

The Formative Heritage in Central Mexico: Proyecto Arque-ologico Tlalancaleca, Puebla

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The Formative Heritage in Central Mexico: Proyecto Arqueológico Tlalancaleca, Puebla

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Introduction

In Central Mexico, archaeologists look to the origins of state society at Teotihuacan, a metropolis that developed with such supremacy that its influence reached almost every corner of Mesoamerica [Braswell 2003; García-Des Lauriers and Murakami 2021; Hirth, et al. 2020]. However, what catalyst drove the rise of Teotihuacan? Tlalancaleca is a key archaeological site for answering this question given that Tlalancaleca declined as Teotihuacan gained its hegemony [García Cook 1973, 1981]. Furthermore, the Teotihuacan state did not develop in a vacuum, but was instead a product of specific historical processes that implemented accumulated knowledge and technology since earlier times [e.g., Cowgill 2015: 41-46; Plunket and Uruñuela 2012a: 33-34]. Past and recent research continue to confirm that Tlalancaleca and the Puebla-Tlaxcala Valley were key places in these processes [Carballo 2016; García Cook 1981; Lesure 2014; Murakami, et al. 2017]. In this chapter, we disentangle these processes and demonstrate that Tlalancaleca and other Formative

centers were the heritage out of which later societies developed in Central Mexico.

We do so by focusing on the cultural elements inherited by Teotihuacan, especially the worldviews materialized in the urban landscape. We define worldview as the beliefs shared by the ancient people about how the world was formed, the beings that exist in it along with their place and roles. The materialization of worldview is not a monothetic process but comprises diverse manifestations and media [e.g., DeMarrais, et al. 1996]. Worldviews were often materialized by recreating the cosmos among the layout and orientation of settlements, pyramid structures, caves, and other human-made and natural features of the landscape. In Central Mexico, there seemed to be a commonly shared worldview (and a system of knowledge) in place by the Formative period at early cities like Cuicuilco, Xochitécatl, and Tlalancaleca (Figures 1 and 2). These cities developed prior to Teotihuacan and evidence suggests strong historical continuities in worldview between them and Classic and Postclassic



Figure 1. General View of the Archaeological Site of Tlalancaleca (taken from northeast).

