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Teotihuacan in Mexico-Tenochtitlan: Recent Discoveries, New Insights

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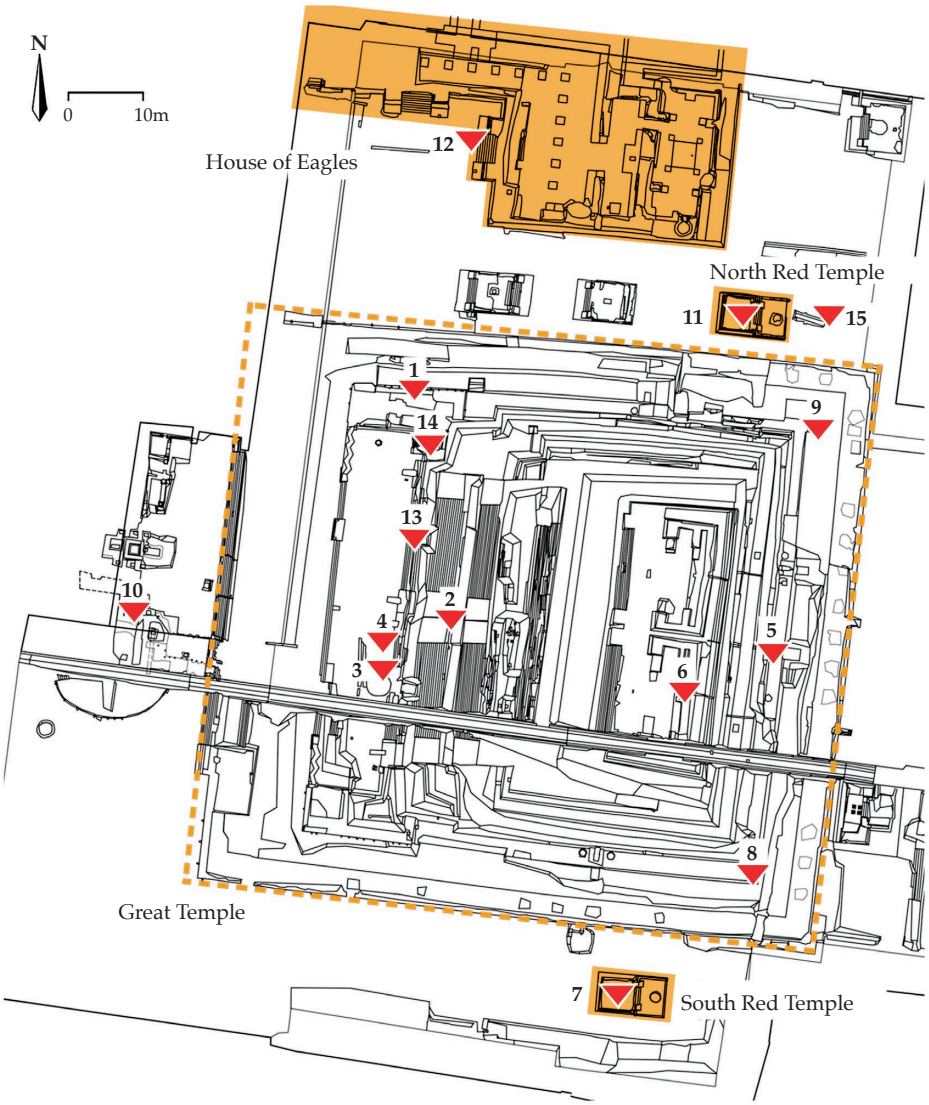
Recovering Time

Historical sources inform us of the deep fascination that Late Postclassic (1325–1521 CE) Mesoamerican societies experienced toward the material vestiges of civilizations that preceded them. Several documents from Central Mexico report that the Mexica often visited the ruins of Teotihuacan, Xochicalco, and Tula—all mighty capitals that had succumbed ages before and were completely abandoned by the fifteenth and sixteenth centuries (Benavente 1971:78; Castañeda 1986:235-336; *Historia de los mexicanos por sus pinturas* 1965:60; Sahagún 1950-1982:Book 10:165, Book 11:221, 2000:1:63). Astonished by their majesty and lacking any information about their builders, the Mexica could only imagine that the pyramids of these sites were the work of gods, giants, or legendary peoples (Alva Ixtlilxóchitl 1975:1:272-273; Boone 2000; Heyden 2000; *Histoire du Mechique* 1965:109; López Luján 1989:43-49, 2013:285-287, 2017:62-63; Sahagún 1950-1982:Book 3:13, Book 10:167-168, 191-192, 2000:2:972-979; Sahagún in León-Portilla 1971:57-61; Torquemada 1968:1:34-38, 278). There, amid the rubble of distant glories, they worshiped ancient divine images and sacrificed war captives in exchange for oracular consultations. And, drawn by curiosity, they penetrated the subsoil to unearth whatever traces of bygone times they could find.

Fortunately, these historical sources have an archaeological correlate that complements our perspective on the Mexica's attraction toward tangible testimonies of the remote past. In Tenochtitlan and Tlatelolco, for example, a diverse array of evidence reflecting this phenomenon has been discovered since the beginning of the twentieth century (Batres 1902:16-26, 47-49; Guilliem 2012:196; Gussinyer 1969:35, 1970a:9-11, 1970b; Matos 1965; Navarrete and Crespo 1971; Nicholson 1971:Figs. 31-32; Olmedo 2002:27-54) and especially since 1978, with the initiation of the Templo Mayor Project's explorations by Mexico's National Institute of Anthropology and History (INAH). These discoveries in the historic center of Mexico City have led to numerous publications that analyze the political, religious, and artistic motivations for recovering the memory of vanished worlds (López Luján 1989:77-89, 2002, 2013, 2017:61-65; López Luján and López Austin 2009:384-395; Umberger 1987:96-99) and, in particular, remnants of the material culture of the Olmec (López Luján 2001; Matos 1979), Teotihuacan (López Luján 1989, 1990; López Luján, Argüelles, and Sugiyama 2012; López Luján, Neff, and Sugiyama 2000; López Luján and Taladoire 2009; Matos and López Luján 1993; Olmedo 2002; Umberger 1987:82-90), Xochicalca (Umberger 1989:90-95; Urcid and López Luján in press), and Toltec (de la Fuente 1990; López Luján 2006; López Luján and López Austin 2009; López Luján et al. 2014; Umberger 1987:69-82).

Along these same lines, one of the Templo Mayor Project's greatest achievements has been the archaeological identification of four types of behavior towards antiquities (López Luján 1989:17-19, 55-65, 2001; López Luján and Sugiyama 2015:33). On the one hand, we know that



1 Starfish
2 Mask fragment
3 Offering 10
4 Offering 14
5 Offering 20
6 Offering 44
7 Offering 78
8 Offering 82
9 Offering 95
10 Offering 144
11 Offering M
12 Offering V
13 Chamber 2
14 Chamber 3
15 Huehueteotl

Figure 1. Map of the Templo Mayor archaeological zone, identifying the buildings, sculptures, and ritual deposits mentioned in the article. Drawing by Michelle De Anda, courtesy of Proyecto Templo Mayor (PTM).

the Mexica and their contemporaries undertook such activities in the ruins of Classic, Epiclassic, and Early Postclassic period cities. Some of these activities were of an *additive* nature, that is, they added modern features to the original landscape, including the construction of accesses and shrines next to the old monuments, the incorporation of new reliefs and standing sculptures, and the interment of offerings and dead individuals. Other activities were of a *subtractive* nature, that is, they subtracted features from the original landscape by extracting building materials, removing ancient sculptures, and exhuming artifacts and ecofacts that normally formed part of the contents of ritual deposits that had been buried in the subsoil for centuries.

Another group of activities, however, was carried out in Late Postclassic cities such as Tenochtitlan and Tlatelolco during their time of splendor. Some of these activities involved the *reutilization* of antiquities recovered from archaeological sites and then reincorporated into new social networks surely as objects of prestige, symbols of power, amulets, relics, cult images, or gifts, although we only know of some that were reburied inside temples and under plazas as offerings to the gods or to deceased high-ranking dignitaries. Other activities focused on the *imitation* of monuments from the past which served as models for the production of small luxury or ritual items, medium-size sculptures, mural paintings, and entire buildings. As we shall see, the imitations produced by the Mexica recreated some archaized stylistic elements, but also incorporated other elements from their own culture, and thus acted more like decontextualized evocations than exact replicas of an integral set.

Fortunately, our knowledge about these four types of activities and behaviors has greatly increased in recent years. Therefore, this article will present our latest findings and insights concerning this exciting phenomenon of recovering Teotihuacan's past (Figure 1).

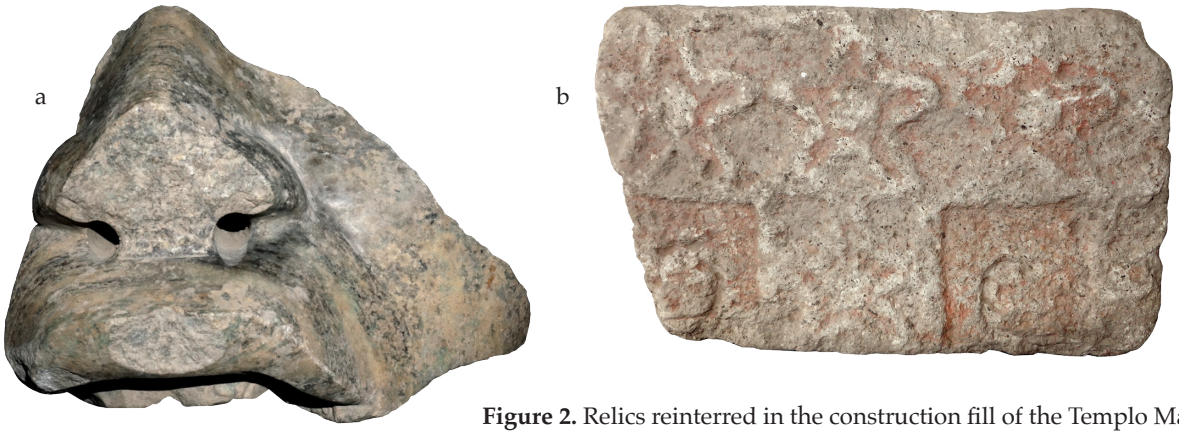


Figure 2. Relics reinterred in the construction fill of the Templo Mayor: (a) fragment of an anthropomorphic mask; (b) bas-relief section with starfish. Photographs by Mirsa Islas, courtesy of PTM.

Reutilization without Modification

One of our main tasks has been to inspect the storage facilities of the Templo Mayor Museum in search of Teotihuacan antiquities that were found during the first season of excavations but were not known to us.[1] This has led us to the realization that the relics buried by the Mexica in their principal pyramid did not always end up in ritual deposits, as some were cast into the earth and rubble of its construction fill. For example, from this latter context come two fragments—an incomplete mask and part of a bas-relief—that are revealing (Figure 2). The first (11.7 x 16.5 x 6.5 cm) was sculpted in an olive green listwanite (Ricardo Sánchez, personal communication 2018). It retains part of the nose, upper lip, and teeth of a human face, and was found in Phase IVa of the Templo Mayor at the very center of the principal façade.[2] The second (25.5 x 41.65 x 24 cm) was carved in a gray andesite and has remnants of blue, green, red, and white pigment. It depicts a series of four starfish and was unearthed precisely at the northwest corner of the Phase V pyramid.[3]

The size and appearance of the mask and the bas-relief suggest that they did not get to Tenochtitlan's Templo Mayor merely by chance. Moreover, that they are incomplete leads us to suspect that they were not buried for their aesthetic qualities, but rather for their alleged magical powers. In this respect, we must remember that antiquities were thought to be sacred objects made by gods, giants, or legendary beings (López Luján 1989:73). Even more suggestive is the fact that one of these sculptures depicts starfish, that is, organisms symbolically related to fertility and quite common in both Teotihuacan iconography (see Star A in Langley 1986:322) and the Tenochtitlan offerings (López Luján et al. 2018). Their presence associated with the side of the building dedicated to Tlaloc makes complete sense, especially considering that this pyramid was thought to be an artificial mountain filled with water (López Austin and López Luján 2004, 2009:39-63, 100-101).

