When Hernán Cortés and his men arrived in Tenochtitlan, the capital of the Mexico Empire, in November 1519, they were given rooms in the former quarters of the previous ruler Axayacatl, an old and luxurious residence across from Moteuczoma’s own palace. Shortly after they had settled in, they had a stroke of luck, for they noticed that one of the walls bore traces of a doorway, recently sealed off and freshly plastered. The Spaniards did not hesitate to break through the wall and force their way into the chamber, called the teocalco, where the emperor kept treasures inherited from his ancestors. In the words of an eyewitness, Bernal Díaz del Castillo, a Spanish conquistador who was a foot soldier to Cortés: “Cortés and some of his captains went in first, and they saw so much jewelry, and round and rectangular gold sheets, and chalchihuites (blue-green metamorphic stones) and other great riches, that they were quite carried away and did not know what to say about such wealth.”

In the end, it took three days and the participation of numerous goldsmiths brought from Azcapotzalco to brutally strip off all the gold; it embellished weapons, insignia, and ornaments crafted from lavish feathers, fine woods, precious stones, gorgeous textiles, and other materials that the conquerors dismissed as worthless. Through this plunder, the men obtained three mounds of gold, worth about 162,000 pesos, that were immediately melted down. Of the resulting booty, Cortés set aside a fifth for the king of Spain, another fifth for himself, and a flat amount to cover expedition expenses; then he gave eighty pesos to each horseman and sixty pesos to each foot soldier. No one was satisfied with this ridiculously low sum. Indeed, some of the men refused to receive such paltry compensation, arguing that it was not commensurate with their efforts in the conquest of Mexico.

While this well-known episode highlights Cortés’s unfair treatment of his fellow Spaniards, it also reveals that the gold concentrated in the imperial coffers of Tenochtitlan was not as abundant as we have been led to believe. This fact becomes even more apparent if we consider the enormous riches amassed by the Spaniards during the conquest of Peru. For example, the treasure taken by Francisco Pizarro’s army during the capture of Atahualpa at Cajamarca, along with the treasure from Cusco, amounted to 1,890,000 pesos. The first of these fortunes, after discounting the Royal Fifth, was enough to pay each soldier a hundred times more than what Cortés distributed, leading the chronicler Gonzalo Fernández de Oviedo to declare: “Everything about Cortés seemed like night compared to the clarity we saw when it came to the riches of the South Sea.”

Why were the Mexica and Inca worlds so different? The answer is quite simple. First, Mexico is a country poor in gold, especially compared to Colombia, Peru, and Bolivia. Second, the Mexican states richest in gold are located in the north, far away from the area dominated in pre-Hispanic times by Tenochtitlan and its allies. Third, metallurgy was introduced to Mesoamerica at a relatively late date, and gold processing based on copper, lead, silver, or zinc sulfide was never developed through such advanced techniques as pyrometallurgical smelting or chemical processing. As a result, the Mexicas, Mixtecs, Zapotecs, and other Mesoamerican peoples were limited to exploiting the prized metal in its pure, native state. Gold was used in modest amounts, never assuming the same economic, social, political, and religious status enjoyed by other valued materials, such as brightly colored feathers and jade. This fact is clearly reflected in Nahua history, iconography, poetry, and metaphors.

Archaeology teaches us a similar lesson. In the case of Tenochtitlan, the gold that has come down to us is strikingly scarce. Excavations carried out from 1948 to 2015 in the Templo Mayor archaeological zone in Mexico City (see Caplan, this volume) have yielded 204 offerings concentrated within a space of only 1.51 hectares (3.73 acres); however, just fourteen of these offerings contained gold objects. From these ritual deposits only 267 complete gold pieces, all of small dimensions, have been discovered, in addition to 1,090 fragments. These numbers are insignificant in relation to the tens of thousands of greenstone, obsidian, flint, and copper artifacts found in the same area from the same period. Moreover, the total weight of the
gold artifacts discovered in the Templo Mayor area comes to a mere 500 grams, which seems minor when compared to the 2.4 kilograms found in Tombs 1 and 2 at Zaachila; the 3.5 kilograms from Monte Albán Tomb 7 (see fig. 119); the 5.9 kilograms from the Veracruz Fisherman’s Treasure (see cats. 220–222); and the 7.2 kilograms from the Sacred Cenote of Chichén Itzá (see figs. 94 and 96). The quantity from the Templo Mayor area seems especially negligible when we consider the scale and power of the Mexica Empire.

This essay focuses on the gold objects recovered by the Proyecto Templo Mayor (Templo Mayor Project) of Mexico’s National Institute of Anthropology and History (INAH), and examines the provenance and circulation of the raw material, the techniques employed to produce the gold artifacts, and those items’ ritual uses.

**Historical Information**

Much of what is known about the role of gold in Mexica civilization comes from documents written in the sixteenth and seventeenth centuries. Fortunately, modern researchers have extensively studied these texts, and their work allows us to reconstruct the production—circulation—consumption cycle. In pre-Hispanic times, native gold was obtained from placer deposits, which accumulate at the bends of rivers and streams. Gold nuggets and particles of pure metal collect in these sandy beds when they become dislodged by erosion and are carried downstream from quartz veins in the mountains. Díaz del Castillo tells us that the indigenous people collected the wet sand in gourds “so that after the earth was washed away some grains of gold remained.” According to what Moteuczoma told Cortés, the main placers were in Zozolan, Tochtepec, and Malinaltepec, and in Coatlecamac, which lay beyond the southern border of the empire in the lands of Chinantla. Local peoples exploited these sources, sending the gold to Tenochtitlan and other important capitals.

