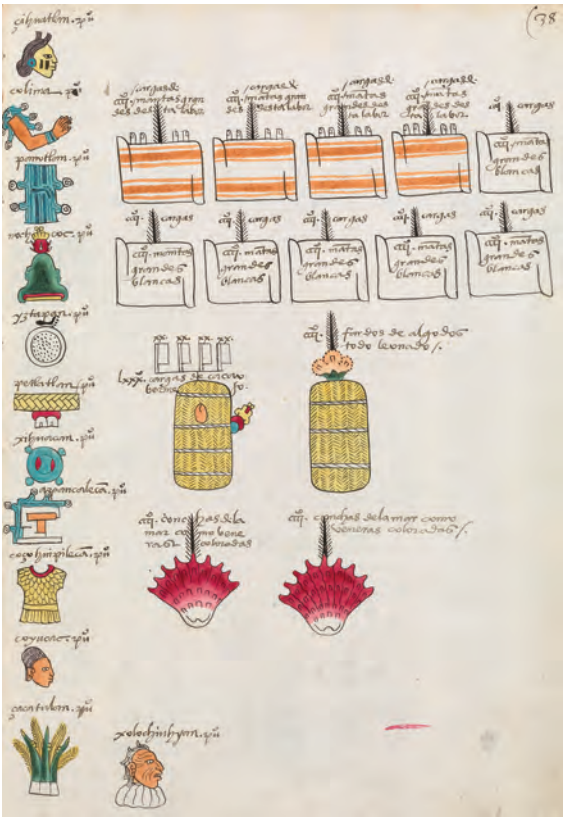

FIGURE 2.7 Products paid in tribute by the province of Cihuatlan
CODEX MENDOZA, FOL. 38R

colours ranging from pink to purple, including bright red. When comparing the archaeological and historical data, it is surprising that we have only found until now 237 *tapachtli* valves in the Templo Mayor offerings, and conversely that the Codex Mendoza does not mention any of the other 224 mollusc species identified by biologists in our archaeological contexts (Valentín and Zúñiga-Arellano 2011; Zúñiga-Arellano 2013; Belem Zúñiga-Arellano, personal communication, May 2016).

A similar case involves gold objects. According to a recent estimate by Timothy King (2015) based on the Codex Mendoza and the *Relaciones geográficas* that continues to be controversial, Tenochtitlan annually received half a tonne of gold shipments, which not only consisted of the raw material, but also of semi-processed products, as well as finished pieces. This elevated figure bears no relation to our archaeological data: after forty

years of explorations and the discovery of tens of thousands of objects, we have only found half a kilogram of gold ornaments, which fit in both of my hands (López Luján and Ruvalcaba 2015). Such data are consistent with three incontrovertible facts: Mesoamerican territory is poor in native gold; its inhabitants never exploited nor processed auriferous minerals; and metallurgy as a technology was imported relatively late from South America. This is reflected in the absence in present-day Mexico of gold museums associated with financial institutions—unlike Costa Rica, Colombia, Ecuador, Peru, and Bolivia—, in our poor archaeological collections, and in the great esteem held by Nahua people in the past for fine feathers and greenstone instead of gold and silver.

The topic of eagles is also worth mentioning. It is significant that the eagle warrior suit is not among the wide variety of uniforms—including those of the jaguar knight—recorded in the Codex Mendoza (1992: 18v-34r, 35v-37r, 38v-41r, 42v-43r, 44v-46r, 48v-52r, 53v-54r). Actually, the imperial capital only imported live eagles through tribute from the northern provinces of Xilotepec and Oxitipan (*Codex Mendoza* 1992: 31r, 55r). It is paradoxical that Xilotepec also had to pay tribute in military uniforms, but none of them was in the form of the bird of prey (Fig. 2.8). This may be a consequence of the control over production exercised by Mexica featherworkers, who must have always had feathers at their disposal from the eagles kept in captivity in the so-called Totocalli or Bird House (López Luján 2006, 1: 87–89). According to Sahagún (2000: 762), this structure formed part of Motecuhzoma's palace complex. However, it was not simply a place where eagles were kept in cages; featherworkers in the service of the emperor also worked there (Cortés 1994: 63, 67).