We have also recently studied new types of relics that shed light on the practices used by the Mexica to recover antiquities. Consider, for example, two small greenstone sculptures that were recovered inside ritual deposits (Figures 3 and 4). The first (2.7 x 2.8 x 1.5 cm) is the head of an originally complete figurine whose body we have not found. It depicts a male personage wearing the well-known "inverted T" headdress. The face is characterized by its realism and delicate features, including narrow elliptical eyes, a thin nose with wide nostrils, full lips, and a slightly opened mouth. It lacks ears and in their place are cylindrical holes where tiny round greenstone ear ornaments were inserted. This piece comes from Offering 144, which was buried in front of the Huitzilopochtli side of the dual pyramid in a context contemporary with Phase VI (López Luján et al. 2012).[4] The second sculpture (5.15 x 5.7 x 0.6 cm) is a nose ornament carved in listwanite (Ricardo Sánchez, personal communication 2018) in the form of a serpent rattle. It was recovered from Chamber 2 on the Tlaloc side of the temple in a context corresponding to Phase IVb (López Luján 2005:243-246).[5]

The figurine and nose ornament are highly illuminating to our study, for nearly identical pieces in terms of raw material, size, shape, and manufacturing technique have been found inside Teotihuacan's most important monuments. In the case of the figurine, it is a perfect example of what has been variously identified as "Type C" by Daniel Rubín de la Borbolla (1947:Fig.

[1] The first field season of the Templo Mayor Project (1978–1982) was directed by Eduardo Matos Moctezuma.

[2] Excavation Section 1, coordinates O'-29, c. 1440–1469.

[3] Excavation Section 1, coordinates T'-44, c. 1481–1486.

[4] Artifact no. 161, c. 1486–1502.

[5] Element no. 311, inventory no. 10-251651, c. 1469–1481.

Figure 3. Anthropomorphic figurines with the "inverted T" headdress: (a) Templo Mayor; (b) Feathered Serpent Pyramid; (c) Pyramid of the Moon. Photographs by Mirsa Islas, courtesy of PTM.

Figure 4. Nose ornaments in the form of a serpent rattle: (a) Templo Mayor; (b) Feathered Serpent Pyramid; (c) Pyramid of the Moon. Photographs by Mirsa Islas, courtesy of PTM.

15), "Type 1c" by Oralia Cabrera (1995:265-269, 278-283), and "Type A1" by Saburo Sugiyama (2005:151). Archaeologists have discovered at least six of them in front of the stairway of the Feathered Serpent Pyramid (Cowgill and Cabrera 1991; Pérez 1939; Rubín de la Borbolla 1947), thirty-five in Burial 14 of the same building (Sugiyama 2005:148-152), and two—although depicted in a seated position—in Burial 3 of the Pyramid of the Moon (Sugiyama 2017a; Sugiyama and López Luján 2007:143). As for the nose ornament, it corresponds precisely with the variety designated "Type 1a" by Cabrera (1995:226-228, 233-242) and "Type A" by Sugiyama (2005:147-148), of which archaeologists have found one in Burial 21 of La Ventilla B (Rattray 1992:16, Pl. 4, 21), twenty-two in Burials 1, 13, 14, and 203 of the Feathered Serpent Pyramid (Cabrera 1995:226-228, 237; Robb 2017b; Sugiyama 2005:143-148),[6] one in Burial 2 of the Pyramid of the Moon (Sugiyama 2005:143-148, 2017b; Sugiyama and López Luján 2007:130),[7] and one at

[6] These nose ornaments measure between 3.6 and 5.0 cm high, 4.2 and 6.3 cm wide, and 0.5 and 0.8 cm thick. Several of them are made of listwanite (Ricardo Sánchez, personal communication 2018). Cabrera (1996:226-228) provides a detailed description of their exact morphology and production technique. Of the eighteen found in Burial 14, fourteen were located next to the faces of an equal number of young warriors who were interred there.

[7] This nose ornament measures 5.9 x 7.2 x 0.4 cm and was carved in listwanite (Ricardo Sánchez, personal communication 2018). It was worn by individual 3B, a young man of foreign origin.

the bottom of the tunnel excavated under the Ciudadela (Julie Gazzola, personal communication 2018). Two more have been reported in a La Ventilla neighborhood lapidary and shell workshop (Cabrera 1995:237; Gazzola 2007:40-41, Fig. 3, 2017; Gómez and Gazzola 2011:116), but they are smaller and courser and thus may have been made for consumption by a lower social class (Julie Gazzola, personal communication 2018).[8]

All of this has led us to two fundamental conclusions. First, the Mexica reused objects whose original contexts go back to Teotihuacan's Miccaotli and Early Tlamimilolpa phases, that is to say, between the years 100 and 250 CE (Cowgill 2015:11). This means that when they were reburied in Tenochtitlan, they were already at least twelve centuries old. And second, the Mexica had either direct or indirect access to ritual deposits of the highest order inside Teotihuacan's primary religious structures. Significantly, clear evidence, including some from the Classic period, has been recorded of intentional removal from ritual contexts in the Feathered Serpent Pyramid, the Pyramid of the Sun, and the Pyramid of the Moon (Heyden 1975:131-134; Marquina 1922:134-135; Sugiyama 1998).

Reutilization with Modification

Let us now turn to another aspect related to the reutilization of Teotihuacan antiquities. A relatively short time ago, Emiliano Melgar (2017a:260, 2017b:114-115) conducted a scanning electron microscopy (SEM) analysis of the manufacturing marks on two complete masks from Offerings 20 and 82 of Tenochtitlan's Templo Mayor and compared them with those on two incomplete masks from Chambers 2 and 3 of the same building (Figures 5 and 6).[9] According to his observations, the complete masks, unlike the latter, had lustrous surfaces obtained with a basalt grinding stone, medium-size holes made with a flint burin, and small holes along the edge of the forehead.[10] Melgar thinks that these three characteristics belong to an "estilo tecnológico tenochca de la fase imperial [Tenochca technological style of the imperial phase]"

Figure 5. Complete masks from the Templo Mayor: (a) Offering 20; (b) Offering 82. Photographs by Mirsa Islas, courtesy of PTM.

(Melgar 2017b:114), "leaving open the possibility" (Melgar 2017a:260) that the two complete masks are not recycled relics, but rather Mexica "replicas" of ancient Teotihuacan models (Melgar and Ciriaco 2014:117).[11] We, on the other hand, disagree with this

[8] One of these two smaller ornaments measures 4.0 x 3.3 x 0.6 cm.

[9] The brief lines devoted to this topic in these two publications from 2017 are based on a paper first presented at the 54th International Congress of Americanists in Vienna (Melgar 2012), and subsequently at the Cultural Heritage and Archaeological Issues in Materials Science II symposium in Cancun (Melgar and Ciriaco 2014).

[10] In contrast, the incomplete masks have lustrous surfaces achieved with an andesite grinding stone; they have holes made with flint abrasives, and they lack small holes drilled in the forehead (Melgar and Ciriaco 2014). This same study says that the complete and incomplete masks have three technical aspects in common: they were polished with flint nodules, buffed with leather, and cut with flint flakes. We should also add that members of the same team (Melgar and Ciriaco 2014:115) have discovered that some of the lapidary objects found in Teotihuacan archaeological contexts were drilled with a reed shaft and flint powder, while others were drilled with flint burins, which contradicts any generalization.

[11] "Why they [the Mexica] were interested in *replicate* [sic] these objects and not only looted [sic] them? . . . They *replicated* these pieces because they want [sic] to control all of the sacred powers, energies and symbolic characteristics of them, and the only way to obtain a total control of that is the recreation of the objects, not only looting or exchanged [sic] them from afar" (Melgar and Ciriaco 2014:117).

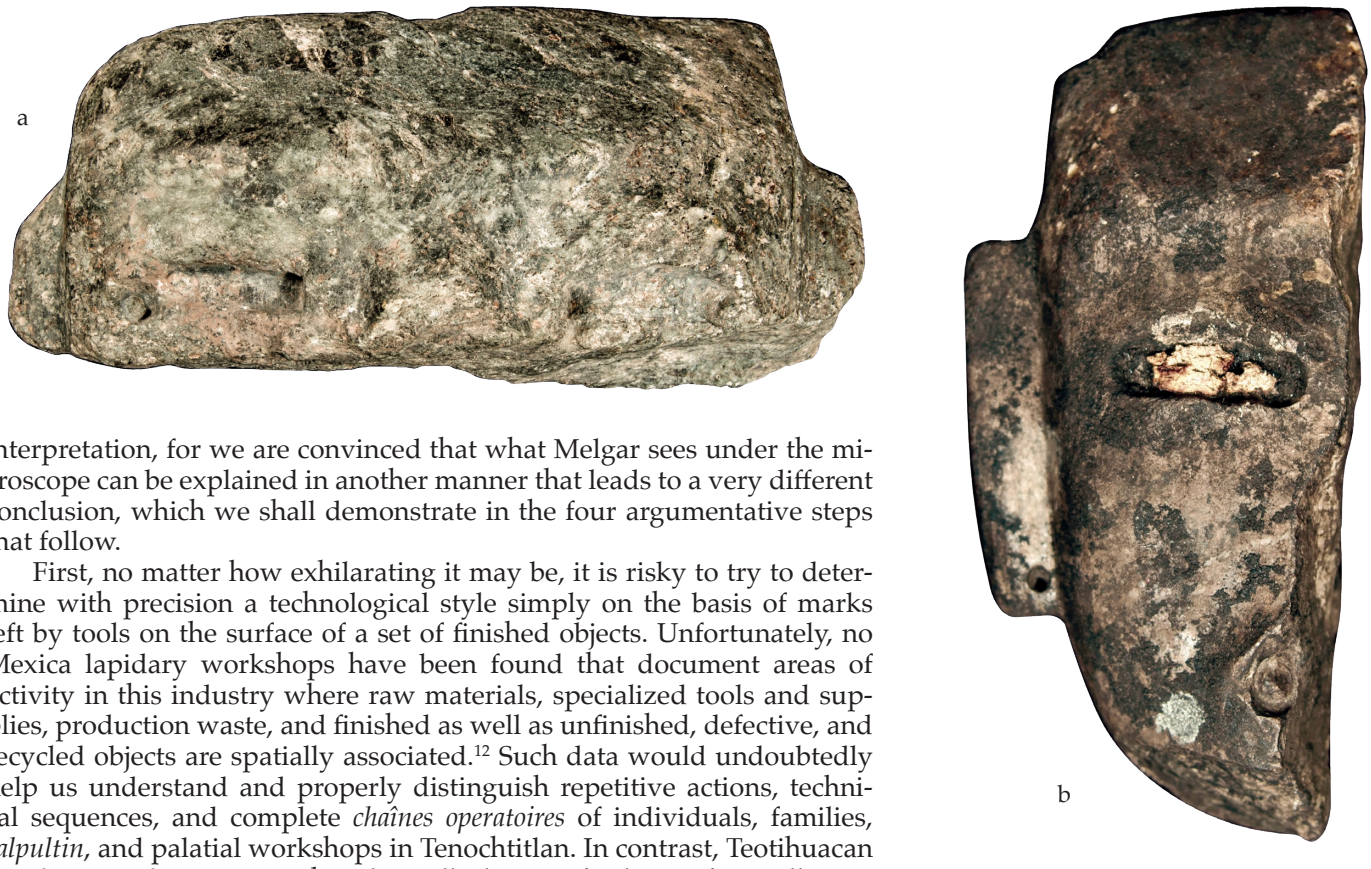


Figure 6. Incomplete masks from the Templo Mayor: (a) Chamber 2; (b) Chamber 3. Photographs by Mirsa Islas, courtesy of PTM.

interpretation, for we are convinced that what Melgar sees under the microscope can be explained in another manner that leads to a very different conclusion, which we shall demonstrate in the four argumentative steps that follow.