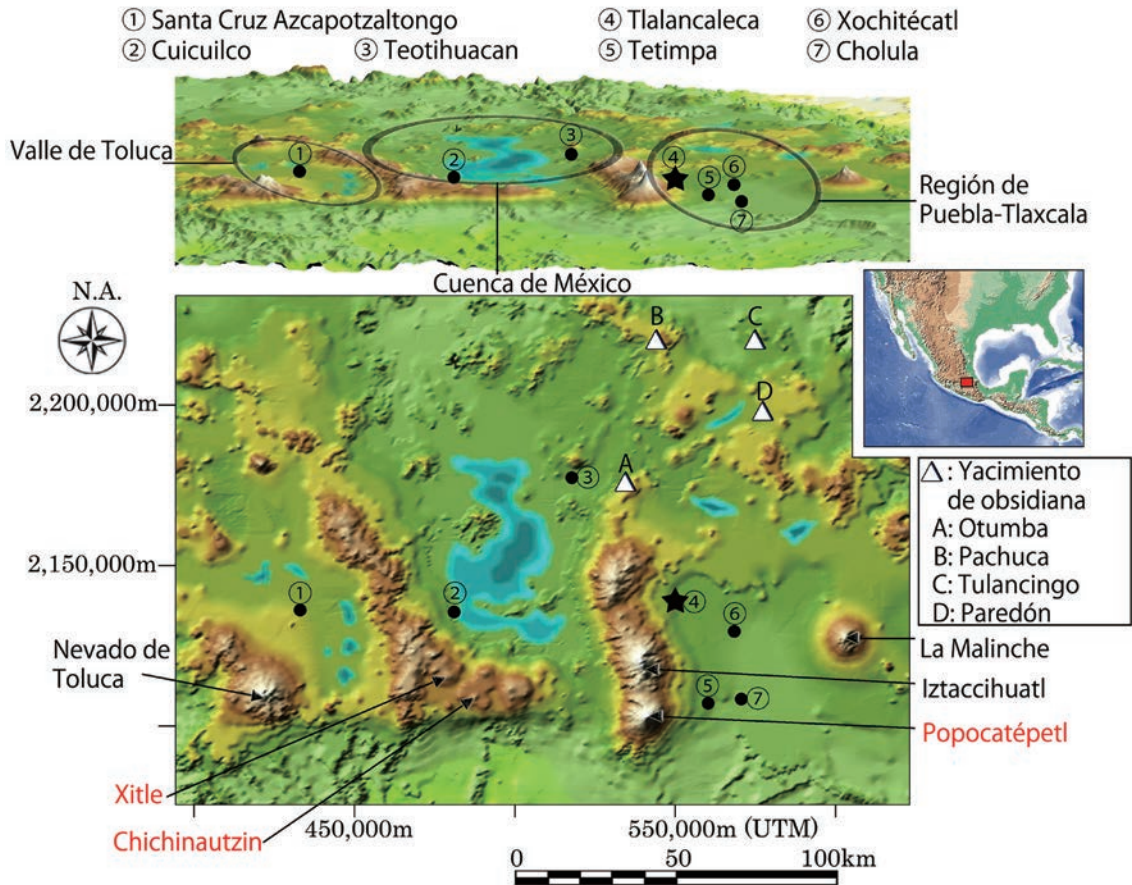


Figure 2. Map showing the location of important archaeological sites in Central Mexico.

period cities [Carballo 2016]. The production of the central authority and a corporate ideology was likely predicated on the materialized worldview at Classic Teotihuacan [Headrick 2007; Murakami 2016; Sugiyama 2005]. Therefore, paying attention to which aspects of the Formative period worldview persisted and changed is key for understanding how the Teotihuacan state emerged out of the sociopolitical and ideological processes of earlier societies. In this chapter, we provide some alternative interpretations regarding the formation of the Teotihuacan state from the perspective of historical continuity, based on the results of the Proyecto Arqueológico Tlalancaleca, Puebla (PATP).

Urbanization and State Formation at Teotihuacan: The Origins of Materialized Worldview

Why did people nucleate at Teotihuacan? How did population nucleation tie into state formation at Teotihuacan? According to previous studies, large-scale population movement was the result of volcanic eruptions by the Popocatepetl, Chichinautzin, and Xitle volcanos [e.g., López Austin and López Luján 2001: 116-126]. These eruptions occurred between the first and third centuries AD and caused, directly or indirectly, the decline and abandonment of Cuicuilco and other centers [Siebe, et al. 2004].

During the Patlachique phase (100-1 BC), Teotihuacan and Cuicuilco were incipient cities with estimated populations between 20,000 and 40,000 inhabitants [Cowgill 1974, 2003; Parsons 1974; Sanders, et al. 1979]. Given these observations, Teotihuacan and Cuicuilco have long been conceived as rival polities. The volcanic eruptions tie into this rivalry, for Teotihuacan supposedly eclipsed its rival as it incorporated refugees from the southern Basin of Mexico and the western part of the Puebla-Tlaxcala valley. Archaeologists have promoted this migratory phenomenon as the foundation of state formation at Teotihuacan [Cowgill 2015; Nichols 2016].

However, Teotihuacan was unlikely a mature state with strong political and economic bases during this time period [Murakami 2014; cf. Cowgill 2000; Millon 1981]. So, if this was the case, how would Teotihuacan have received, managed, and maintained thousands of refugees? More importantly, why would those refugees have migrated to Teotihuacan rather than other Formative centers or founding new settlements entirely? Scholars point to fertile lands, the sacred nature of place, and the city's proximity to obsidian sources and other natural resources as factors that might have attracted migrants [Cowgill 2000, 2015; Millon 1981, 1993; Sanders, et al. 1979].

That said, would not the inhabitants of Cuiculco and other nearby areas also have sought secure and fertile lands with abundant natural resources prior to the volcanic eruptions? The problematic premise pervading discussions of this topic is that human decision-making processes depend solely on natural circumstances. Archaeological data defies this premise, indicating a need for alternatives. Take for example, the Toluca Valley, located to the west of the Basin of Mexico. It shows no substantial impact by the volcanic eruptions nor an influx of migrants and yet there was plenty of fertile land within the valley [Sugiura 2005: 315-317]. Therefore, we need to account for population nucleation at Teotihuacan with other factors besides natural environment.