Eleven provinces paid gold in tribute to the Mexica, and almost all of them were conquered during the reign of Moteuczoma I (AD 1440–69). These provinces were located to the northeast, east, south, and southeast of Tenochtitlan, and on Mexico’s modern-day border with Guatemala. Some had gold-bearing placers either within their territories or in neighboring provinces; other provinces had to trade with distant towns to fulfill their tribute obligations. According to the Codex Mendoza (AD 1541–42), gold shipments consisted not only of the raw material but also of the semiprocessed and finished pieces. Gold dust brought in gourds is an example of the first category; gold sheets in the form of tablets or disks were examples of semiprocessed products. Finished pieces included diadems, headbands, shields, strands of round beads and bells, and lip plugs embellished with amber or beryl (see p. 98).

Along with these regular tribute obligations, Tenochtitlan also demanded tribute payments for special occasions, such as political or religious events, funerals of sovereigns, coronations, or consecrations of additions to the Templo Mayor. While numerous finished objects—mainly ornaments—were gathered, large volumes of raw materials also arrived in the imperial capital, and the high steward delivered them to the palace craftsmen to fashion objects for use in these special occasions. Gold also reached Tenochtitlan through gifts, spoils, and trade. Friar Bernardino de Sahagún mentions that this metal had been sold at the Tlatelolco market since the beginning of the fifteenth century. Gold was exchanged as nuggets; as gold dust inside feather quills; and as processed rings, noseplugs, earflares, labrets, bangles, belts, and crowns.

The precious metal was worked in Tenochtitlan by full-time specialists with the highest levels of expertise. Many artisans worked in the royal palace, where they were fed and closely guarded. Their ateliers were in the totocalli, or bird house, next to the workshops of feather workers and lapidaries with whom they often collaborated. Gold-workers were supplied with the materials and tools they required, but if they made any mistakes in their commissions, they were severely punished and sometimes even banished. Apart from the palace gold-workers, there were other, likewise supremely skilled artisans who lived in the neighboring city of Azcapotzalco. Díaz del Castillo referred to them as “the silversmiths of the great Montezuma,” which suggests the direct connection between these specialists and the palace of Tenochtitlan, despite the seven miles separating the two cities. Indeed, since the conquest of Azcapotzalco by the Mexica ruler Itzcóatl in 1430, half of the city’s territory had been colonized by the Mexica and named Mexicapan. Historical sources—and specifically Sahagún’s informants—help us to reconstruct the processes by which Mexica goldsmiths transformed their material (see fig. 19). The teocuitlatotzontzueh hammered nuggets into thin sheets. Generally working in the open air, these workers cut, perforated, embossed, and engraved sheet metal to create all sorts of objects. The teocuitlapitzqueh, experts in the lost-wax casting technique, melted gold on small stoves and used blow-pipes to stoke the fire and green branches to remove the scoria, or slag.

The result of these chains of production was a wide array of sumptuary and prestige items. Many of these works were combined with precious stones, wood, feathers, ceramics, or textiles. Almost all of them were conceived to be worn as garments or ornaments, to be held in the hands as insignia or weaponry, or to be displayed as part of elite household goods or as images in a state cult (see figs. 116 and 117). These objects were gathered in the imperial palaces and sacred precincts: in the aforementioned treasury of the teocalli, Petlacalco storerooms, armories of Tlacochoicalo, and artisans’ workshops in the totocalli. There, the sovereign could access them for personal use or for distribution as prestigious gifts to nobility, high-ranking warriors, and distinguished visitors. These luxury pieces were also brought by ambassadors to leaders of allied, subjugated, or independent lands; given to merchants as items to exchange on long-distance expeditions; and entrusted to priests to place in votive or funerary offerings in temples.
Archaeological Data

With the Spaniards’ arrival in Tenochtitlan, the vast majority of gold objects in circulation ended up in crucibles. Only a small number of Mesoamerican gold objects of high aesthetic quality survived, and they can be found today in museums in Europe, the United States, and Mexico. But the most important corpus consists of those artifacts that had been buried earlier by the Mexica in their sacred precinct, and recovered in archaeological studies over the last thirty-seven years. Thanks to a detailed field record, it has been possible to document each piece in its archaeological context, thereby allowing us to shed light on important questions regarding chronology, function, and meaning.

As mentioned earlier, thus far only fourteen offerings—thirteen at the Templo Mayor and one more in the House of the Eagles—have been found to contain gold objects. Of these fourteen, nine offerings were discovered in the Great Temple (fig. 123); four were found in front of the temple pyramid’s main facade and around the monolith of Tlaltecuhtli, an earth goddess; and one was uncovered at the entrance of the adjacent House of the Eagles. The Mexicas buried six of these fourteen offerings at plaza level, another six in the pyramid platform, and the

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**Templo Mayor Archaeological Zone**

![Map of Templo Mayor Archaeological Zone](image)

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**Fig. 123.** Western facade of the Templo Mayor archaeological zone, Tenochtitlan, Mexico City.

**Fig. 124.** Buildings with gold objects, Templo Mayor archaeological zone.
The Templo Mayor was a double-pyramid platform topped by twin temples (fig. 125). It was built in nested successive stages, with each new phase replicating and covering the former (see fig. 123). The southern half was dedicated to Huitzilopochtli, associated with war and the sun, while the northern half belonged to Tlaloc, an ancient Mesoamerican rain god. The structure replicated two sacred mountains: Coatepetl, the mythic site where Huitzilopochtli was born and defeated his sister, Coyolxauhqui, who threatened to kill him and his mother; and Tonacatepetl, the hollow mountain of sustenance where Tlaloc guarded maize and water. Monolithic sculptures of serpents and a dismembered Coyolxauhqui underscored these mythic associations.