First, no matter how exhilarating it may be, it is risky to try to determine with precision a technological style simply on the basis of marks left by tools on the surface of a set of finished objects. Unfortunately, no Mexica lapidary workshops have been found that document areas of activity in this industry where raw materials, specialized tools and supplies, production waste, and finished as well as unfinished, defective, and recycled objects are spatially associated.[12] Such data would undoubtedly help us understand and properly distinguish repetitive actions, technical sequences, and complete *chaînes operatoires* of individuals, families, *calpultin*, and palatial workshops in Tenochtitlan. In contrast, Teotihuacan lapidary production is archaeologically known far better from all sorts of excavations and studies (for example, Cabrera 1995; Gazzola 2007, 2009, 2017; Gómez and Gazzola 2011; Rose and Walsh 2016; Spence 1984; Turner 1987, 1988, 1992; Widmer 1991). These works have revealed the concurrence of various technological styles over the course of more than a half-millennium of this civilization's existence, and thus preclude the formulation of simplistic technological generalizations.[13]

Moreover, as Tenochtitlan was a densely populated, ethnically plural, multicultural metropolis with a dynamic history of economic, political, and social development, it is logical to imagine a complex scenario in which several technological styles/traditions interacted and evolved over time (concerning the shell industry, see Velázquez and Zúñiga-Arellano 2019). And to complicate matters further, remember that, in addition to the island's *calpulli* and palace artisans, there were other groups of specialists in the surrounding cities that dedicated part of their production to Tenochca elites. A good example of these are the so-called "silversmiths of Motecuhzoma," who were Mexica but resided in Azcapotzalco (López Luján and Ruvalcaba 2015; López Luján et al. 2015). Analogous or reciprocal phenomena may also have occurred among lapidaries in capitals such as Xochimilco, Chalco, or Texcoco (Alva Ixtlilxóchitl 1975:1:315, 430, 2:32-33; Pasztory 1983:252; Quiñones Keber 1998; Sahagún 1950-1982:9:79-80).

Second, it is well known that when fabricating their imitations, the Mexica and their neighbors did not use the same raw materials employed by the Olmecs, Teotihuacanos, Xochicalca, or Toltecs in the production of their ancient models. This custom—which may stem from reasons of affordability or cultural preference—manifests itself in various ways. For example, in the case of painting, the Neo-Teotihuacan murals of Tenochtitlan's Red Temples are distinguished by their classic Mexica palette composed of five distinct pigments, namely, hematite red, goethite ocher, palygorskite and

[12] An exception for Late Postclassic Central Mexico is the lapidary workshop excavated in Otumba, Estado de México (Otis Charlton 1993; Otis Charlton and Pastrana 2017).

[13] This is confirmed by the mask recently discovered in Tlajinga, Teotihuacan (Carballo and Barba 2014), which lacks any traces of a hollow drill being used in the eye sockets but has a small hole in the left ear made with a flint burin. These features differ from those observed in the workshops of La Ventilla, but are similar to those on the Templo Mayor mask from Offering 82 (David Carballo, personal communication 2018). A short time ago, an anthropomorphic head with the same manufacturing technique was found in the tunnel under the Ciudadela (Julie Gazzola, personal communication 2018).

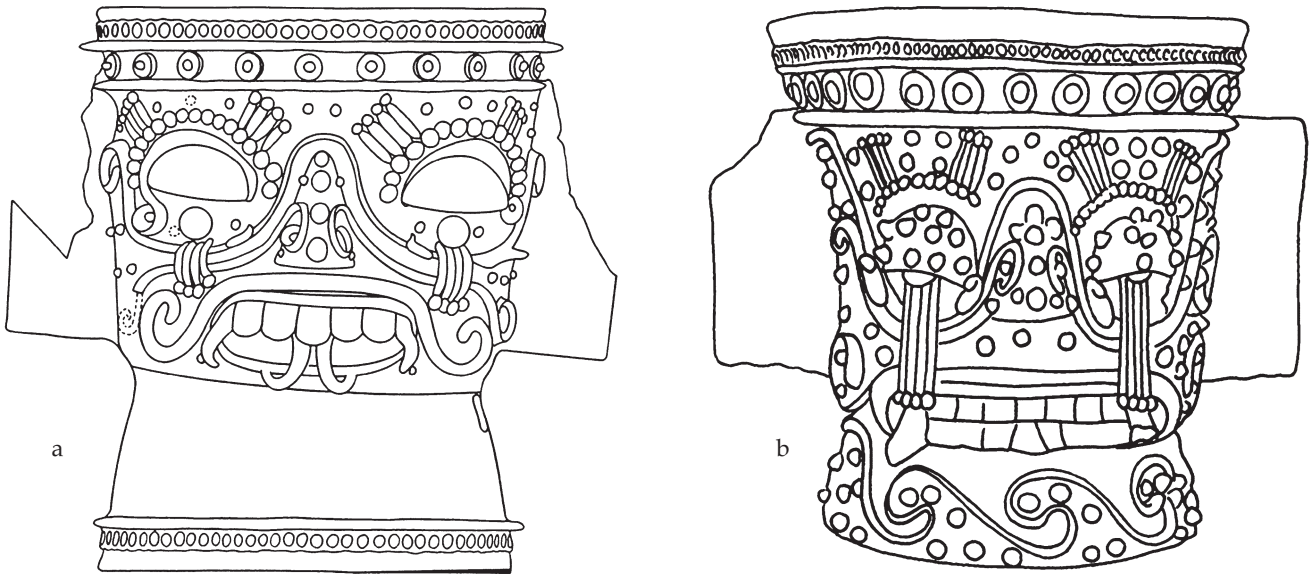


Figure 7. Tlaloc braziers: (a) Neo-Toltec imitation from the House of Eagles; (b) Toltec Abra Café Burdo model. Drawings by Fernando Carrizosa, courtesy of PTM.

sepiolite blue, calcite white, and carbon black (Chiari 2000; López Luján et al. 2005). This limited chromatic range hardly corresponds to the rich Teotihuacan palette which consists of three reds (an orange-hued tone from iron oxide, a burgundy shade combining hematite with pyrolusite, and a brilliant variety from hematite and powdered mica), three greens (a bright tone from malachite, an olive shade from malachite and lepidocrocite, and a dark variety combining malachite, azurite, hematite, and pyrolusite), and three blues (a greenish tone from malachite and chalcanthite, an ultramarine variety combining pyrolusite with calcium carbonate and sulfate, and a lighter shade combining ultramarine blue and white pigment), along with iron oxide oranges and yellows, and pink, white, and black (Magaloni 1995, 2017).

We observe something similar in monumental sculpture, for example, in the Neo-Toltec benches in Tenochtitlan's House of Eagles. Here, the Mexica used earth and *tezontle* rubble for fill which they covered with thick slabs of *tezontle* and pyroxene basalt carved on five of their faces (López Luján 2006:1:105-106; Torres 1998b), while the original models at Tula only had earthen fill covered with thin limestone slabs carved on six sides (Acosta 1956-1957:81-82; Jiménez 1998:23).

As for ceramics, three similar cases come to mind. In the House of Eagles, we exhumed several Neo-Toltec imitations of Abra Café Burdo–type braziers of the Tlaloc variety (Cobean 1990:421-426, Pl. 198; Hinojosa 1982; López Luján 2006:1:96-99). Neutron activation analysis (Neff 1997) clearly determined that the clay was obtained near Tenochtitlan, while petrographic analysis (Torres 1998a) confirmed that a temper derived from basalt and andesite abundant around Lake Texcoco but not in Tula was used (Figure 7). Sometime earlier, during the excavation of Offerings 10 and 14 at the Templo Mayor, a beautiful pair of pedestaled vessels appeared that were inspired by the relatively courser Silho Fine Orange type from the Gulf coast (López Luján 2005:172-178; Matos 1982:32-33). Similarly, while exploring Offering V in the House of Eagles, an effigy pot was found that vaguely resembles Tohil Plumbate from the Pacific coast near the Mexico-Guatemala border (López Luján 2006:1:137-139) (Figures 8 and 9). The two pedestaled vessels, which obviously are copies, were made of clay from a source located west of the Basin of Mexico according to neutron activation analysis (Chávez 2007:289-291, 362; Neff et al. 1999),[14] with a temper of volcanic (andesitic-basaltic) sand and diatoms identified by petrography (Mercado 1982:359), while the effigy pot was modeled with clay obtained from the so-called "Tenochtitlan-Azcapotzalco-Tenayuca" area, again, revealed by neutron activation analysis (Neff 1996, 1998).[15]

[14] This clay is chemically related to one used in Matlatzinca polychrome ceramics.

[15] Conversely, those that clearly appeared to be relics reinterred in Tenochtitlan, after undergoing neutron activation analysis, yielded the expected provenances: the plumbate urn in the form of a dog from Offering 44 is Early Postclassic Tohil Plumbate ware from the Pacific coast near the Mexico-Guatemala border (Chávez 2007:236-239, 361; Neff et al. 1999), while the vase from Offering V depicting the butterfly-bird god is Thin Orange ware from the Classic period and comes from southern Puebla (López Luján 2006:1:132-137; López Luján et al. 2000; Neff 1996, 1998).

Figure 8. Vessels with pedestal: (a) imitations from Central Mexico; (b) Silho Fine Orange models. Photographs by Mirsa Islas, courtesy of PTM.

But let us return to the case of the complete and incomplete masks studied by Melgar, which were found in four ritual deposits that were spatially and temporally close, since they were associated with the Templo Mayor platforms corresponding to Phases IVa and IVb (López Luján 1993, 2005:237-248, 328-330; Matos 1982:34-42, 60). Many years ago, these objects were sampled and analyzed petrographically in INAH's Subdirección de Laboratorios y Apoyo Académico by the geological engineer Ricardo Sánchez Hernández (1985; Olmedo and González 1986:168). According to his identification, the complete mask (21 x 20.5 x 14 cm)[16] from Offering 82 and the incomplete mask (9.4 x 21.3 x 7.3 cm)[17] from Chamber 2 were carved in the same serpentinite,[18] while the complete mask (21 x 24.5 x 9.5 cm)[19] from Offering 20 and the incomplete mask (16.9 x 8 x 5.9 cm)[20] from Chamber 3 are both

[16] Inventory no. 10-220032.