There is sufficient archaeological evidence to propose that several of the golden eagles recovered from ten offerings at the Templo Mayor and three from the House of Eagles may have come from the Totocalli (López Luján 2006, v1: 222–223; López Luján et al. 2014; López Luján 2015b). In Offering 125, the skeleton of a male eagle is distinguished by a visible deformity on its right wing. Digital X-rays indicate that this deformity was caused by a fracture. Although the fracture healed, this bird was unable to fly, which would have prevented it from hunting and feeding. Its bones, however, were robust and of normal dimensions, which suggest that it was kept in captivity and was cared for by expert hands. Similarly, inside the same offering box, the sternum of a female eagle skeleton contained a high concentration of fragmented Montezuma quail bones with green bone fracture patterns and homogeneous colouring at the edges. We believe that this eagle, before being buried, had lived in captivity and was fed only quail.

FIGURE 2.8 Products paid in tribute by the province of Xilotepec
CODEX MENDOZA, FOL. 31R

Codex Mendoza's Third Section

The third section of the Codex Mendoza (1992: 57r-71r), related to social life and composed of sixteen folios, contains images of objects whose actual referents or representations in miniature were found in Templo Mayor offerings, such as household goods (cradle, reed coffer, jar, bowl, cup), artisanal tools

(spindle whorl, spindle bowl, batten), fishing implements (canoe, pole, paddle), weapons (projectile point, spear, dart, arrow, shield, club, banner), ritual utensils (maguey spine, incense ladle, tobacco gourd, horizontal drum, vertical drum, drumstick), and symbols (earth, star, day, year, pulque, gold, jade, stone, Malta cross, fire serpent, eagle claw, market).

I must confess that the two scenes that depict the *petlacalli*, that is, the reed coffer for storing valuables such as blankets, cotton garments, precious feathers, and greenstone jewels, have always drawn my attention (*Codex Mendoza* 1992: 70r). In both, the contents are removed, either by a thief who furtively steals the precious items, or drunks who blow their savings to continue drinking (Fig. 2.9). In metaphoric language, the word *petlacalli* alluded to the underworld where the ancestors resided, the abode of the rain deities filled with riches, the house where the chaste daughter lived, the womb of the mother who carried the baby, and the chest of the individual who gave wise counsel (López Luján and Santos 2012: 14–18). In the Templo Mayor offerings, we have never had the good fortune of finding a reed coffer, but we have found its stone version known in Nahuatl as *tepetlacalli*. In fact, we have recovered several of them, in cubic form, always filled with jade beads, seashells, seeds, and small images of the rain gods (López Luján 2005: 168–172). Based on many archaeological, historical, and ethnographic studies, we have concluded that the Mexica priests buried stone coffers to confer on each enlargement of the Templo Mayor the qualities of a sacred mountain which engendered the clouds, the rains, and therefore the earth's fertility (López Austin and López Luján 2009: 321–331).

The so-called ethnographic section also has been very useful for resolving problems of iconographic identification, along with the function and meaning of the monuments and religious structures exhumed in the Historic Centre of Mexico City. A good example is the series of disk-shaped sculptures that are exhibited today in the National Museum of Anthropology (López Luján and Olmedo 2010). Carved in basalt and about 1 metre in diameter, the five extant examples have traditionally been identified as solar symbols based on their reliefs. The presence of a sculpted glyphic convention that symbolised *market*, however, would suggest a very different interpretation. This fact is corroborated in the Codex Mendoza (1992: 58r, 67r), where the gloss "*tianquez*" appears next to this glyph: in the scene where the father sends his two six-year-old sons to the market to gather from the ground prickly pears and maize kernels left by the vendors, and in the scene where six captains spy at night on the market, the temple, and the houses of an enemy community that their lord wishes to conquer (Fig. 2.10). Moreover, Durán (1984, v1: 177–186) tells us that built in to the shrines of the merchants were "some carved round stones as big as a shield, sculpted with a round figure such as that of a sun."