Razed and built over following the Spanish Conquest, the temple was rediscovered in 1978 next to Mexico City’s main square. Since then, excavations by Eduardo Matos Moctezuma, Leonardo López Luján, and the Proyecto Templo Mayor have uncovered many offerings, which were deposited during rituals for Mexica religious ceremonies, noble burials, social advancement, trade expeditions, and dedications of new additions to the temple (fig. 126).

Deposits included gods’ adornments; heirloom Olmec and Toltec greenstone carvings; feathers; turquoise mosaics; shells; textiles; gold, copper, and silver ornaments; and human remains as well as the remains of diverse flora and fauna (see cats. 208, 209, 211, 214, and 219). The variety of materials suggests the value placed on distant origins, antiquity, brilliance, color, and connections with divinities and elements of the cosmos.

The temple’s stages of construction and their ritual deposits correlate with periods of Mexica history and, as such, shed light on this group’s political and economic expansion. As Tenochtitlan rose from a tribute-paying city to an imperial capital, offerings deposited at the Temple Mayor reflect increasing access to foreign materials, such as jade, turquoise, and mother-of-pearl. Further, the marked preponderance of materials from the tribute-paying provinces of Puebla, Oaxaca, Guerrero, and the Gulf coast may have been intended to symbolize Mexica domination over these areas (see p. 98). Specifically selected and gathered to the very heart of the empire, these offerings reflect Aztec understandings of the raw materials and finished works that embodied superlative value.

1. The animal differs between colonial sources: Durán describes the eagle holding a bird, while Chimalpahin says it was a serpent. Durán (1581) 1984, 2: 44, 48; López Luján 2005, 65–66.
remaining two inside Huitzilopochtli’s shrine, which crowned the summit (see fig. 124). In terms of the Templo Mayor’s dual symbolic associations with both Huitzilopochtli and Tlaloc, among the offerings found at the Great Temple, the majority of them—twelve—were located in the southern half of the structure, related to the dry season and dedicated to Huitzilopochtli, the solar war god.\(^3^6\) We should bear in mind that gold was conceptually linked to the sun, its brilliance, and its dryness. Only one offering was found in the Templo Mayor’s northern half, which was dedicated to the cult of Tlaloc, the Rain God. In terms of chronology, two offerings were found in Templo Mayor’s Phase II (AD 1375–1427),\(^3^7\) six correspond to Phase IVb (AD 1469–81), and the remaining six are from Phase VI (AD 1486–1502). This distribution constitutes strong evidence of a ritual practice that lasted at least one hundred years.

The 267 complete artifacts can be divided into two groups according to the technique used to create them—either hammered sheet metal or lost-wax casting—following the taxonomy suggested by Sahagún’s informants. Of the works in sheet metal, seventy-two, or 27 percent of the total, are spheres or round ceramic beads that have been covered with an extremely thin layer of gold leaf (fig. 127, types 1 and 2). Another 45.3 percent, or 121 objects, are works in sheet gold that have been cut and perforated, including small disk-shaped pendants (see fig. 127, types 4–6) and gold sheet in the shape of a bifurcated tongue or an eagle feather military insignia (see fig. 127, types 7 and 8). Others—such as tiny hollow hemispheres, disk-shaped pendants, and disk-shaped appliqués for an earspool—have been embossed (see fig. 127, types 11–13). Of particular note are works representing gods’ specific insignia, including the double volute headdress characteristic of Huitzilopochtli and round noseplugs worn by the deities Itztliacoliuhqui, Itztapaltotec, and Tlazolteotl (fig. 128, types 9 and 10); circular pleated headdress elements characteristic of the death gods (see fig. 128, type 14); a long bone associated with Ehecatl-Quetzalcoatl, the Wind God (see fig. 128, type 15); and a pendant in the shape of a cut shell, likewise associated with Ehecatl-Quetzalcoatl (see fig. 129, type 16; see also p. 110 and cat. 215.3). Others—including a knotted headdress element and a U-shaped nose ornament—evoke pulque gods (see fig. 129, types 17 and 18; see also p. 110 and cat. 215.1). Another represents the glyph for star, shown as a round, lidded eye (see fig. 129, type 19). The group of hammered objects
concludes with the two rectangular ear ornaments of a pulque god, each object made of a pair of gold sheets joined with a tab-and-slot system, and two unusual folded sheet-metal clasps with wires (see fig. 129, types 20 and 21; see also p. 110 and cat. 215.2).

The second major technological group—those cast via the lost-wax technique—is composed of seventy-four pieces, or 27.7 percent of the total. These objects include fasteners and a beautiful round bead with falso filigree (fig. 130, types 22 and 23; see cat. 210). Much more abundant are bells, both round (see fig. 130, types 24 and 25) and pear-shaped, either plain or adorned with spirals, rendered in false filigree (see fig. 130, types 26 and 27). An exceptional olive-shaped bell represents the glyph for movement (see fig. 130, type 28; see also cat. 209).

The function and meaning of many of these gold artifacts become clear when we examine the archaeological contexts in which they were found. The ninety-five complete pieces and sixty fragments formed part of votive offerings, valuables that were buried in cavities or stone boxes to honor the deities of the Templo Mayor (see fig. 131). Ten of these offerings contained works of gold. Some served as miniature insignia that were affixed to sacrificial flint knives, and these insignia linked the knives to specific deities. For example, the gold pieces in the shape of a bone and cut shell identified two knives as Ehecatl-Quetzalcoatl (see fig. 132). The miniature representations of the insignia of the pulque gods were placed in Offering 125 (see p. 110), adorning a spider monkey skin. In the same offering, priests put strands of pear-shaped bells on the feet of an elderly she-wolf and on those of a male golden eagle. A female golden eagle in this same offering had copper bells on her feet.