[17] Element no. 77, inventory no. 10-251609. Only the upper half of the face is conserved.

[18] Serpentinites are green and occasionally brown or reddish metamorphic rocks. They have a compact structure and smooth surfaces, and are formed by the alteration of ultramafic bodies. The closest sources of serpentinite are located in the Tehuitzingo-Tecomatlan area in Puebla (González-Mancera et al. 2009), and in the foothills of the Sierra Madre del Sur in Guerrero and Oaxaca. According to Robles and his associates (2008:31-33), there are important outcroppings in the technostratigraphic terrain of the Mixtec (Tlachinola, Tecolutla, Tecomatlan, and Colonia Allende in Puebla), Cuicatec (Concepción Pápalo, Vista Hermosa, Llanón, and Niltepec in Oaxaca), and Maya (San José Ixtepec in Chiapas, and El Manzanal, Puente Uyus, Cerro Gordo, Granados, and Desviación Río Dulce in Guatemala) areas.

[19] Element no. 13, inventory no. 10-168801.

[20] Element P, inventory no. 10-252142. Only the right half of the face is conserved.

Figure 9. Effigy pots: (a) Mexica imitation; (b) Tohil Plumbate model. Photographs by Mirsa Islas, courtesy of PTM.

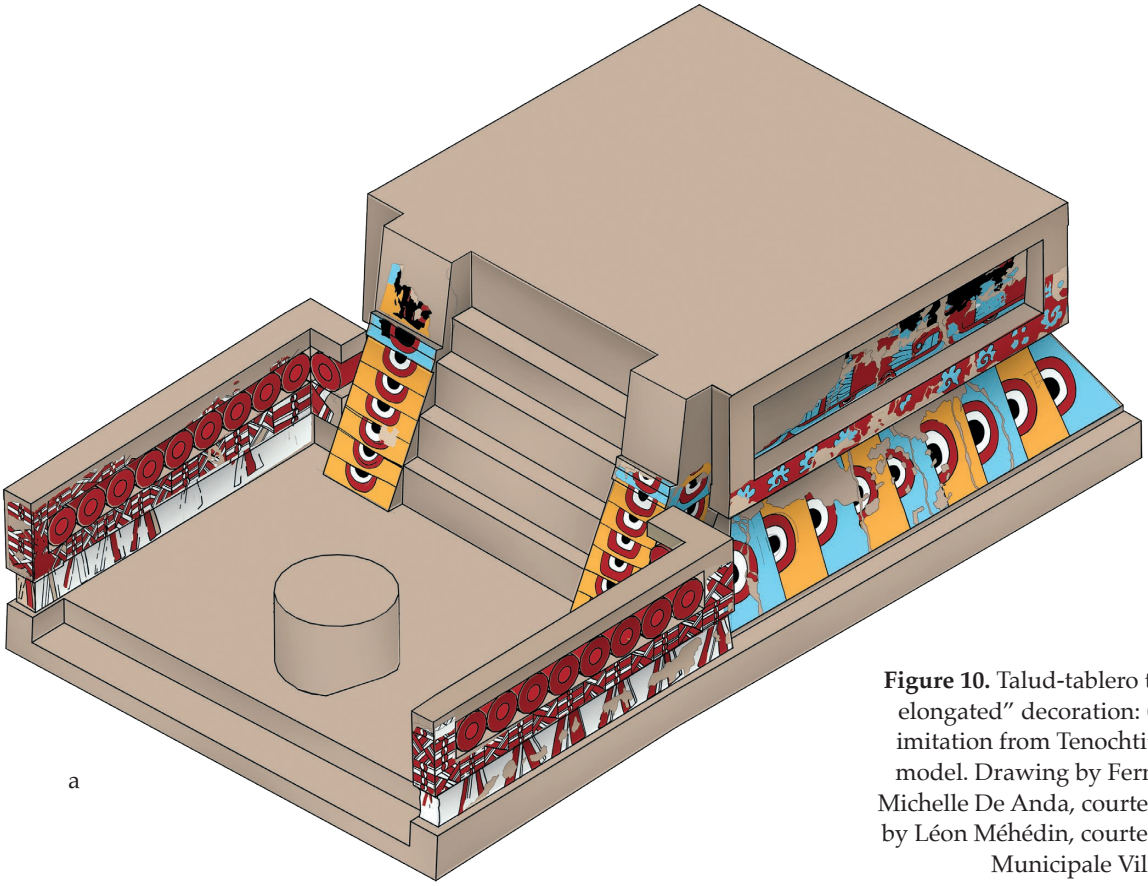
listwanite.[21] It is commonly known by specialists that these two types of stone were not among the raw materials preferred by Mexica lapidaries.[22] But both of them were employed in large quantities at Teotihuacan, where serpentinite and listwanite, along with limestone and travertine, were the most common types of rock used in mask production (Cabrera 1995:165-223; Rose and Walsh 2016; Sánchez 1994).[23]

Third, the Mexica and their neighbors never made "replicas or duplications" of antiquities, as Beatriz de la Fuente (1990:40) insightfully noted in reference to the Neo-Toltec benches at Tenochtitlan. This idea of meticulously copying the canonical styles of vanished civilizations was alien to Mesoamericans in general. In fact, this phenomenon emerged quite late in the history of world art during the Italian Renaissance, and often involved satisfying the demand of enthusiasts with facsimiles or deceiving collectors with near-perfect forgeries (Lenain 2011:13, 46-73; Rizzo 2016). In the Mexica capital, however, we see the proliferation of all sorts of revivals, that is to say resurgences in architecture, mural painting, sculpture, and the minor arts, where the past is freely recreated in the present (see Argan 1977; Assunto 1977; Patetta 1977). But this was not achieved with whole "replicas," but rather through specific formal, stylistic, or iconographic elements that were imperfectly imitated in isolation without comprehending or importing the logic of their original contexts. In other words, the internal coherence of the copied cultural manifestations was not totally respected in terms of their dimensions, proportions, colors, forms, functions, or meanings. Thus, approximate imitations of only certain features that were incorporated into stylistically hybrid works

[21] In the 1980s, these and other petrographic samples from the Templo Mayor were identified as skarns (Olmedo and González 1986; Sánchez 1985). Subsequently in the 90s, the same rock was recognized in numerous artifacts from Teotihuacan's Feathered Serpent Pyramid, all of them with a magnesite-quartz-muscovite mineralogical composition (Cabrera 1995:169-170; Sánchez 1994). After decades of experience and based on new geological studies (Akbulut et al. 2006; Halls and Zhao 1995; Hansen et al. 2005), specialists have now concluded that this rock is actually listwanite (Rose and Walsh 2016; Ricardo Sánchez Hernández, personal communication 2018). It is composed of minerals from the carbonate group (such as dolomite, calcite, and magnesite) and quartz, and often contains fuchsite which gives it its green color. Listwanite is formed when ultramafic rock is completely carbonated. Its sources are not well identified, but they are normally associated with serpentinite. According to Melgar (2017a:260), the mask from Offering 20 was carved in a "white-veined greenstone."

[22] For their large and medium-size sculptures, the Mexica employed volcanic rock from sources in the Basin of Mexico, such as basalt, andesite, and scoria (López Luján and Fauvet-Berthelot 2009:88-89; Pasztory 1983:209-249). For lapidary they used jadeite, diorite, porphyry, rock crystal, serpentine, marble, travertine, amber, turquoise, opal, ruby, and amethyst, as well as obsidian, pyrite, jet, and shell (López Luján and Fauvet-Berthelot 2009:89-94; Otis Charlton and Pastrana 2017; Pasztory 1983:250-268).

[23] Of the 121 Teotihuacan masks analyzed by Rose and Walsh (2016:5), thirty-seven were made of travertine, thirty of limestone, twenty-seven of serpentine, twenty-two of listwanite, two of white marble, one of metadiorite, one of pumice, and one of schist.



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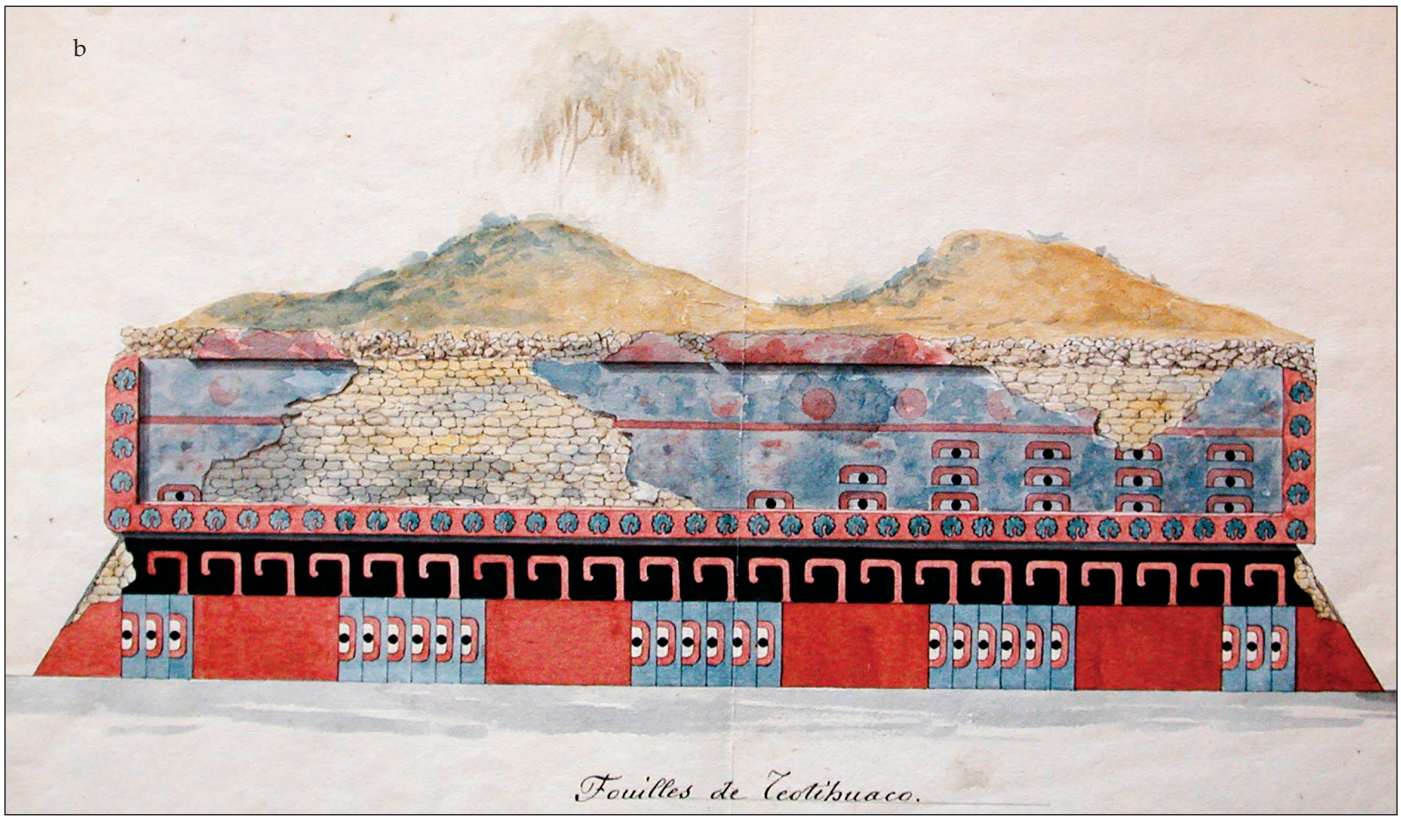

Figure 10. Talud-tablero temples with the "eye elongated" decoration: (a) Neo-Teotihuacan imitation from Tenochtitlan; (b) Teotihuacan model. Drawing by Fernando Carrizosa and Michelle De Anda, courtesy of PTM; watercolor by Léon Méhédin, courtesy of the Bibliothèque Municipale Villon, Rouen.

acted more like evocations—or imperfect echoes of glorious epochs—than organic elements of a general arrangement. Their intention was to revive the past by reinterpreting and resignifying it to respond to the needs of their present.