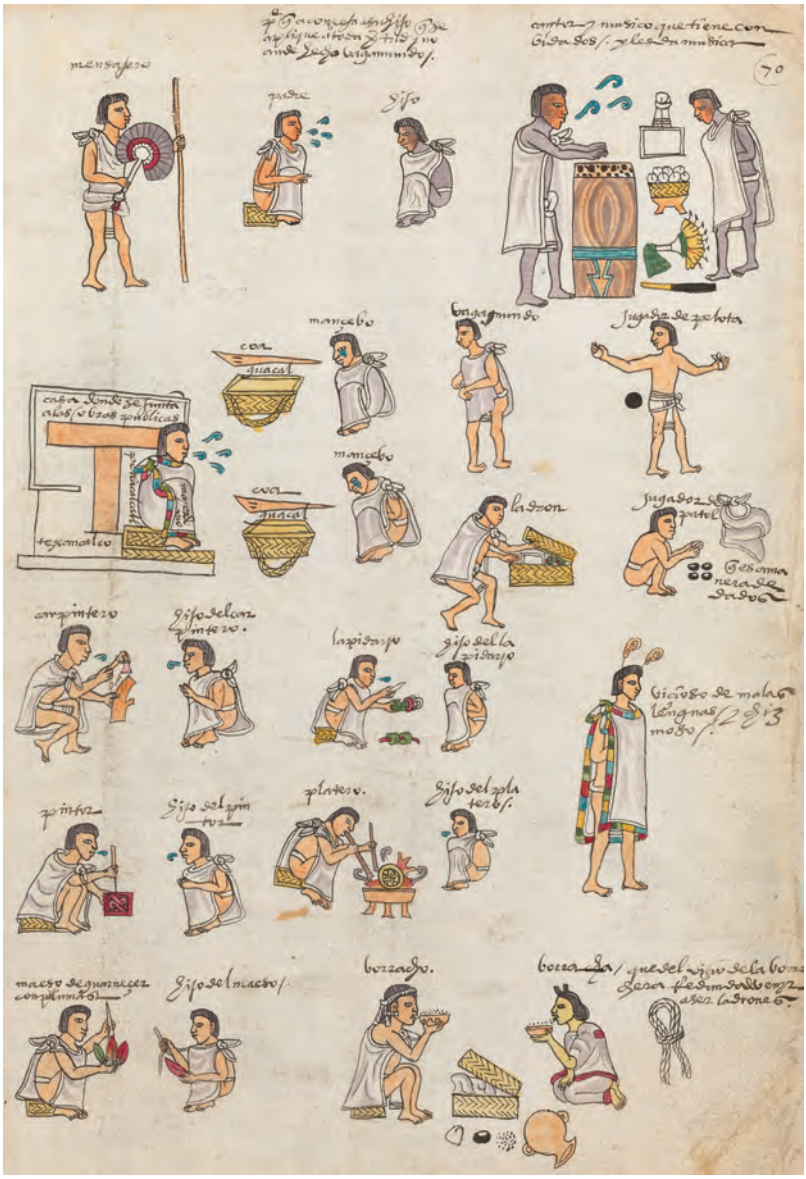

FIGURE 2.9 Reed coffers containing riches
CODEX MENDOZA, FOL. 70R

Another good example consists of the two large images of the Death God discovered inside the House of Eagles. Made of assemblable ceramic sections, they represent semi-defleshed male personages with a large organ emerging from the thoracic cage (López Luján and Mercado 1996; López Luján 2005b;

FIGURE 2.10 Market of an enemy town
CODEX MENDOZA, FOL. 67R

2006, v1: 84–96; 2007). Significantly, the Codex Mendoza (1992: 20r, 21v, 23r, 24v, 26r, 27r, 28r, 29r, 30r, 33r, 36r, 41r, 50r, 67r) depicts several examples of a military uniform similar to our sculptures, which is worn by the *tlacochcalcatl* general (Fig. 2.11). Eduard Seler (1992: 23, 31) thought that this uniform had a heart on its chest. Herman Beyer (1940) rejected this identification, pointing out that