Funerary offerings formed the context for another 142 complete pieces and 763 fragments. These groups of objects were deposited with the cremated remains of high-ranking dignitaries inside spaces under the floors (see fig. 131). Six funerary offerings have been discovered to date, including four with gold artifacts (see cat. 209). Some of these pieces are elements of the personal accoutrements and finery of the deceased, while others are jewelry offered by mourners during funeral rites. Pear- and olive-shaped bells are the most numerous, along with hollow hemispheres and disk-shaped pendants that might have been sewn onto cotton garments. Beads, ear ornament appliqués, and a perforated strip were also found.
Most of these objects exhibit deformations resulting from long exposure to fire, which means that they were cast into funerary pyres that reached temperatures of around 1,742°F to 1,850°F (see fig. 130, type 29). Others, however, are well preserved, which suggests that they were deposited in burials once the ashes had cooled.

Chemical Analysis

A crucial aspect of our research addresses two fundamental questions: Where did the gold come from, and where were these objects made? This is a difficult matter, for no map yet exists that identifies the gold sources exploited by Mesoamerican peoples through time. Therefore, we lack the chemical profiles of the numerous placers where the metal was obtained. To make up for this gap, since the mid-1970s systematic studies have been undertaken of the chemical compositions of several archaeological collections—specifically their percentages of gold, silver, and copper. This research has made it possible to generate ternary equilibrium diagrams that reveal clear compositional differences among Mixtec gold from the central valleys of Oaxaca; Zapotec gold from the Sierra de Juárez; gold from the Fisherman’s Treasure (supposedly also from Oaxaca); Costa Rican and Panamanian gold recovered from the Sacred Cenote of Chichen Itza; and some Mexico artifacts found in Mexico City. Thus, we are able to identify what we might call geographic zones of gold use.

We analyzed the ternary composition of all of the complete pieces and a large part of the fragments in the broader Templo Mayor archaeological zone collection. We used X-ray fluorescence (XRF), a reliable, highly sensitive, multi-elemental technique that is also nondestructive, noninvasive, and efficient. We employed SANDRA for this purpose, which is a portable system calibrated with homogeneous Degussa alloys. More than six hundred measurements were taken, each for sixty seconds, often in multiple regions of the same object. The results obtained from each piece were averaged to produce the standard deviation.

We developed three ternary diagrams, each representing finds from a different area in the sacred precinct. The
artifacts from the offerings at Templo Mayor proper (fig. 133) form a fairly heterogeneous group in which marked variation can be observed in the percentages of gold, silver, and copper. Such divergence may be explained by the fact that these eight deposits differ in both date and type: some are votive and others funerary. Things change greatly in the second graph, which shows data for Offering 5 (fig. 134). In this funerary deposit from the House of the Eagles, there is a more compact group of artifacts, with notable shifts in the percentages of gold and silver but always minimal copper content. Even more homogeneous is the group of artifacts from Offerings 122, 123, 125, and 149—votive deposits associated with the monolith of Tlaltecuhtli (fig. 135). Apart from the minimal copper content, what stands out in this third graph is the smaller variance in the percentages of gold and silver when compared to the preceding example. This difference may be explained by the fact that the offerings represented in figure 133 are contiguous and were buried simultaneously, thus the gold artifacts could have been created intentionally in the same workshop.

The next graph offers clearer results. Here we have divided all of the offerings into two groups, according to type (fig. 136). There are noticeably greater fluctuations in the ternary composition of funerary offerings. As mentioned above, these types of deposits brought together highly diversified gold artifacts, because they contained not only the belongings of the deceased but also gifts given by relatives and foreign dignitaries. In contrast, almost all of the artifacts from the votive offerings are circumscribed in a highly limited area; this may be explained by the fact that the rulers of Tenochtitlan tended to have the palace goldsmiths create gold objects expressly for use as deposits for Templo Mayor consecration ceremonies.

Figure 137 shows the data divided chronologically. A few gold artifacts date to the end of the fourteenth century, when the rulers Acamapichtli, Huitzilihuitl, and Chimalpopoca governed a humble Tenochtitlan that was still a dependency of Azcapotzalco. Numerous items, however, correspond to the second half of the fifteenth century, when Axayacatl successfully consolidated an independent state on the path to expansion. Finally, the largest group of objects dates from the beginning of the sixteenth century, when Ahuitzotl expanded the frontiers of the empire from the Tarascan area to the modern-day border with Guatemala. There is a general tendency over time toward homogenization in the ternary composition of gold objects.

In our opinion, this increasing standardization—not only in chemical composition but also in shape and size—might have resulted from raw materials from a small number of placers being used in the production of ceremonial artifacts and from these pieces being processed only in specific workshops, such as imperial palace or Azcapotzalco workshops.

In the ternary graph showing geographic zones of gold use (fig. 138), we see that the artifacts from Chichen Itza have extremely high percentages of gold (gold: 96%, silver: 3.5%, copper: 0.5%); Mixtec objects from Oaxaca have high percentages of silver (gold: 60–85%, silver: 10–40%, copper: 10–25%); and the Zapotec bell from Caxonos in the Sierra de Juárez boasts the highest percentage of copper (gold: 60%, silver: 10%, copper: 30%).

When we put this graph together with the values for the gold objects from Tenochtitlan, two fundamental findings become apparent: (1) there is greater variability in the ternary composition of the Tenochtitlan objects (gold: 30–95%, silver: 3–62%, copper: 0–35%), and (2) despite this variability, the Tenochtitlan group stands apart for having lower percentages of copper.