In terms of archaized architecture and painting, the Red Temples of Tenochtitlan and Tlatelolco unequivocally show how Mexica artists commemorated Teotihuacan art without replicating or duplicating it (Figure 10). These buildings, constructed with local raw materials and techniques (Gussinyer 1970b:34; López Luján et al. 2003; Sánchez 2002; cf. Barba and Córdova 2010; Sotomayor 1968), harmoniously combine elements of these two styles separated by more than nine centuries, including an atrium with a stairway flanked by typical Mexica *alfardas*, in front of a shrine with talud and tablero panels which obviously are reminiscent of Teotihuacan (Gerber and Taladoire 1990; Gussinyer 1970b; López Luján 1989:37-42; Matos 1984:19; Olmedo 2002:27-54). In the specific case of the Northern Red Temple murals, the repetition of Mexica insignia associated with Xochipilli on the atrium complements the series of Teotihuacan symbols known as "eye elongated" (Langley 1986:249) on the *alfardas* and taludes. But unlike the original Classic-period variety where a complete circle is drawn inside an elongated letter D, the Mexica version has three concentric half-circles.[24] In other words, these examples do not respect the forms, proportions, or colors of the ancient canon.[25]

We also see many creative liberties in the sculpture attached to architecture, although in this case they occur in the size, style, technique, and iconographic content of the archaized copies. For example, in the House of Eagles benches, the Mexica artists used large slabs joined without mortar (41–45 cm high in the first row and 16–18 cm in the second), while the Toltec models had smaller slabs fixed with mortar (35–37 cm in the first row and 15–16 cm in the second). Another perceptible difference concerns the angle of the first row, where the House of Eagles slabs are perfectly vertical, while those in the Burned Palace and Building 4 at Tula are slanted. On the other hand, although the thematic content of the Neo-Toltec and Toltec sculptural complexes is the same (groups of armed dignitaries depicted in ritual processions that culminate in a blood offering under a motif of mythical serpents), the copy greatly exceeds the original in terms of realism, detail, fluidity of line, and formal variation in human anatomy, clothing, and armament (Acosta 1956a:77-78, 1957:132-133; de la Fuente 1990:40; Jiménez 1998:378-380; López Luján 2006:1:102-116, 2:Figs. 87-88, 140-143, 146-149, 155-207). Moreover, Mexica contributions were added to the House of Eagles copy, including the *zacatapayolli* which is very similar to those depicted in the *Codex Borbonicus*.

In this same vein, we must mention the illustrative standing sculpture found a dozen meters east of the Northern Red Temple (López Austin 1987; López Luján 1989:32-33; Umberger 1987:88-89).[26] This is the famous Mexica reinterpretation of the Teotihuacan image of Huehueteotl, the old fire god (Figure 11). According to Nicholson and Quiñones Keber (1983:34-35), the piece "successfully combines the monumentality of Teotihuacan with the somewhat more 'realistic' approach of the Aztec sculptor. It is unquestionably the most impressive archaized Aztec sculpture so far discovered." In fact, just like its Classic-period canonical variety, this sculpture depicts a male individual, seated on a lotus flower, with his hands—one closed in a fist baring his knuckles, the other open upward exposing his palm—resting on his knees, his torso bent forward, his face flanked by round earpieces, and on his head a cylinder with alternating vertical bars and rhombuses inscribed with a circle. But unlike the canonical varieties which range from 24.5 to 66 cm high (Allain 2000:31-33, 40-43), the Mexica version, measuring 77 cm, lacks geriatric facial features and possesses numerous aquatic and telluric symbols (rectangular plaques over the eyes and mouth, fangs, *chalchihuites*, grotesques on the joints, aquatic currents on the cylinder) along with the Postclassic calendrical date, 11 Reed.[27] And if this were not enough, with respect to its execution, this sculpture falls well within the Mexica imperial style with its solid mass composition without openings, its simple, compact, and rounded forms, its smooth and convex surfaces (as if pressed by a pneumatic force from within), and a naturalism that has undergone a masterful simplification process in which the size and details of the head, hands, and feet are intentionally amplified. We can say something very similar about the Mexica Tlaloc *chacmool* and its ancient model, the Toltec butterfly warrior *chacmool* (Acosta 1956b; López Austin and López Luján 2001; López Luján et al. 2014).

Let us conclude our list of cases by returning to the aforementioned small and medium-size ceramics. First,

[24] The inner half-circle is black, the middle one is white, and the outer one is red. They were painted on alternating ochre and blue backgrounds, which may relate to the dry and wet seasons, or the primordial ochre and blue springs upon which Tenochtitlan was founded (Heyden 2000:176-181; Olmedo 2002:88-92).

[25] It is interesting to note that the archaized polychrome friezes at the House of Eagles do respect the size and proportions of the Toltec models (superimposed horizontal bands, each around 10 cm wide), but not the chromatic sequence, which is ochre-red-blue-black in the Tenochtitlan building (López Luján 2006:1:120) and ochre-blue-red-black in the Tula constructions (Acosta 1956a:44, Fig. 3, 1956-1957:82-83).

[26] Excavation section 3, coordinates H-52, buried by the fill of Phase VII of the Templo Mayor, c. 1502–1520.

[27] Remember that the year bearers used by the Mexica and their contemporaries were the signs House, Rabbit, Reed, and Flint, but in Teotihuacan were Wind, Deer, Grass, and Movement.

Figure 11. Sculptures of the fire god: (a) Mexica reinterpretation from Tenochtitlan; (b) Teotihuacan model. Photographs by Mirsa Islas, courtesy of PTM.

we should say that the Mexica imitations of the Café Burdo Tlaloc braziers are much smaller (65 cm high and 55 cm in diameter) than the Toltec originals (100 cm high and 70 cm in diameter), and they differ in their formal representation of the tears, mustache, teeth, and bifurcated tongue, as well as in their pastillage pedestal decoration (Cobean 1990:421-426, Pl. 198; López Luján 2006:1:97-99, 2:Figs. 131-132, 135). Second, we must point out that well before the neutron activation analysis conducted in 1999, one of the two imitation Silho Fine Orange pedestaled vessels was described as "an interesting example of conscious archaism" (Nicholson with Quiñones Keber 1983:94-97; see also Matos 1983:18-20; Umberger 1987:79-80). This is due to the fact that the two Late Postclassic pedestaled vessels clearly differ from their Early Postclassic models in terms of the former's larger dimensions, narrower silhouette, greater saturation of orange tones, and more polished and lustrous surfaces; but most of all, the scenes depicted on the imitations are more technically refined and aesthetically realistic, and differ in iconographic content (for example, Becker-Donner 1965:Pl. 33; Smith 1958:153-157, 1971:1:182-184; Tovalín 1998:107, 119). And third, the imitation Tohil Plumbate effigy pot has a finish that differs from its models. Unlike the partially vitrified surfaces of Soconusco ceramics, the House of Eagles pot was burnished with a tool whose hardness left vertical marks, while its walls, inside and out, are completely black, departing considerably from the typical grayish and orange tones of Tohil pieces. Moreover, the old man depicted on it differs in the form and proportion of his facial features, as well as in the kind of ornaments that he wears (López Luján 2006:1:137-139, 2:Fig. 330a-b; Shepard 1948:29, 86-97, Fig. 18g).

For all of these reasons, it is easy to conclude that the four Templo Mayor masks are not free recreations or decontextualized imitations of ancient Classic-period models. Rather, these objects made with raw materials favored by Teotihuacan lapidaries perfectly adhere to the aesthetic canons of that civilization in terms of size, proportions, and style, where faces were sculpted in a highly standardized manner (Pasztory 1997:179, 2005:147), which we can demonstrate from a variety of perspectives.

Unquestionably, the anatomical elements of the Templo Mayor masks are identical to those of Teotihuacan masks according to the definitions formulated by prestigious researchers such as Manuel Gamio (1922) and Beatriz de la Fuente (1985:28-30). They present a symmetrical distribution of facial features articulated through a succession of planes and horizontal lines, framed by a contour curved in a U shape. Anatomical elements are well defined: Two slanted, rectangular plaques simulate ears; the forehead is a flat, smooth, narrow band; eyebrows are marked by a fine, slightly curved ridge, while the eyes are elliptical and fully framed by a carved line representing the eyelids; the nose has a wide base with openings for nostrils and a narrow ridge that indicates the space between the eyebrows; the mouth has well-delineated, half-opened lips, and the cheeks and chin are represented by shallow planes. Although we will not dwell on this any further,

the same occurs when we compare the Templo Mayor masks with the new formal definitions of Teotihuacan lapidary art, including those of Julie Gazzola (2009:65).

Mathematical analyses also point in this same direction, as demonstrated in the work of Bertina Olmedo and Carlos Javier González (1986:137-148), who more than three decades ago rigorously studied 162 lapidary masks exhumed by the Templo Mayor Project in Tenochtitlan's sacred precinct. They constructed a matrix of twenty-three technological, morphological, and decorative attributes for each object with no less than 464 variables or states.[28] After applying their up-to-date method of numerical taxonomy and sectioning the resulting tree diagrams,[29] they obtained thirty groups, of which one of the most compact coincidentally contained the complete masks of Offerings 20 and 82 and the incomplete masks of Chambers 2 and 3.[30]

A subsequent classificatory study worthy of consideration was conducted by Timothy Rose and Jane Walsh (2016), who methodically analyzed 121 Teotihuacan masks, some recovered in controlled excavations and others in public and private collections throughout the world. Their careful analysis differentiated four large groups, based on raw material, dimensions, proportions, technology, and style. A comparison with the two complete Templo Mayor masks yielded significant correlations. The mask from Offering 82 fit perfectly among the Teotihuacan serpentinite masks of Group 1, as it is made of this material, its size ranges between 9 and 23.5 cm in height and between 8.5 and 22 cm in width, it has a vertical (taller-than-wide) proportion, its back side has a U-shaped edge, and its ears take the form of narrow rectangles. The mask from Offering 20, in turn, easily fell within the parameters of the Teotihuacan listwanite masks of Group 4, as it is made of this stone, its size ranges between 13.8 and 28 cm in height and between 15 and 28 cm in width; it has a horizontal (wider-than-tall) proportion, its back has a U-shaped edge, and its ears are large and geometrical.[31]

In order to complement these classifications, we decided to undertake a morphometric study following the method proposed by Josefina Bautista and Mirsha Quinto-Sánchez (2010). These researchers compared the famous mask from Malinaltepec with seven Teotihuacan style masks by calculating their facial proportions based on proper ratios or indices from physical anthropology. Analogously, we first constructed a corpus of fourteen complete masks that we were sure were from Teotihuacan (Figures 12 and 13) listed below, including eight excavated by archaeologists at the site (Matthew Robb and Jane Walsh, personal communications 2018),[32] five collected by amateurs before 1830 (that is, before the rise of the organized production of high-quality forgeries), and the Malinaltepec mask itself, whose authenticity has been recently corroborated through an extensive multidisciplinary study (Martínez del Campo 2010):

Masks with Documented Archaeological Contexts

1. Pyramid of the Sun, Sector N4 W1, PAT 60–64, Zone 5-A, Plaza 1, 1963, Piece 38 (Zona de Monumentos Arqueológicos de Teotihuacan, inv. 10-80880).
2. Pyramid of the Sun, perimetral platform (Museo Nacional de Antropología, inv. 10-529512).
3. Sector N2 E1, Río San Juan Salvage 93, Ribera Norte (Zona de Monumentos Arqueológicos de Teotihuacan, inv. 10-411210).
4. NW Río San Juan Complex (Zona de Monumentos Arqueológicos de Teotihuacan, inv. 10-336691).
5. Ciudadela, Complex 1D, Group E, Habitation 5 (Zona de Monumentos Arqueológicos de Teotihuacan, inv. 10-262340).
6. La Ventilla, Neighborhood Temple, Central Altar (Zona de Monumentos Arqueológicos de Teotihuacan, inv. 10-411167).
7. La Ventilla, Frente 3, Artisan Complex, Cuarto 18.1 (Zona de Monumentos Arqueológicos de Teotihuacan, inv. 10-411187).
8. Tlajinga, Complex 18:S3E1 (Zona de Monumentos Arqueológicos de Teotihuacan, inv. 10-654331).