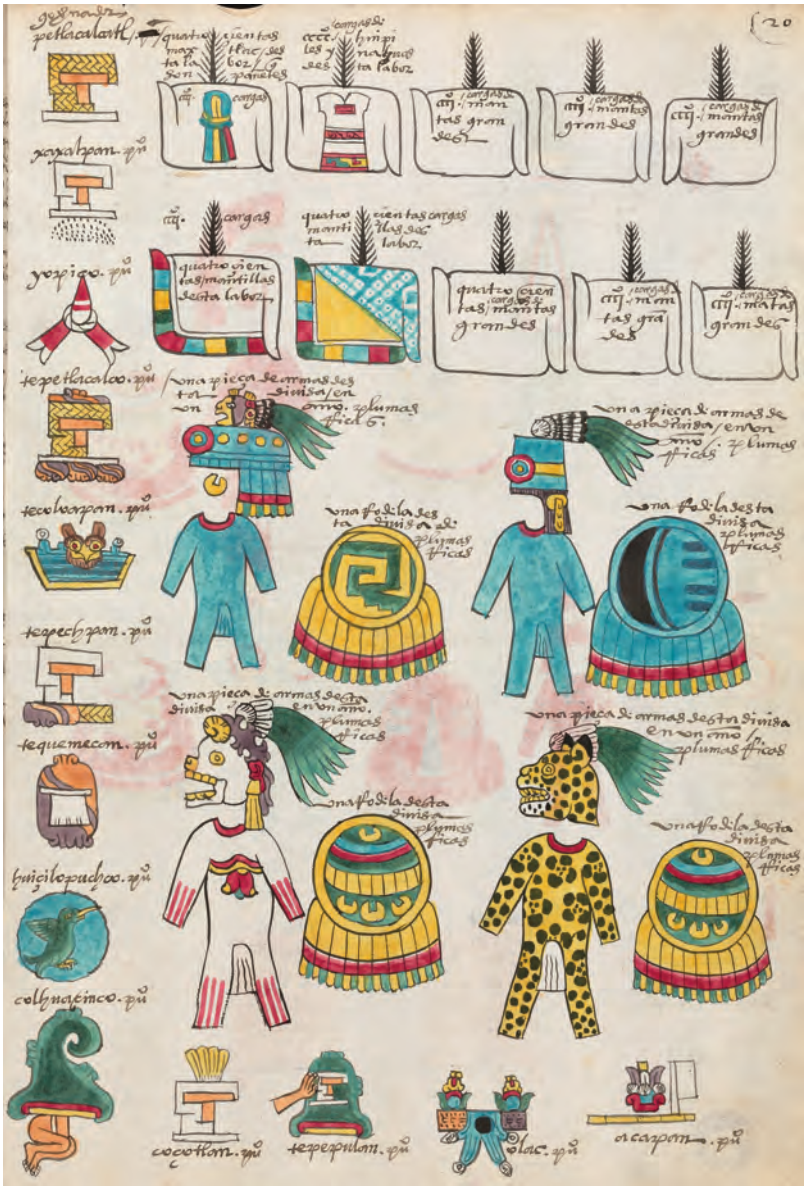

FIGURE 2.11 Military uniform in form of a semi-defleshed individual with a big liver
CODEX MENDOZA, FOL. 20R

FIGURE 2.12 *Calmecac* or temple-school for nobles
CODEX MENDOZA, FOL. 61R

the heart had a conventional form in Mexica iconography that does not correspond with the organ of the uniforms. Beyer came to the conclusion that it more likely was a liver after phonetically analysing a toponym pictured on folio 10 verso of the Codex Mendoza—specifically, the place glyph for Tampatel, a

Huastec community conquered by Axayacatl. This toponym is composed of a hill (*tam-* in Huastec) topped by an inverted liver (*-elli* in Nahuatl). According to Mexica conceptions, the liver contained the *ihiyotl*, the animistic entity linked to death and the underworld. This would explain why deities related to the powers of the lower half of the cosmos, such as Mictlantecuhtli, Mictecacihuatl, Tzitzimitl, and Itzpapalotl, were depicted with large prominences.

A third example is the building recently excavated by the Urban Archaeology Program underneath the Cultural Centre of Spain in Mexico City (Barrera and López Arenas 2008; López Luján and López Austin 2009: 403–404; Barrera 2012). It is a porticoed space, consisting of at least four chambers equipped with benches. From its architectural configuration and its location near the Ballcourt and the Temple of the wind god Ehecatl-Quetzalcoatl, it was identified as the *calmecac*, an establishment that offered religious training to young men of the nobility who in the future would occupy high positions in secular life or would serve as fulltime priests. This would be confirmed by the discovery of images and the calendrical names of Quetzalcoatl, the patron deity of the *calmecac*. It is well known that the Codex Mendoza (1992: 61r) contains an image of this building, whose roof is decorated with large crenellations in the shape of gastropod shells (Fig. 2.12). And during the excavations the archaeologists found seven such crenellations made of stuccoed ceramic, 2.4 metres in height, which corroborates the hypothesis.

With gusto, I shall continue constructing my own Codex Mendoza, but space has run out. I wish, again, to thank Professor Jansen and Virginia Lladó-Buisan for their gracious invitation to contribute in this volume.

References

Alva Ixtlilxóchitl, F. de 1975–1977. *Obras históricas*, v. 2, Edmundo O'Gorman (ed.). UNAM, Mexico.