Returning to Teotihuacan and Cuiculco, there was an important difference between the Patlachique phase centers: Teotihuacan lacked comparable large-scale monumental structures to the ones found at Cuiculco. If we take this to mean that powerful ruling elites governed at Cuiculco while a confederation of local, autonomous communities governed at Early Teotihuacan [Angulo V. 2007; Murakami 2014], it would seem that politics/governance and socioeconomic processes accounted for immigration to the city more than natural environment [Millon 1993]. More importantly, we think that the materialized worldview would have been a major attraction to newcomers.

We argue that the worldview materialized in state/public architecture at Teotihuacan, such as the Moon and Sun Pyramids

[Sugiyama 2005], had roots in earlier societies [Murakami, et al. 2017]. We see these monumental structures as signs that ancient people saw religious meaning in elements of the natural landscape, such as mountains, rivers, and caves – beliefs and a tradition of materiality that we understand to have preceded Teotihuacan in the religious practices of much earlier societies. However, there is a gap in our knowledge and data between earlier stages and the materialized worldview at Teotihuacan in Central Mexico [but see Grove 1999]. Archaeological data from Tlalancaleca are now filling this gap. We contend that it is critical to examine diachronically how worldviews were materialized to better understand early urbanization and state formation. The success of the materialized worldview at Teotihuacan owes not only to the technology and knowledge that developed in the city itself but also its cultural heritage from earlier societies.

Archaeological Site of Tlalancaleca

Tlalancaleca is located 4 km southwest of the present town of San Matías Tlalancaleca and 19 km northeast of the Iztaccíhuatl volcano. The epicenter of the site is on a plateau-like hill flanked by two gullies (approximately 2,500 m asl), locally called La Pedrera due to the abundance of rocks. La Pedrera is roughly 5.5x1.2 km (its elongated form runs along the east-west axis) and rises from 50 m to 100 m above the valley that extends east of the site (Figure 3). From this vantage point one can look across the valley bottom of the Puebla-Tlaxcala region. Access

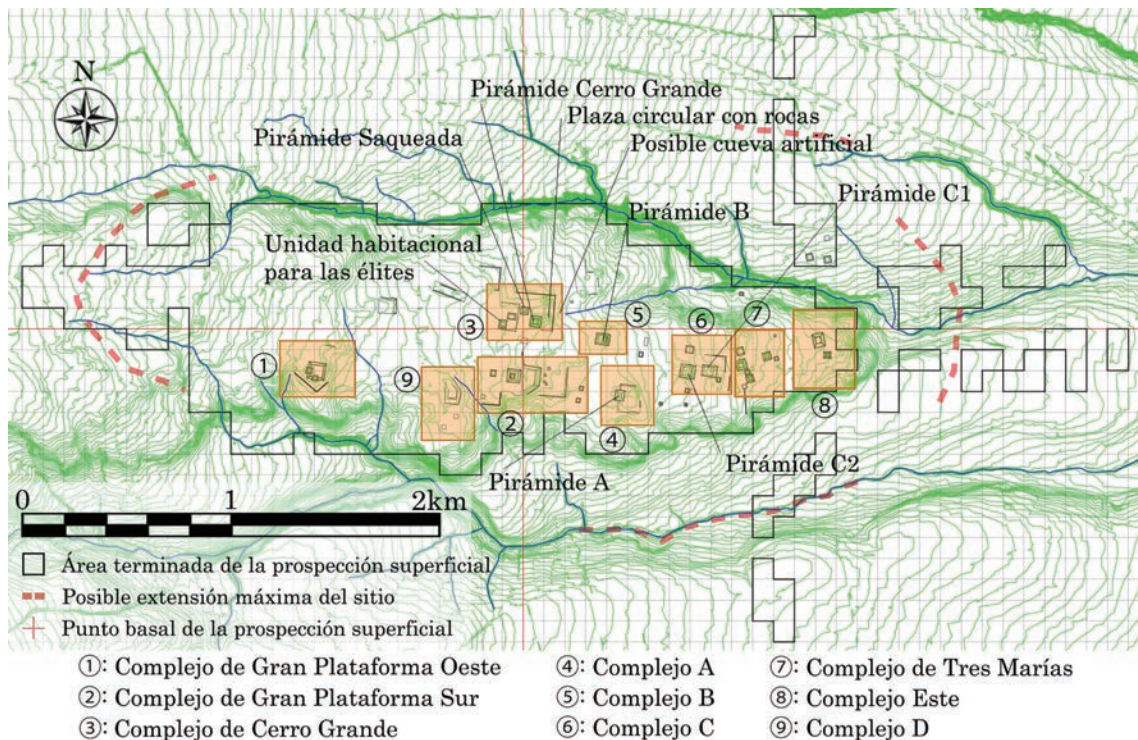


Figure 3. Map showing the location of major architectural complexes at Tlalancaleca.

to La Pedrera is difficult; gullies and ravines inhibit entry from the north and northwest, and cliffs inhibit ascent from the east and south.