[28] These attributes include volume; contour; shape of the front and back surface; profile angle; headdress type; forehead width; configuration of eyebrows, eyes, nose, nostrils, cheekbones, mouth, lips, chin, and ears; ear ornaments; number and position of holes; incised and painted decorations, and appliqué types.

[29] Recently Diego Jiménez and Salvador Ruiz (2017) used part of the matrix generated by Olmedo and González to evaluate the benefits of spectral clustering.

[30] Olmedo and González (1986:168) defined Group 6 as having "an average volume, a regular forehead, and a *U* shape, ending with liberally open upper lateral edges; the anterior surface is convex in profile and straight in frontal view, while the back is straight in profile and straight in frontal view with lateral edges, which is exclusive to this group. The ears are rectangular and marked on both surfaces; the eyebrows have separate curved edges that start from the nose. The nose is executed in a realistic manner, and the presence of nostrils and cheekbones is significant in this group; inlays are also important in four of the group's objects given their relative absence in the sample. As for the eyes, there is no regularity in shape, although in various cases a slot was made to receive inlays. This group is morphologically related to Teotihuacan style, although one example has been identified as being of Mexica manufacture [a travertine mask from Offering 82]."

[31] We should also add that the Offering 20 mask has a mouth with the same "Olmecoid lips" found on four anthropomorphic sculptures discovered by archaeologists at the Ciudadela in Teotihuacan (Robb 2017a:153, Cat. 72-75).

[32] Interestingly, the masks recovered in archaeological contexts do not come from residential complexes, but rather from buildings and plazas adjacent to the Avenue of the Dead, thus Pasztory (1997:46-47, 146-147) suggested that they were objects of high status.

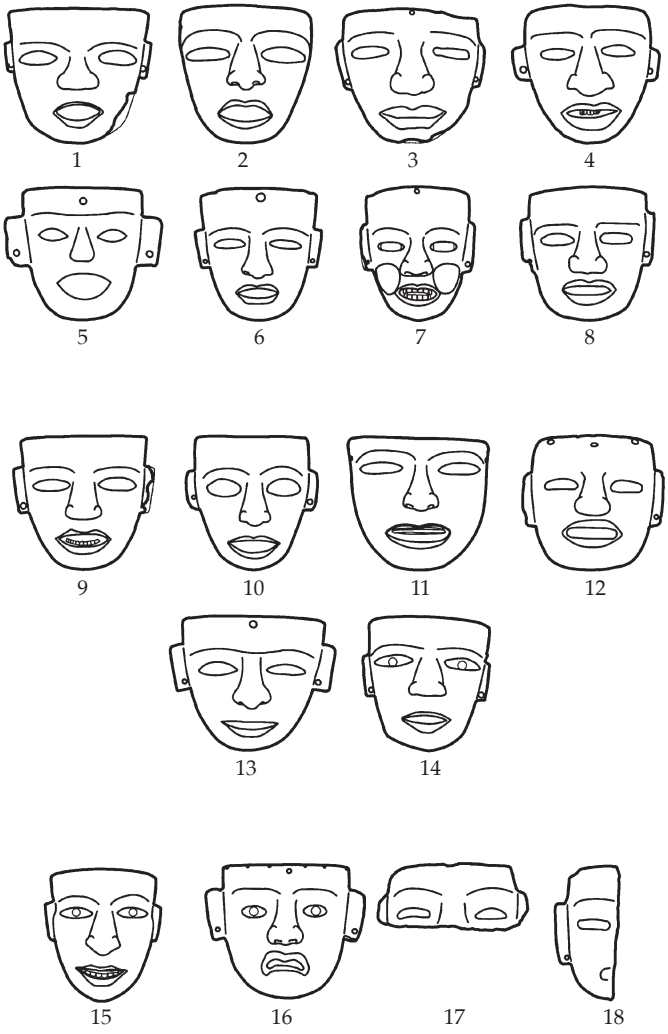

Figure 12. Corpus of Teotihuacan masks of undoubted origin. Drawing by Michelle De Anda, courtesy of PTM.

Figure 13. Corpus of Teotihuacan masks of undoubted origin. Reprographics by Mirsa Islas, courtesy of PTM.

Masks in Old Collections or with Corroborated Authenticity

9. Leopoldo de' Medici Collection (Gallerie degli Uffizi, Tesoro dei Granduchi, inv. delle Gemme 284).
10. Ciriaco González de Carvajal Collection (British Museum, inv. Am1849,0629.5).
11. Joel Poinsett Collection (University of Pennsylvania Museum of Archaeology and Anthropology, inv. L-83-154).
12. Conde de Peñasco Collection (National Museum of the American Indian, inv. 2/6607).
13. MNA Collection (Museo Nacional de Antropología, inv. 10-9628).
14. Malinaltepec mask (Museo Nacional de Antropología, inv. 10-9630).

Then we added the four Templo Mayor masks to the corpus:

Templo Mayor Masks

15. Offering 82, complete mask (Museo del Templo Mayor, inv. 10-220032).
16. Offering 20, complete mask (Museo del Templo Mayor, inv. 10-168801).
17. Chamber 2, upper half of face (Museo del Templo Mayor, inv. 10-251609).
18. Chamber 3, right half of face (Museo del Templo Mayor, inv. 10-252142).

Our next step consisted of measuring all of the masks and calculating their facial ratios or indices, including: 1) total width to total height, 2) upper third height to total height, 3) middle third height to total height, 4) lower third height to total height, 5) orbital height to total height, 6) orbital width to total height, 7) external interorbital width to total width, 8) internal interorbital

Region	Measurement	Code
Face	Height	A
	Width	B
	Upper third	C
	Middle third	D
	Lower third	E
Eyes	Orbital height	F
	Orbital width	G
	Internal interorbital width	H
	External interorbital width	I
Nose	Nasion-subnasal height	J
	Nasal width	K
Mouth	Mouth height	L
	Mouth width	M

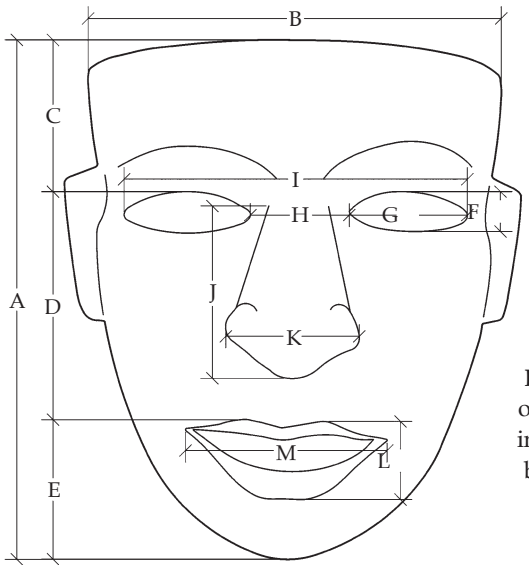

Figure 14. Facial ratio or indices of the masks in the corpus. Drawing by Michelle De Anda, courtesy of PTM.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Width-to-height ratio	1.04	0.94	1.01	0.91	0.90	0.87	0.77	0.86	0.94	0.86	1.07	0.88	1.06	0.89	0.80	0.94
Upper third	32	31	29	29	32	40	41	35	32	32	18	33	35	30	29	31
Middle third	38	39	44	41	34	34	31	35	38	43	47	30	44	29	44	35
Lower third	30	31	27	29	35	26	28	30	30	25	35	37	21	41	27	35
Orbital height	10	10	8	8	9	7	7	9	9	13	9	8	9	8	8	9
Orbital width	27	33	27	27	24	27	25	28	30	29	30	27	27	31	31	19
External interorbital width	83	92	87	76	74	75	76	79	82	82	85	82	74	88	83	67
Internal interorbital width	30	25	34	22	25	21	26	23	23	24	26	29	21	27	24	30
Nasion-subnasal height	24	33	41	36	25	30	28	31	28	32	34	32	38	28	36	34
Nasal width	30	29	33	37	20	27	32	33	28	27	25	26	26	31	32	28
Mouth height	19	21	17	19	20	14	15	19	18	17	19	20	11	15	15	18
Mouth width	35	42	50	48	45	37	44	46	44	45	46	50	40	41	49	38
	Masks with Documented Archaeological Contexts								Masks in Old Collections or with Corroborated Authenticity						Complete Templo Mayor Masks	

Table 1. Ratio and percentages (see Figure 14).

width to total width, 9) nasion-subnasal height to total height, 10) nasal width to total width, 11) mouth height to total height, and 12) mouth width to total width (Figure 14). The resulting ratio and percentages are arranged in Table 1.

Finally, we statistically processed the numerical values in the matrix under the guidance of Diego Jiménez-Badillo and Edgar F. Román-Rangel, who suggested using the principal components analysis (PCA) method, which has the benefit of reducing the dimensionality of a data set while retaining the characteristics contributing most to their variance. After applying this method we obtained a graph (Figure 15) where the distribution of both the excavated and collected Teotihuacan masks formed a fairly compact cluster of points, undoubtedly reflecting the great homogeneity of the group. The points corresponding to the complete Templo Mayor masks convincingly appear at the center of the cluster, thus revealing that

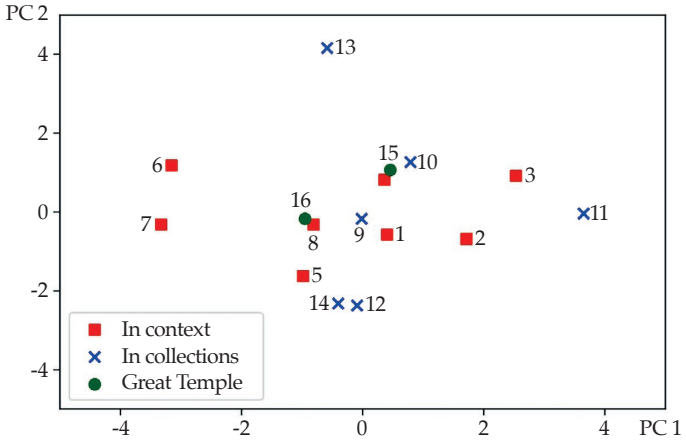

Figure 15. Principal components analysis (PCA) conducted on the masks in the corpus. Drawing by Edgar F. Román-Rangel and Michelle De Anda, courtesy of PTM.