Aveni, A.F., E.E. Calnek and H. Hartung 1988. Myth, Environment, and the Orientation of the Templo Mayor of Tenochtitlan, *American Antiquity* 53(2): 287–309.

Alvarado Tezozómoc, F. 1949. *Crónica Mexicáyotl*. UNAM/INAH, Mexico.

Barrera Rodríguez, R. 2012. Museo de Sitio. El *calmécac* de Tenochtitlan, *Arqueología Mexicana* 114: 8.

Barrera Rodríguez, R. In press. Las exploraciones del Cuauhxicalco, el Huei Tzompantli, el Templo de Ehécatl-Quetzalcóatl, el Juego de Pelota y el Calmécac, *Al pie del Templo Mayor de Tenochtitlan: ensayos en honor a Eduardo Matos Moctezuma,* L. López Luján and X. Chávez Balderas (eds.). INAH, Mexico.

Barrera Rodríguez, R. and G. López Arenas 2008. Hallazgos en el recinto ceremonial de Tenochtitlan, *Arqueología Mexicana* 93: 18–25.

Barrera Rodríguez, R., R. Martínez Meza, R. Morales Sánchez, and L. Vázquez Vallin 2012. Espacios rituales frente al Templo Mayor de Tenochtitlan, *Arqueología Mexicana* 116: 18–23.

Berdan, F.F. 1992a. The Imperial Tribute Roll of the *Codex Mendoza,* in *The Codex Mendoza*, F.F. Berdan and P.R. Anawalt (eds.), v. 1: 55–79. University of California Press, Berkeley.

Berdan, F.F. 1992b. "Glyphic Conventions of the *Codex Mendoza,*" *The Codex Mendoza*, F.F. Berdan and P.R. Anawalt (eds.), v. 1: 93–102. University of California Press, Berkeley.

Berdan, F.F. 1992c. Economic Dimensions of Precious Metals, Stones, and Feathers: the Aztec State Society, *Estudios de Cultura Náhuatl* 22: 291–323.

Berdan, F.F. and P.R. Anawalt 1992. Description of *Codex Mendoza, The Codex Mendoza*, F.F. Berdan and P.R. Anawalt (eds.), v. 2: 1–282. University of California Press, Berkeley.

Beyer, H. 1940. El jeroglífico de Tlacaélel, *Revista Mexicana de Estudios Antropológicos* 4(3): 161–164.

Bleichmar, D. 2015. History in Pictures: Translating the *Codex Mendoza*, *Art History* 38(4): 682–701.

Boone, E.H. 1992. The Aztec Pictorial History of the *Codex Mendoza* in *The Codex Mendoza*, F.F. Berdan and P.R. Anawalt (eds.), v. 1: 35–54. University of California Press, Berkeley.

Caso, A. 1927. *El Teocalli de la guerra sagrada*. Museo Nacional de Arqueología, Historia y Etnografía, Mexico.

Caso, A. 2015. El águila y el nopal, *Estudios de Cultura Náhuatl* 50: 355–369.

Chávez Balderas, X. 2007. *Rituales funerarios en el Templo Mayor de Tenochtitlan*, INAH, Mexico.

Chávez Balderas, X. 2014. Sacrifice at the Templo Mayor of Tenochtitlan and its Role in Regards to Warfare, in *Embattled Bodies, Embattled Places. War in Precolumbian Mesoamerica and the Andes*, A. Scherer and J. Verano (eds.): 171–197. Dumbarton Oaks, Washington.

Codex Mendoza 1992. A Facsimile Reproduction, F.F. Berdan and P.R. Anawalt (eds.) v. 3:1–152. University of California Press, Berkeley.

Codex Telleriano-Remensis 1995. *Ritual, Divination, and History in a Pictorial Aztec Manuscript*, E. Quiñones-Keber (ed.). University of Texas Press, Austin.

Códice Cozcatzin 1994. Ana Rita Valero and Rafael Tena (eds.). INAH/Universidad de Puebla, Mexico.

Cortés, H. 1994. *Cartas de relación*, Manuel Alcalá (ed.). Porrúa, Mexico.

Delmas, A. 2016. Imperial and Philological Encounters in the Early Modern Era: European Readings of the *Codex Mendoza*, *Philological Encounters* 1: 163–198.