A New Mesoamerican Geographic Zone of Gold Use

One of the crucial questions left unanswered is: Where did the gold-working tradition practiced in Tenochtitlan and Azcapotzalco come from? Nearly all modern-day researchers have directed their gaze toward Oaxaca, especially the Mixteca area. In fact, the prevailing school of thought for many decades has been that the artifacts found in the Basin of Mexico—if not imported from the Mixtecs of Oaxaca or Puebla—were worked by Mixtec goldsmiths living in capital cities such as Tenochtitlan, Tetzoco, and Azcapotzalco. Thus, whenever Mesoamerican gold pieces are exhibited or...
Fig. 133. Ternary equilibrium diagram (gold-silver-copper) of the objects from the Templo Mayor offerings.

Fig. 134. Ternary equilibrium diagram (gold-silver-copper) of the objects from the House of the Eagles offerings.

Fig. 135. Ternary equilibrium diagram (gold-silver-copper) of the objects from the Tlaltecuhtli-area offerings.

Fig. 136. Ternary equilibrium diagram (gold-silver-copper) of the objects from votive and funerary offerings.

Fig. 137. Ternary equilibrium diagram (gold-silver-copper) of the objects from Phases II, IVb, and VI.

Fig. 138. Ternary equilibrium diagram (gold-silver-copper) of objects from different geographic zones of gold use.

Au (Gold): 27–95%
Ag (Silver): 5–60%
Cu (Copper): 0–27%

Offering 1
Offering 2
Offering 3
Offering 13
Offering 34
Offering 39
Offering 60
Offering 87
Chamber 2

Au (Gold): 45–87%
Ag (Silver): 12–52%
Cu (Copper): 0–8%

Offering V

Funerary
Votive

Phase II
Phase IVb
Phase VI

Temple Mayor
MNA Oaxaca, Ruvalcaba Sil, Demortier, and Oliver 1995
MNA Oaxaca, Rickards Campbell et al. 1999
Temple 7, Peñuelas Guerrero 2008
Fisherman’s Treasure, Torres Montes and Franco Velázquez 1989
Caxonos, Ortiz Díaz and Ruvalcaba Sil 2009

Mexica Gold
which could be called the Basin of Mexico tradition.

Against such hypotheses, scholar H. B. Nicholson emphasized the absence of any passages in the primary historical sources that indicated that Mixtec-speaking artisans from Oaxaca or Puebla had been brought to Tenochtitlan to practice their skills there and to transmit them to local artisans.60 In his judgment, the great artisanal tradition of central Mexico does not derive from the Mixtecs; rather, it has autochthonous roots that go back at least to Classic-period Teotihuacan. For the early sixteenth century, Nicholson observed that gold-working was as developed in central Mexico as it was in the Mixteca region, and that Moteuczona had no need to import gold items from distant Oaxaca for the Spanish conquistadors when he could draw upon local production.

Nicholson’s critical view aligns with our research on the archaeological gold from Tenochtitlan’s sacred precinct. In terms of form and style, a detailed comparison of the 121 spectacular Mixtec objects from Tomb 7 at Monte Albán61 makes it clear that they are totally different from the twenty-nine types described here from Tenochtitlan’s Templo Mayor and House of the Eagles.

Contextual data also support Nicholson’s stance. Our research indicates that the use of gold objects at the Templo Mayor differed greatly from that of the pieces recovered by archaeologists in Oaxaca. The use of gold-sheet ornaments and bells to identify certain sacrificial knives and animal skins as specific deities, for example, is distinct from the use of gold ornaments on the deceased in Monte Albán’s Tomb 7, as is the use of bells to adorn the wolf and eagle in Offering 125 near the Tlaltecuhtli monolith.

Similarly, in iconographic terms, some of the gold objects found in the offerings at Tenochtitlan have counterparts in central Mexican codices, but they are absent from the visual arts of the Mixteca region. Perhaps the clearest evidence is the frontal ornament of the pulque gods that appears in several places in the Codex Magliabechiano and its cognate, the Codex Tudela, but that is absent from Mixtec codices, such as the Codex Zouche-Nuttall and the Codex Vindobonensis, and from mural paintings, such as those at Mitla.

Finally, we turn to our chemical analyses, which yielded ternary gold-silver-copper percentages with copper values fundamentally lower than those of Mixtec gold. In fact, we have seen that Tenochtitlan gold gradually became standardized in terms of size, shape, and chemical composition; perhaps this is because the requirements for creating ceremonial objects restricted both procurement, to only a few placers, and production, to specific workshops in the capital and Azcapotzalco—and all were under direct state control. This leads us to propose a new Mesoamerican geographic zone of gold use, distinct from the Mixteca region, which could be called the Basin of Mexico tradition.

Epilogue

In March 1981 a surprising archaeological discovery was made in an area just north of the Alameda Central in Mexico City. During the construction of a large government building, a gold ingot was unearthed from the bed of the long-since-receded Lake Texcoco, near the ancient causeway that once connected the island of Tenochtitlan with the allied city of Tlacopan (see cat. 223). All signs point to this piece being dropped by one of Cortés’s men in their hasty retreat from the Mexico capital during the Noche Triste (Night of Sorrows) on June 30, 1520. Surely melted from treasure plundered from the royal coffers by the Spanish conquistadors, this ingot would seem to be a material manifestation of the destiny and demise of the Mexica metallurgical tradition. We know, however, that this was not so. The descendants of “the silversmiths of the great Montezuma” continued to practice their art in Azcapotzalco throughout the colonial period. At first they made fine jewelry for the peninsular- and American-born Spaniards, even for the viceroy himself. But during the mid-seventeenth century, as economic conditions worsened, these artisans began to manufacture bronze bells, nails, hinges, and artillery pieces; nevertheless, today in Azcapotzalco, some precious metalsmith workshops still survive, and they serve as a reminder of the great tradition born on the shores of Lake Texcoco.