Figure 16. Lapidary objects modified in Europe: (a) Mexica mask at the Museo Archeologico, Florence; (b) Olmec mask in the Schatzkammer der Residenz, Munich. Reprografics by Mirsa Islas.

both adhere closely and unequivocally to the canon of facial proportions in vogue at Teotihuacan during the Classic period.

Fourth, the predilection of the Mexica and their neighbors for deliberately modifying many of the relics they later reburied in their temples and plazas is well documented (Aguirre 2009:140-152; López Luján 1989:74; López Luján et al. 2000:228; Olmedo and González 1986:121-148; Umberger 1987:84-85; Walsh 2003). Antiquities with patina, blemishes, root marks, and other damage caused by many centuries of interment (for example, Berrin and Pasztory 1993:Cat. 28-29, 31-36; Robb 2017:Cat. 34-35, 133, 151, 158) were restored to their original splendor simply by cleaning, polishing, and burnishing, as evidenced by the anomalous marks on their surfaces. Moreover, they often were adapted to their new functions with cuts or holes; for example, two of the legs were removed from the Teotihuacan Thin Orange tripod vase found in Offering V, perhaps because the third was found broken (López Luján 2006:1:133). We have also seen ornamental elements incorporated to accentuate the original sense of the relic or to give it a new meaning, including instances where they were covered with thin coatings of paint, tar, or melted rubber; drawn or engraved with calendrical glyphs or divine symbols; augmented with inlays or other appliqués to indicate anatomical features such as the iris, sclera, teeth, or various body decorations; or adorned with hair, cords, or feathers inserted into cavities or small holes. In the case of some of the masks, the Mexica placed bells, earrings, necklaces, and insignias made of copper, shell, or greenstone around them in the offering, which enhanced their religious meaning (for example, Olmo 1999).

The modification of Mesoamerican antiquities, of course, was not limited to pre-Hispanic times; it continued well into the Colonial period and beyond. For example, the famous green travertine Teotihuacan mask (15.8 x 17.3 x 5.0 cm) that belonged to Leopoldo de' Medici (1617–1675), now conserved in the Gallerie degli Uffizi in Florence (inv. delle Gemme 284), was given shell and obsidian eyes by the Mexica and then had a vertical hole drilled into it in Italy to add a metal clasp for hanging (Domenici 2017; Heikamp 1972:22, 25, 43, Figs. 54-55). Similarly, the black limestone Teotihuacan mask (20 cm) that belonged to Diego Rivera (1886–1957) and André Breton (1896–1966), currently exhibited in the Musée du Louvre in Abu Dhabi (inv. 70.1999.12.1), was thoroughly polished and burnished in the twentieth century, which explains its exceptional shine (Walsh and Rose 2014:80; Jane Walsh, personal communication 2018).

Two other examples worth mentioning are the tiny Mexica greenstone mask (5.5 x 1.48 cm) that belonged to the Medicis, now conserved at the Museo Archeologico in Florence (inv. 15892), and the Olmec jadeite mask (60 cm) owned by Albrecht V of Bavaria (1528–1579), currently held at the Schatzkammer der Residenz in Munich (inv. 1258) (Figure 16). The first had rubies added for

eyes along with an oval gilded copper frame (Heikamp 1972:26, 32-33, Pl. 61), while the second was incorporated into a complex gilded silver and bronze niche, with gold, enamel, greenstone, onyx, diamonds, and rubies (Keen 1971:249-250). Obviously, no one would dare to claim that these pieces are Italian, French, or German simply because they had been modified and recycled in Europe.

Based on our preceding four demonstrative lines of argument, it seems indisputable that the Templo Mayor masks are not Mexica "replicas or duplications" of Teotihuacan models, but rather true Classic-period relics that were buried in Tenochtitlan many centuries after their creation. Obviously, the incomplete masks from Chambers 2 and 3 would not have been substantially modified in the Late Postclassic,[33] but the complete masks from Offerings 20 and 82 clearly were abraded, polished, and burnished so that their surfaces recovered their original magnificence. Additionally, holes were drilled along the edge of the forehead and in the ears (perhaps to insert hair, feathers, cords, or some kind of perishable ornament). They also added appliqués in the eyes and mouth, including green obsidian from the Sierra de las Navajas for the pupils of both masks, and *Turbinella angulata* shell for the sclera and Pacific *Spondylus princeps* shell for the teeth on the Offering 82 mask (Adrián Velázquez Castro, personal communication 2012).[34] In the case of the latter, the intervention concluded after it was adorned with two round greenstone earpieces and buried next to a travertine mask and a human skull with three vertebrae belonging to an adult male between 20 and 30 years of age, which had been exposed to fire (Chávez 2017:334-337, 475).[35] In sum, what Melgar saw under the microscope is in fact a palimpsest of marks left by tools in different periods.

Decontextualized Imitation

In this last section we will examine more closely the issue of imitation, an aesthetic phenomenon made possible by the direct contact of Late Postclassic artists with the original sources of Classic, Epiclassic, and Early Postclassic architecture, painting, and sculpture. The Mexica practiced this phenomenon on such a large scale that we can only conclude that they exhumed entire buildings and graphically recorded their architectural profiles and decorative elements. Here we shall focus briefly on the aforementioned Red Temples, which are two magnificent examples of revival or resurgence.[36] We already have mentioned that the architectural and iconographic programs of these shrines which flank the Templo Mayor harmoniously combined Neo-Teotihuacan and Mexica styles.[37] Thanks to Bertina Olmedo's (2002) extensive research, we know that they were dedicated to the cult of Xochipilli-Macuilxochitl, a solar deity, patron of nobles and lords, and numen of flowers, the arts, music, dance, and the ballgame (Aguilera 1998a, 1998b; Graulich 1999:392-401; Fernández 1959; Krickeberg 1960; Mateos Higuera 1946; Pomedio 2002).[38]

This association is evident in the east-west orientation of both shrines with their principal façade facing east. Even more convincing are the mural paintings that adorn these two structures' façades, whose leitmotiv is one of Xochipilli's most definitive symbols, that is, red and white intertwined knotted bands that form four superimposed bows with hanging pairs of strips (López Luján 1989:42; Olmedo 2002:73, 85). To this we must add Offering M of the Northern Red Temple and Offering 78 of the Southern Red Temple (López Luján 2005:302, 318-319; Olmedo 2002:97-245) that contained effigies of Xochipilli and his feathered headdress, earrings, scepters, and fans; votive representations of musical instruments (*huehuetl*, *teponaztli*, *ayotl*, *tlapitzalli*, *chichtli*, *tetl*, *ayacachtli*, *chicahuaztli*, *omichicahuaztli*, *tetzilacatl*, *atecocolli*, and *cuechtli*); and images of the heads and claws of golden eagles (*Aquila chrysaetos*), along with their skeletal remains. Equally revealing is the sculpture of Macuilcuetzpallin—an aspect of Xochipilli-Macuilxochitl—which was found in the construction fill a few meters north of the Northern Red Temple. Thus, Olmedo (2002:261-262) concluded that these buildings alluded to the rebirth of the sun, that is to say, at the end of one era and the beginning of another established by Xochipilli, the god of music. She lucidly explained that "the Teotihuacan style of the temples was intentionally chosen, since . . . they evoked the sacred place where the Fifth Sun was created, the place of the Mexica's

[33] The Chamber 3 mask, however, has traces of a thin coating that seems to be tar.

[34] According to a SEM study conducted by Adrián Velázquez Castro, Norma Valentín Maldonado, and Belem Zúñiga-Arellano, the marks on these shell appliqués are consistent with tools used by the Mexica in the Late Postclassic.

[35] In 1992, we undertook an excavation on the northeast corner of the Templo Mayor, in search of a ritual deposit that symmetrically corresponded to Offering 82. There we found Offering 95, which contained another skull with vertebrae, also of an adult male, 20–30 years old, likewise exposed to fire, in addition to a greenstone mask in the so-called Guerrero-Teotihuacanoid style (Chávez 2017:338-340, 476; López Luján 1992:24).

[36] Two other archaized buildings in Tenochtitlan's sacred precinct are the Neo-Toltec House of Eagles and Calmecac (López Luján 2006; López Luján and López Austin 2009:404-411).

[37] The position of the Red Temples inside Tenochtitlan's sacred precinct seems to be conveyed in folio 269r of the *Primeros memoriales* by means of images of Macuilcuetzpalin and Macuilcalli, both invocations of Xochipilli-Macuilxochitl (Klein 1987:307; López Luján 2006:1:273; Olmedo 2002:269-274; Sahagún 1993).

[38] Xochipilli-Macuilxochitl occupies the east quadrant of the cosmogram in the frontispiece of the *Codex Fejérváry-Mayer*, thus one of his invocations was Piltzintecuhtli, the newborn sun.

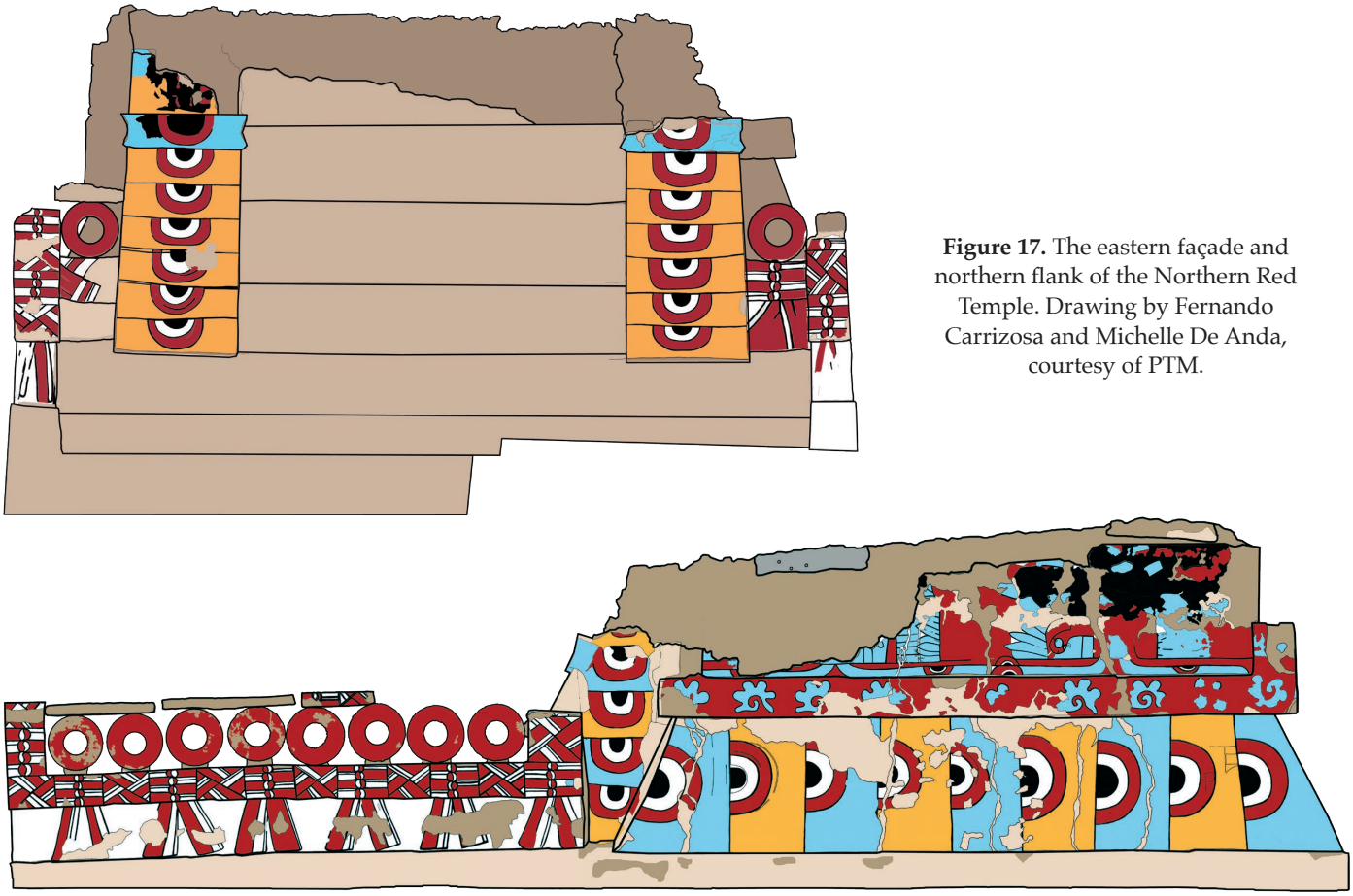

Figure 17. The eastern façade and northern flank of the Northern Red Temple. Drawing by Fernando Carrizosa and Michelle De Anda, courtesy of PTM.