Durán, Fray D. 1984. *Historia de las Indias de Nueva España e islas de tierra firme*, 2 v., Ángel Ma. Garibay K. (ed.). Porrúa, Mexico.

Graulich, M. 2000. Más sobre la Coyolxauhqui y las mujeres desnudas de Tlatelolco, *Estudios de Cultura Náhuatl* 31: 77–94.

Heyden, D. 1988. *México, origen de un símbolo: Mito y simbolismo de la fundación de México-Tenochtitlan.* Departamento del Distrito Federal, Mexico.

King, T. 2015. The Case of the Aztec Goldsmith, *Ancient Mesoamerica* 26(2): 313–327.

León-Portilla, M. 1981. Los testimonios de la historia, in *El Templo Mayor*, J. López Portillo et al.: 33–101. Bancomer, Mexico.

López Austin, A. and L. López Luján 2009. *Monte Sagrado/Templo Mayor: El cerro y la pirámide en la tradición religiosa mesoamericana*. INAH/UNAM, Mexico.

López Austin, A. and L. López Luján 2017. State Ritual and Religion in the Sacred Precinct of Tenochtitlan, *The Oxford Handbook of the Aztecs*, D.L. Nichols and E. Rodríguez-Alegría (eds.): 605–621. Oxford University Press, New York.

López Luján, L. 1982. Neues aus der alten Welt, Mexiko, *Das Altertum* 2(28): 126–127.

López Luján, L. 1989. *La recuperación mexica del pasado teotihuacano*. INAH, Mexico.

López Luján, L. 1998. Recreating the Cosmos: Seventeen Aztec Dedication Caches, in *The Sowing and the Dawning: Termination, Dedication, and Transformation in the Archaeological and Ethnographic Record of Mesoamerica*, S. Boteler Mock (ed.): 176–187. University of New Mexico Press, Albuquerque.

López Luján, L. 1999. Water and Fire: Archaeology in the Capital of the Mexica Empire, in *The Archaeology of Mesoamerica: Mexican and European Perspectives*, W. Bray and L. Manzanilla (eds.): 32–49. British Museum Press, London.

López Luján, L. 2001a. Tenochtitlán: Ceremonial Centers, *Archaeology of Ancient Mexico and Central America: An Encyclopedia*, S.T. Evans and D.L. Webster (eds.): 712–717. Garland Publishing, New York.

López Luján, L. 2001b. Offerings, *The Oxford Encyclopedia of Mesoamerican Cultures*, D. Carrasco (ed.): v. 2, 403–404. Oxford University Press, New York.

López Luján, L. 2005a. *The Offerings of the Templo Mayor of Tenochtitlan*, University of New Mexico Press, Albuquerque.

López Luján, L. 2005b. Sobre la Casa de las Águilas y sus imágenes del Dios de la Muerte, *Mexicon* XXVII(2/3): 28–30.

López Luján, L. 2006. *La Casa de las Águilas: Un ejemplo de la arquitectura religiosa de Tenochtitlan*, v. 2, Harvard University/INAH/Fondo de Cultura Económica, Mexico City.

López Luján, L. 2007. Sobre la Casa de las Águilas y sus imágenes del Dios de la Muerte: Comentario final, *Mexicon* XXIX(1): 32–34.

López Luján, L. 2013a. Viaje arqueológico por las entrañas de nuestra ciudad, *Algarabía* 100: 78–86.

López Luján, L. 2013b. Echoes of a Glorious Past: Mexica Antiquarianism, *World Antiquarianism: Comparative Perspectives*, A. Schnapp, L. von Falkenhausen, P.N. Miller, and T. Murray (eds.): 273–294, The Getty Research Institute, Los Angeles.

López Luján, L. 2015a. The Great Temple Project: In Search of the Sacred Precinct of Mexico-Tenochtitlan, 2015 *Shanghai Archaeology Forum: Awarded Projects*: 296–313. Research Center for World Archaeology, Chinese Academy of Social Sciences, Shanghai.

López Luján, L. 2015b. Under the Sign of the Sun: Eagle Feathers, Skins, and Insignia in the Mexica World, *Images Take Flight: Feather Art in Mexico and Europe 1400–1700*, A. Russo, G. Wolf, and D. Fane (eds.): 132–143. Hirmer, München.

López Luján, L. 2017. El Proyecto Templo Mayor (1991–2017): Recuento de cinco lustros de actividades, *Templo Mayor: Revolución y estabilidad*, E. Matos Moctezuma and P. Ledesma Bouchan (eds.): 35–57. INAH, Mexico.