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Notes

4. Cortés 1963, 69–70. Based on Haring (1915, 435n1), 162,000 pesos were equivalent to 677 kilograms of gold.
5. According to Mayer (1915, 65), both treasures together contained 7,901 kilograms of gold. Marfounine (1898, 152) calculated 6,752 kilograms of gold, equivalent to 1,615,311 pesos. See also Pillsbury, “Luminous Power,” this volume.
9. Águila Piedra 1946, 15; Rivet and Arsandaux 1946, 182; Caso 1969, 80–81; León-Portilla 1978, 7; N. Schulze 2008, 196; Torres Montúfar 2011, 118.
12. See, for example, Berdan 1992b, 293–95.
16. Águila Piedra 1946, 15; Rivet and Arsandaux 1946, 182.
22. Sahagún (1575–77) 1950–82, bk. 9, 2.
28. López Luján and Ruvalcaba Sil 2015, 43–48. The other half of the settlement was known as Tepanecapan.
32. Torres Montúfar 2011, 22–33.
33. For example, Durán (1581) 1984, 2: 151, 172, 341. See also Berdán 1987, 174–75; Torres Montúfar 2011, 48–74.

38. Respectively, the god of frost; an aspect of the fertility god Xipe Totec; and the goddess of filth.
44. The acronym derives from “Sistema de Análisis No Destructivo por Rayos X.” See Ruvalcaba Sil et al. 2010.
45. López Luján and Ruvalcaba Sil 2015, 38–43.
46. For example, Durán (1581) 1984, 2: 297.
47. For example, Durán (1581) 1984, 2: 341.
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Chalchiuhtlicue

ca. AD 1500
Aztec; Mexico, Mexico City
Diorite
85 × 37 × 25 cm (33\(\frac{3}{16}\) × 14\(\frac{9}{16}\) × 9\(\frac{13}{16}\) in.)
Mexico City, Museo Nacional de Antropología, 10-82215
Secretaría de Cultura—INAH

Chalchiuhtlicue was the teotl (god) identified with lakes, rivers, and moving waters. Her name, “Jade Her Skirt,” speaks of the close identification of precious greenstones (chalchihuitl) with life-giving waters. As is common in sculpted representations of Chalchiuhtlicue, she is depicted wearing a quechquemitl, a women’s garment draped over the shoulders, edged with greenstone beads and tassels. Though commonly worn by Totonac, Mixtec, and Zapotec women, the quechquemitl, among the Nahuas, was a foreign Huastec garment restricted to ritual uses.\(^1\) Her skirt, or cueitl, which is secured with a rattlesnake belt, bears a distinctive design of squares set in a diamond grid, known as the xiuhxitlapilli turquoise mosaic design, most famously used on the Mexica ruler’s cape.\(^2\)

This design appears in codices as a visual descriptor of turquoise mosaic objects and is composed of round greenstone beads set in a grid of dotted squares. On Chalchiuhtlicue’s skirt, this design underscores the garment’s identification with the teotl’s name and visually embodies the flowing movement and sparkling blue-green of an expanse of water in the turquoise textile.

Xihuitl often is distinguished from chalchihuitl, as the former is identified as turquoise and the latter as jadeite or greenstone; however, in this context, xihuitl represents a type of chalchihuitl. The round greenstone beads’ inclusion as a component of the xiuhxitlapilli design and Aztec viewers’ recognition of the turquoise design as a representation of the name Chalchiuhtlicue reveal the closeness of jadeite and turquoise in Nahua conceptualizations of these precious blue-green materials. —AC


208

Mask with Serpent Earrings and Bells

AD 1375–1427
Mexica; Mexico, Mexico City, Templo Mayor de Tenochtitlan, Phase II, Offering 34, Artifact 1a
Silver
4.9 × 4.5 cm (1\(\frac{7}{16}\) × 1\(\frac{3}{8}\) in.)
Mexico City, Museo del Templo Mayor, 10-168843
Secretaría de Cultura—INAH

Silver, called iztac teocuitlatl (“white divine exccrescence”) in Nahuatl and symbolically associated with the moon,\(^1\) was rarely used in
Mesoamerican metalworking. Although sixteenth-century sources mention its sale in the most important markets of the Aztec Empire, it is significant that—contrary to gold and copper—silver does not appear in the lists of items periodically paid in tribute to Tenochtitlan. Archaeological findings likewise attest to this scarcity: after forty years of excavations at the Templo Mayor, only this small silver piece has been recovered.1 Specialists still debate whether this visage corresponds to that of a monkey (linked to Ehecatl, the god of wind, or Xochipilli, the god of music) or to that of Xipe Totec, a deity associated with vegetation and war. Most recently, it has been reinterpreted as the effigy of Yacateuctli, patron of commerce and travelers.2 Usually depicted with a prominent nose and a black-and-white face, this god was one of the aspects of Quetzalcoatl and symbolized the setting sun’s transformation into Venus.4 The earrings here are traversed by serpents, which may have served as conduits for wind transporting the soul of the deceased.5 This object appeared together with a golden bell pendant (see cat. 209) in Offering 34 at the Templo Mayor, a funerary deposit buried inside the patron god Huitzilopochtli’s shrine. —LLL

2. Compositional analysis: 96.5% silver, 3.5% copper, 0.5% gold; weight: 10.4 g.

209

Olive-Shaped Bell Pendant with Ollin Symbol

AD 1325–1427
Mexico; Mexico, Mexico City, Templo Mayor of Tenochtitlan, Phase II, Offering 34, Artifact 1b
Gold
2.7 × 2.2 cm (11⁄16 × 7⁄8 in.)
Mexico City, Museo del Templo Mayor, 10-168844
Secretaría de Cultura—INAH

This cast bell is finely decorated with false filigree in the form of spheres, simple coils, and the double spiral known as xonecuilli (a rain and astral symbol); the ollin (movement) symbol is depicted above the resonator.1 A similar object appears in the Codex Magliabechiano as part of the funerary offering dedicated to a merchant.2