Previous research [García Cook 1973, 1981] posits that Tlalancaleca was settled by sedentary inhabitants around 1200 BC (modified to 800 BC by Lesure, et al. 2014), reached its apogee around 600 or 500 BC, and was abandoned around AD 100 (Figure 4), prior to state formation at Teotihuacan. Yet,

similarities or continuities in a number of cultural traits between Tlalancaleca and Teotihuacan suggest their histories were closely entwined [García Cook 1973, 1981, 1984]. These cultural elements include the talud-tablero architectural style, lime plaster (or white coating), and representations of the Old God of Fire (Huehuetótl) (Figure 7b) and Storm God (Tláloc) (Figure 5). Given these cultural traits, the high density of monumental structures and magnitude of the site, Tlalancaleca was a major civic-cere-

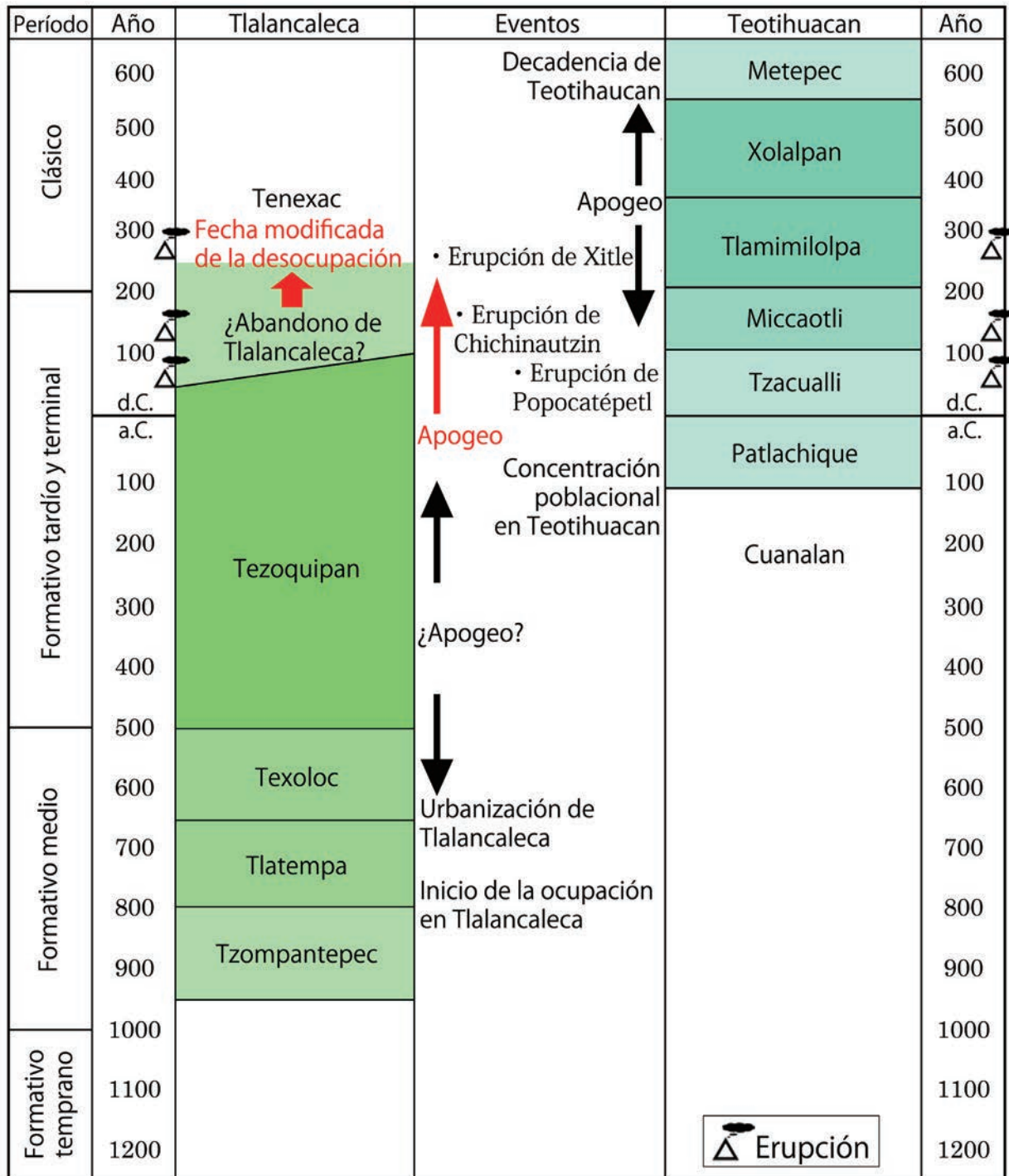


Figure 4. Chronology of Tlalancaleca and Teotihuacan.



Figure 5. Sculpture of Pre-Tlálloc (the right photogrammetric image created by Ariel Taxis Muñoz).



Figure 6. Stone brazier of the Old God of Fire discovered at the Sun Pyramid (photo courtesy of Alejandro Sarabia).

monial center and peer among Teotihuacan and Cuicuilco. Current evidence suggests the political, economic, and religious influence of Tlalancaleca went beyond the Puebla-Tlaxcala region. Despite its clear importance, there was no long-term archaeological project nor large-scale excavations carried out at Tlalancaleca after García Cook's Proyecto Arqueológico Puebla-Tlaxcala first drew attention to the site and conducted pilot work. We intend to rectify the gaps at Tlalancaleca through our project the Proyecto Arqueológico Tlalancaleca, Puebla [Murakami, et al.



Figure 7. Vertical order (from the top, a: Popocatepetl; b: brazier with the image of the Old God of Fire; c: Cerro Grande Pyramid; d: Entrance of a possible artificial cave)

2017; Murakami, et al. 2018].

Worldview Embodied in Material Culture at Tlalancaleca

In this section, we review archaeological evidence at Tlalancaleca that suggests a degree of continuity in worldview and its materialization at Tlalancaleca and Teotihuacan. We want to draw particular attention to a verticality that characterizes this materialization in landscape and material culture. To begin, we turn to Teotihuacan's Sun Pyramid (ca. 224×223×64 m). At the top of this pyramid, inhabitants deposited a brazier dedicated to the Old God of