López Luján, L. 2018. Cuando la gente "se uno-aconejó": la gran sequía de 1454 en la Cuenca de México, *Arqueología Mexicana* 149: 36–45.

López Luján, L. In press. Al pie del Templo Mayor: Excavaciones arqueológicas en torno al monolito de la diosa Tlaltecuhtli y el Cuauhxicalco, *Al pie del Templo Mayor de Tenochtitlan: ensayos en honor a Eduardo Matos Moctezuma,* L. López Luján and X. Chávez Balderas (eds.). INAH, Mexico.

López Luján, L. and A. López Austin 2009. The Mexica in Tula and Tula in Mexico-Tenochtitlan, *The Art of Urbanism: How Mesoamerican Cities Represented Themselves in Architecture and Imagery*, W.L. Fash and L. López Luján (eds.): 384–422. Dumbarton Oaks, Washington.

López Luján, L. and Á. González López 2014. Tierra, agua y fuego al pie del Templo Mayor de Tenochtitlan: un conjunto de bajorrelieves de la época de Motecuhzoma Ilhuicamina, *Estudios de Cultura Náhuatl* 47: 7–51.

López Luján, L. and B. Olmedo Vera 2010. Los monolitos del mercado y el glifo *tianquiztli*, *Arqueología Mexicana* 101: 18–21.

López Luján, L. and J.L. Ruvalcaba Sil 2015. El oro de Tenochtitlan: la colección arqueológica del Proyecto Templo Mayor, *Estudios de Cultura Náhuatl* 49: 7–57.

López Luján, L. and M. Antonio Santos 2012. El *tepetlacalli* de la colección Leof: Imagen cuatripartita del tiempo y el espacio, *Estudios de Cultura Náhuatl* 43: 7–46.

López Luján, L. and R. Barrera Rodríguez 2011. Hallazgo de un edificio circular al pie del Templo Mayor de Tenochtitlan, *Arqueología Mexicana* 112: 17.

López Luján, L. and V. Mercado 1996. Dos esculturas de Mictlantecuhtli encontradas en el Recinto Sagrado de Mexico-Tenochtitlan, *Estudios de Cultura Náhuatl* 26: 41–68.

López Luján, L., G. Chiari, A. López Austin, and F. Carrizosa 2005. Línea y color en Tenochtitlan: Escultura policromada y pintura mural en el recinto sagrado de la capital mexica, *Estudios de Cultura Náhuatl* 36: 15–45.

López Luján, L., J. Torres, and A. Montúfar 2003. Los materiales constructivos del Templo Mayor de Tenochtitlan, *Estudios de Cultura Náhuatl* 34: 137–166.

López Luján, L., X. Chávez Balderas, B. Zúñiga-Arellano, A. Aguirre Molina, and N. Valentín Maldonado 2014. Entering the Underworld: Animal Offerings at the Foot of the Great Temple of Tenochtitlan, *Animals and Inequality in the Ancient World*, B.S. Arbuckle and S. Ann McCarty (eds.):33–61. University Press of Colorado, Boulder.

López Luján, L., X. Chávez, N. Valentín, and A. Montúfar 2010. Huitzilopochtli y el sacrificio de niños en el Templo Mayor de Tenochtitlan, *El sacrificio en la tradición religiosa mesoamericana*, L. López Luján and G. Olivier (eds.):367–394. INAH/UNAM, Mexico.

Matos Moctezuma, E. 1979. *Coyolxauhqui*, Secretaría de Educación Pública, Mexico.

Matos Moctezuma, E. 1981a. *Una visita al Templo Mayor*, INAH, Mexico.

Matos Moctezuma, E. 1981b. Los hallazgos de la arqueología, *El Templo Mayor*, J. López Portillo (*ed.*)*:* 102–283. Bancomer, Mexico.

Matos Moctezuma, E. 1982. *El Templo Mayor: Excavaciones y estudios*: 109–118. INAH, Mexico.

Matos Moctezuma, E. 1984. Los edificios aledaños al Templo Mayor de Tenochtitlan, *Estudios de Cultura Náhuatl* 17: 15–21.

Matos Moctezuma, E. 1986. *Vida y muerte en el Templo Mayor*, Océano, Mexico.