The piece was discovered, together with a small silver mask (see cat. 208) and human skeletal remains, inside an obsidian cinerary urn with the effigy of Mictlanteuctli, the god of death.3 According to bioarchaeological analysis, the cremated remains include the cranium of an individual between twenty-one and twenty-four years of age whose corpse was found in Offering 39, an adjacent deposit. Because these remains were placed at the top of the Templo Mayor, they may belong to one of the early Mexica sovereigns. The funerary offering’s otherwise modest deposits and historical accounts claiming that Acamapichtli and Huitzilihuitl died at advanced ages, however, have generated uncertainty. In the case of Chimalpopoca, his exact age at time of death is not known, but apparently he well exceeded twenty-four years. —LLL

1. Compositional analysis: 80.7% gold, 13.9% silver, and 6% copper; weight: 7.1 g.
2. Codex Magliabechiano 1983, 68r.

210

Bead with Serpent and Star Motif

AD 1469–81
Mexico; Mexico, Mexico City, Templo Mayor of Tenochtitlan, Phase IVb, Offering 3
Gold
Diam: 1.7 cm (11⁄4 in.)
Mexico City, Museo del Templo Mayor, 10-263402
Secretaría de Cultura—INAH

Representing two intertwined serpents and a star, this bead was cast via the lost-wax method, with false-filigree and false-granulation techniques—which means that each minute detail had to be elaborated in the wax model rather than soldered on postcasting, as was typical in the Old World.1 This level of precision and the excellence of the product reveal the mastery of...
copper, and shell—was attached to a sacrificial flint knife that personified Quetzalcoatl, the creator and Wind God.³

We also found dozens of cast gold bells that formed anklets around the claws of a male golden eagle (Aquila chrysaetos) and the hind paws of a female Mexican wolf (Canis lupus baileyi). In addition to the anklets, this canine wore two wooden, turquoise mosaic earrings, a necklace with sixty-four greenstone beads, and a belt with twenty-three Oliva shells.⁴ —LL

In 1900, the Mexican archaeologist Leopoldo Batres excavated these gold ornaments in the Calle de las Escalerillas, near the Mexica Templo Mayor.¹ Continuing this association with warfare during the Late Postclassic period, the Mexicas’ patron god, Huitzilopochtli, carried a Xiuhcoatl spear-thrower. —KNR

2. Taube 2012, 121.

216 Pair of Fire Serpent Ornaments

ca. AD 1500
Mexico; Mexico, Mexico City, Calle de las Escalerillas
Gold
L: 16.1 cm (6⅜ in.)
Mexico City, Museo Nacional de Antropología, 10-594810, 10-3302
Secretaría de Cultura—INAH

This deity has its Classic-period antecedent in Teotihuacan’s War Serpent.² Continuing this association with warfare during the Late Postclassic period, the Mexicas’ patron god, Huitzilopochtli, carried a Xiuhcoatl spear-thrower. —KNR

In 1900, the Mexican archaeologist Leopoldo Batres excavated these gold ornaments in the Calle de las Escalerillas, near the Mexica Templo Mayor.¹ They were formed by hammering gold into sheets, cutting out the desired forms, and then embossing the details. Based on the distinctive segmented tails, the serpent ornaments can be identified as depictions of Xiuhcoatl (“Fire-Turquoise Serpent”).
217
Effigy Mask of Coyolxauhqui
ca. AD 1500
Mexico; Mexico
Greenstone
10.5 × 14.5 × 4 cm (4⅛ × 5⅞ × 1⅜ in.)
Cambridge, Peabody Museum of Archaeology and Ethnology, Harvard University, 28-40-20/C10108

Prominent bells on the cheeks of this mask, representing a disembodied head, reveal its identity: Coyolxauhqui (“She Who Has Facial Painting with Bells”), the sister of Huitzilopochtli (“Hummingbird(‘s) Left/South”),1 the Mexicas’ patron god. Coyolxauhqui and her four hundred brothers, the Centzonhuitznahua (“Four Hundred Southerners”), attacked their mother, Coatlicue (“Serpent Skirt”), after she miraculously conceived while sweeping on the mountain Coatepetl.2 Huitzilopochtli emerged from his mother’s womb fully armed with his Xiuhcoatl (“Fire-Turquoise Serpent”) spear-thrower, fending off the attack and slaying his siblings. Coyolxauhqui’s dismembered body rolled down the hill and came to rest. Although this myth represents the daily cosmological struggle between the moon and the sun—for Coyolxauhqui is the Moon Goddess and Huitzilopochtli is the Sun God3—it had political overtones as well. The Mexicas constructed their main temple, the Templo Mayor, as a symbolic representation of Coatepetl and dedicated it to Tlaloc (the Rain God) and Huitzilopochtli (see Caplan, this volume).4 At the foot of Huitzilopochtli’s side of the double-pyramid platform was a monumental relief depicting Coyolxauhqui’s broken body. When victims—often captives taken in battle—were sacrificed at the summit of the temple platform, their discarded bodies landed on this relief. As representations of a defeated enemy, sculptures of Coyolxauhqui would have reminded potentially rebellious groups within the Aztec Empire of the consequences of defying their overlords.5

Like its monumental counterparts, this sculpture features the deity’s iconic gold ornaments: the bells on the cheeks and the ear pendants. The latter are composed of a round earspool with a dangling trapeze-and-ray sign, which represents the tail of Xiuhcoatl, thus associating Coyolxauhqui with war and alluding to the radiant nature of this Moon Goddess.6 Recent excavations at the Templo Mayor have unearthed her gold ornaments in Offering 167 (see cat. 218). The carved feathers on her head mark Coyolxauhqui as a sacrificial victim, while the closed eyes indicate that she is dead; holes on the side of the mask would have allowed for suspension. —KNR