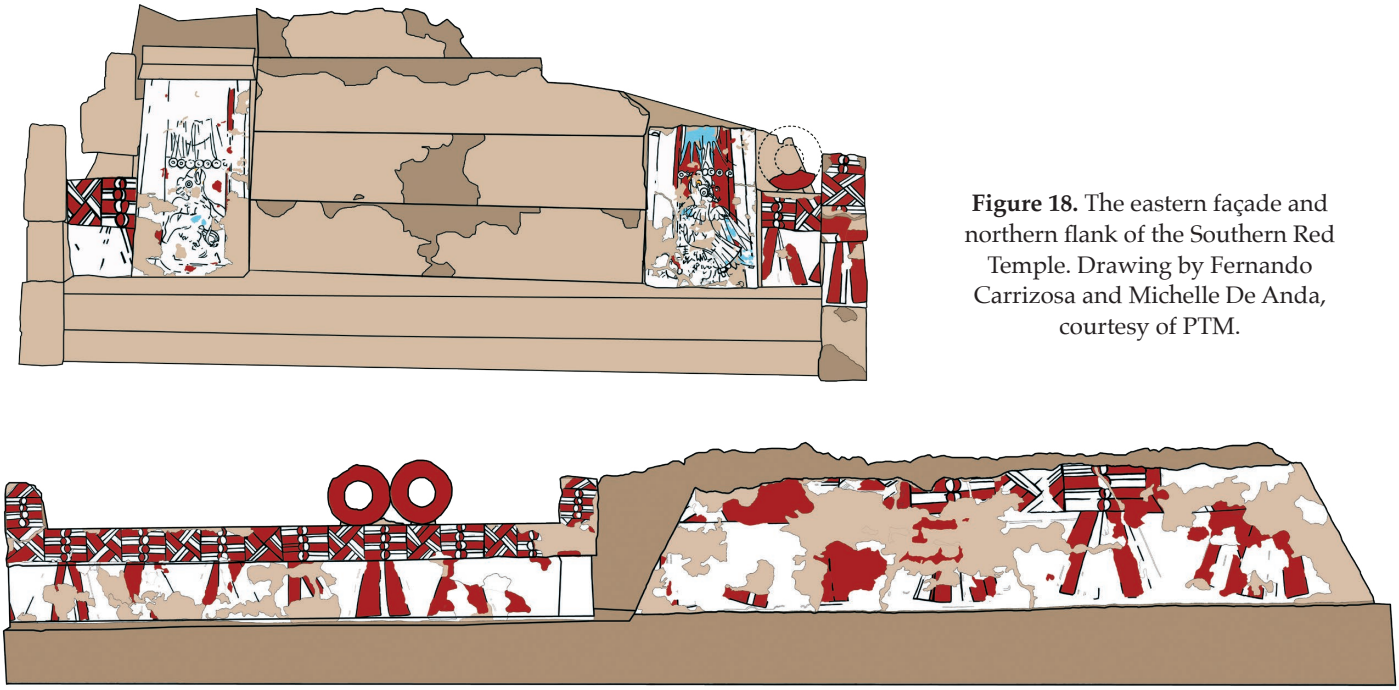

Figure 18. The eastern façade and northern flank of the Southern Red Temple. Drawing by Fernando Carrizosa and Michelle De Anda, courtesy of PTM.

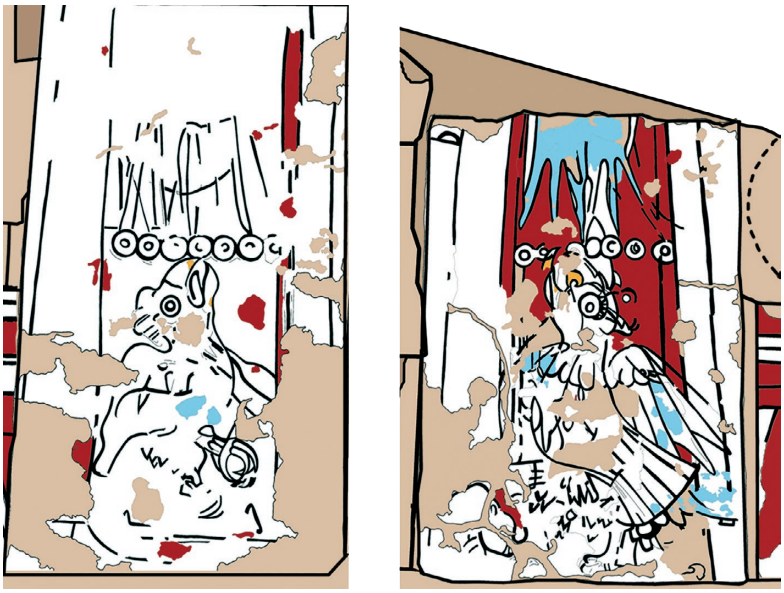

Figure 19. The *alfardas* of the Southern Red Temple, with their painted birds. Drawing by Fernando Carrizosa and Michelle De Anda, courtesy of PTM.

archetypal sunrise."[39]

The two shrines, however, were not symbolically identical, as we can see when we compare the iconography of their painted motifs (López Luján 1989:40-42; Olmedo 2002:74-75, 88-96, 264-268). For example, in the Northern Red Temple, the Mexica red and white bands only appear on the atrium (Figure 17). We already have mentioned that its *alfardas* and taluds are covered with "elongated eyes," that is, Teotihuacan symbols which have been interpreted as divine aquatic streams (Langley 1986:249; Pasztory 1997:211-213). Likewise, the frames of the tableros have crosscut shells that also refer to the world of fertility. This reveals the shrine's solar-aquatic association, reiterated by its proximity to the Tlaloc side of the Templo Mayor, which is linked to the rainy season and the feminine, telluric, aquatic, nocturnal, and agricultural realm of the cosmos.[40] In contrast, the red and white bands appear throughout the Southern Red Temple, on the atrium, the taluds, and framing the tableros (Figure 18). This indicates the double solar value of the shrine, reinforced by its proximity to the Huitzilopochtli side of the Templo Mayor which is associated with the dry season and the masculine, celestial, igneous, diurnal, and warrior realm of the cosmos.

One of the most outstanding discoveries in recent years, which relates precisely to this binary pattern of complementary opposing elements, involves the discernment of one Xochipilli shrine that is more igneous and another that is more aquatic. This occurred in the context of our project of graphically documenting the extant mural painting in the Templo Mayor archaeological zone (De Anda 2018).[41] In a totally unexpected manner, while cleaning the *alfardas* of the Southern Red Temple and studying them with special lighting, we realized that they were not decorated with bands and flowers as previously supposed (Olmedo 2002:75). Instead, large birds were depicted in full body and profile views (De Anda and Carrizosa 2017). Everything seems to indicate that they are two of the various birds that the Mexica associated with Xochipilli.[42] On the north *alfarda* we see a golden eagle and on the south *alfarda* appears another type of eagle or a macaw (De Anda and Carrizosa 2017). Whichever the case may be, both are solar animals depicted in the act of rising in the east (Figure 19). The ascending birds, along with the descending aquatic streams on the *alfardas* of the Northern Red Temple, constitute pairs of opposite yet complementary elements.

Final Reflections

In this article we have reexamined four types of Mexica behavior toward material vestiges of the past, including *additive* and *subtractive* activities conducted in the ruins of civilizations that preceded them, and the *reutilization* and *imitation* of antiquities in their Late Postclassic capitals. The data recently generated in the Templo Mayor Project compared with previously available information have revealed that many of the relics buried in Tenochtitlan's sacred precinct came from the ritual deposits of Teotihuacan's most important civic and ceremonial structures, often from the most exclusive contexts dating from the Miccaotli to Early Tlamimilolpa phases. These artifacts are generally ones to

[39] According to Sahagún's informants, the ancestors of the Mexica lived in Teotihuacan, where their rulers were interred, awaiting their transformation into gods. "For so it was said: 'When we die, it is not true that we die; for still we live, we are resurrected.' In this manner they spoke to the dead... 'Awaken! It hath reddened; the dawn hath set in. Already singeth the flame-colored cock, the flame-colored swallow; already flieth the flame-colored butterfly'" (Sahagún 1950-1982:Book 10:192). This passage is reminiscent of the dawning of the world.

[40] In this sense, the placement of the archaized image of the old fire god (which combines aquatic and telluric elements) in front of the principal façade of the Northern Red Temple is highly significant.

[41] Participants of this project include, among others, Fernando Carrizosa, José María García, Beatrice Viramontes, and the authors of the present work.

[42] These include the golden eagle (*Aquila chrysaetos*), the red macaw (*Ara macao*), the green macaw (*Ara militaris*), the great curassow (*Crax rubra*), and the crested guan (*Penelope purpurascens*) (Aguilera 1998a, 1998b; Fernández 1959; Graulich 1999:392; Olivera 2002; Seler 2004).

which Teotihuacanos attributed enormous value when we consider the quality of their raw materials, the hours of labor invested in their production, and especially the religious and political content expressed through their functions and meanings.

We have also learned that these antiquities, whether complete or incomplete, were buried in construction fill as well as ritual deposits in the Templo Mayor, in adjacent temples, and even in some nearby shrines such as the one dedicated to Ehecatl now visible in the Pino Suárez Metro station. It is logical to suppose that the Mexica would have considered these artifacts precious amulets that transmitted their magical powers to the individuals who possessed them and, by extension, to the entire community. To these we added the decontextualized imitations of architectural, pictorial, and sculptural elements and minor objects which contributed to the fact that the glorious past of gods, giants, and legendary peoples was present at every turn in the imperial capital.

Let us conclude by emphasizing that the Mexica recovery of the past—whether Olmec, Teotihuacan, Xochicalca, or Toltec—is an enormously complex historical phenomenon which should be examined comprehensively, that is to say, using many theoretical, methodological, and technological approaches, to elucidate its multiple facets. As social scientists we will never be able to understand these behaviors if we limit ourselves to microscopic observation, no matter how high the level of magnification.

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