Matos Moctezuma, E. 1987. The Templo Mayor of Tenochtitlan. History and Interpretation, *The Great Temple of Tenochtitlan. Center and Periphery in the Aztec World*, D. Carrasco, E. Matos Moctezuma, and J. Broda (eds.):15–60, University of California Press, Berkeley.

Matos Moctezuma, E. 1988. *The Great Temple of the Aztecs. Treasures of Tenochtitlan*, Thames & Hudson, London.

Matos Moctezuma, E. 2001. The Ballcourt in Tenochtitlan, *The Sport of Life and Death: The Mesoamerican Ballgame*, E. Michael Whittington (ed.): 89–95, Thames & Hudson, New York.

Matos Moctezuma, E. and R. Barrera Rodríguez 2011. El Templo de Ehécatl-Quetzalcóatl del recinto sagrado de México-Tenochtitlan, *Arqueología Mexicana* 108: 72–77.

Miriello, D., D. Barca, G. Crisci, L. Barba Pingarrón, J. Blancas, A. Ortiz, A. Pecci, and L. López Luján 2011. Characterization and Provenance of Lime Plasters from the Templo Mayor of Tenochtitlan (Mexico City), *Archaeometry* 53(6): 1119–1141.

Miriello, D., D. Barca, A. Pecci, R. de Luca, D. Crisci, L. López Luján, and L. Barba 2015. Plasters from different Buildings of the Sacred Precinct of Tenochtitlan (Mexico City): Characterization and Provenance, *Archaeometry* 57(1): 100–127.

Olmedo Vera, B. 2002. *Los templos rojos del recinto sagrado de Tenochtitlan*, INAH, Mexico.

Polaco, Óscar J. (ed.) 1991. *La fauna en el Templo Mayor*, INAH, Mexico.

Román Berrelleza, J.A. 1987. Offering 48 of the Templo Mayor: A Case of Child Sacrifice, *The Aztec Templo Mayor*, E.H. Boone (ed.):131–144. Dumbarton Oaks, Washington.

Sahagún, Fray B. de 1950–1982. *Florentine Codex, General History of the Things of New Spain*, C.E. Dibble and A.J.O. Anderson (eds.), 13 v., The School of American Research/The University of Utah, Santa Fe.

Sahagún, Fray B. de 1993. *Primeros memoriales*, University of Oklahoma Press/Real Academia de la Historia, Norman.

Sahagún, Fray B. de 2000. *Historia general de las cosas de Nueva España*, Alfredo López Austin and Josefina García Quintana (eds.), 3 v., Conaculta, Mexico.

Seler, E. 1992. Ancient Mexican Attire and Insignia of Social and Military Rank, *Collected Works in Mesoamerican Linguistics and Archaeology,* v. 3: 3–61. Labyrinthos, Culver City.

Temple Sánchez G., J. Joseph, and A. Velázquez Castro 2003. El *tapachtli* entre los antiguos nahuas, *Estudios etnobiológicos: pasado y presente de México*, A. Montúfar López (ed.):13–23. INAH, Mexico.

Townsend, R.F. 1979. *State and Cosmos in the Art of Tenochtitlan*, Dumbarton Oaks, Washington.

Trejo Rosas, I., and L. Vázquez Vallin In press. El Huei Tzompantli de Tenochtitlan, *Al pie del Templo Mayor de Tenochtitlan: ensayos en honor a Eduardo Matos Moctezuma,* L. López Luján and X. Chávez Balderas (eds.). INAH, Mexico.

Umberger, E. 1987. Events Commemorated by Date Plaques at the Templo Mayor: Further Thoughts on the Solar Metaphor, *The Aztec Templo Mayor*, E.H. Boone (ed.): 411–449. Dumbarton Oaks, Washington.

Valentín-Maldonado, N., and B. Zúñiga-Arellano 2011. La malacología del Templo Mayor de Tenochtitlan, *Moluscos arqueológicos de América*, A. Velázquez Castro, E.R. Melgar Tísoc, and L. Gómez-Gastélum (eds.):177–197. Universidad de Guadalajara, Mexico.

Zantwijk, R. van 1985. *The Aztec Arrangement: The Social History of Pre-Spanish Mexico*, University of Oklahoma Press, Norman.

Zúñiga-Arellano, B. 2013. *Ofrenda de moluscos a la diosa de la tierra Tlaltecuhtli en el Templo Mayor de Tenochtitlan*, B.A. dissertation, Facultad de Estudios Profesionales Iztacala, UNAM, Mexico.

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