218
Pair of Ear Ornaments
AD 1486–1502
Mexico; Mexico City, Templo Mayor of Tenochtitlan, Phase VI, Offering 167, Artifacts 2 and 91
Gold
8.8 × 4.2 cm (3⅜ × 1⅜ in.)
Mexico City, Museo del Templo Mayor, 10-654075, 10-654076
Secretaría de Cultura—INAH

218.1

218.2

218
Pair of Pear-Shaped Bell Pendants
AD 1486–1502
Mexico; Mexico, Mexico City, Templo Mayor of Tenochtitlan, Phase VI, Offering 167, Artifacts 100 and 233
Gold
2 × 0.9 cm (¾ × ⅜ in.)
Mexico City, Museo del Templo Mayor, 10-654077, 10-654078
Secretaría de Cultura—INAH

218.3
Heart-Shaped Pendant
AD 1486–1502
Mexico; Mexico, Mexico City, Templo Mayor of Tenochtitlan, Phase VI, Offering 167, Artifact 263
Gold
4.1 × 2.6 cm (1⅝ × 1 in.)
Mexico City, Museo del Templo Mayor, 10-654079
Secretaría de Cultura—INAH
The Templo Mayor was the terrestrial representation of Coateteloc (“Mountain of Serpents”), a mythical setting where Coatlicue, an earth goddess, gave birth to Huitzilopochtli, the Sun God, right at the moment when she was about to be assassinated by her daughter, Coyolxauhqui, the Moon Goddess. The first diurnal and nocturnal confrontation then ensued: Huitzilopochtli was victorious, and Coyolxauhqui’s dead body fell from the top of the mountain. This myth explains why the Mexicas placed at the base of their main pyramid at least two large sculptures—one corresponding to Phase IVa and the other to Phase IVb—of a decapitated and dismembered Coyolxauhqui.

In 2015, in the same section of the building, though dated to Phase VI, archaeologists discovered an offering that contained the earrings and gold bells of Coyolxauhqui. Perhaps to denote the goddess’s defeat, the priest who interred the objects surrounded them with obsidian projectile points and sacrificial flint knives. He also placed four sheet-gold representations of hearts, alluding to the vital organs of the goddess and her astral siblings, who, according to myth,1 were devoured by Huitzilopochtli. One of the hearts had been intentionally deformed, perhaps to signify that Coyolxauhqui was “ perverse” and “bad,” as inferred by the words yolochico, yollonecuil, and yollocuecuech (“ crooked,” “bent,” and “twisted heart”), or to “offend her” magically, as conveyed in the literal sense of the verb teyolilacoa (“to damage someone’s heart”).2 — LLL

1. Álvarez Tezozómoc 1975, 33–34.

Turquoise was one of the minerals used most widely by the Mexicas for making mosaics; its great value stemmed from its foreign and exotic character. Associated with fire, time, royal power, and political succession, this lithic material was employed to make insignia of some Nahua deities, and it was an emblem of power or a prestige item for Tenochca elites. Among the thousands of turquoise objects found at the Templo Mayor, only the mosaic disk from Offering 99 depicts seven figures dressed as warriors or gods similar to the Mixteca-Puebla tradition. Nevertheless, when this disk is compared with

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**Mosaic Disk**

**AD 1502–20**

Mexico; Mexico, Mexico City, Templo Mayor of Tenochtitlan, Phase VII, Offering 99

Turquoise

Diam.: 38.3 cm (15 1/16 in.)

Mexico City, Museo del Templo Mayor, 10–604,439

Secretaría de Cultura—INAH

Turquoise was one of the minerals used most widely by the Mexicas for making mosaics; its great value stemmed from its foreign and exotic character. Associated with fire, time, royal power, and political succession, this lithic material was employed to make insignia of some Nahua deities, and it was an emblem of power or a prestige item for Tenochca elites. Among the thousands of turquoise objects found at the Templo Mayor, only the mosaic disk from Offering 99 depicts seven figures dressed as warriors or gods similar to the Mixteca-Puebla tradition. Nevertheless, when this disk is compared with
ACADEMIA DE GEOGRAFÍA E HISTORIA DE COSTA RICA 1952

ACEVEDO 2000

ACOSTA 1972

ACUÑA (C. 1580) 1987

AFANADOR PUJOL 2015

ALCALÁ 2013

ALDENGERFER ET AL. 2008

ALLEN 2002

ALONSO ET AL. 2012

ALVAREZ, ONOFRE 1930

AGUILAR PIEDRA 1972

AGUILERA GARCÍA 2001

AGURCIA FASQUELLE, SHEETS, AND TAUBE 2017

ALVAREZ, ONOFRE 1930

ALVARADO TEZOZÓMOC 1878

ALVARADO TEZOZÓMOC 1975

ANAULT 1980

ANAWALT 1998

ANDERS, JANSEN, AND REYES GARCÍA 1993
BISHOP AND LANGE 1993

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BISHOP ET AL. 1998

BLEICHMAR AND MANCALL 2011

T. BRAY 2009

T. BRAY 2015

T. BRAY ET AL. 2005

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HEYERDAHL, SANDEWS, AND MARVÁEZ 1995

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HOCQUENGHEM 1999

HOOPES 2005

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HOOPES AND FONSECA 2003

HOSLER 1994

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HOUSTON 2012

HOUSTON 2016

HOUSTON, FORTHCOMING

HOUSTON AND STUART 1989

HOUSTON AND TAUBE 2000

HOUSTON AND TAUBE 2008

HOUSTON, STUART, AND TAUBE 2006

HOVE 2016

HOVE AND PETERSEN 1994

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KUNZ 1890

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