Fire or Huehuetéotl [Sarabia González and Núñez Rendón 2017] (Figure 6). Beneath the pyramid, inhabitants constructed an artificial cave [Heyden 1975, 1981]. This vertical order (Old God of Fire-pyramid-cave) was created by inhabitants of Tlalancaleca several decades or a century prior (Figure 7). Cerro Grande, Tlalancaleca's largest pyramid (ca. 55×53×17 m; Figure 7c), is located at the center of the site and contained a stone brazier of Huehuetéotl interred at its top (Figure 7b). Roughly 100 meters to the east of the pyramid, there is a large sink hole indicating the presence of a subterranean cave (Figure 7d).

We suggest that this verticality materialized at both sites relates to common meanings conceptualizing sacred mountain in the Mesoamerican landscape. Plunket and Uruñuela (2012b: 40) explain that these meanings consist of 1) the center and cosmic axis of the world; 2) the origin place of human beings; 3) the house of the patron deity; 4) source of social order, power, and authority; and 5) the dwelling of the dead. The sacred mountain is not only located at the center of the world from which all land extends towards the cardinal directions, but also represents an axis mundi – a vertical axis articulating/linking sky, earth, and underworld. To Mesoamerican people, therefore, this made the axis mundi (and the pyramid replicating the sacred mountain) an important place for communicating with supernatural beings.

At Tlalancaleca, we interpret the Cerro Grande Pyramid as a place where people communicated with supernatural beings associated with the prominent volcanoes of the landscape. Given that the Popocatepetl (Figure 7a) was an active volcano (and continues as so to present), it was a living being to which inhabitants of Tlalancaleca needed to attend. The representation of the Old God of Fire on top of the Cerro Grande Pyramid, a sculpture manufactured with the material extracted from the volcanic mountains, clearly indicates one of the deities people venerated with obvious allusions to a mountain that smokes. Ruling elites at Tlalancaleca might have served as the intermediaries between gods and human beings through rituals carried out on top of this

pyramid. If these rituals integrated different social sectors, this might have made possible the collective labor for the construction of the cave located to the east of the pyramid. Although we still need to verify whether this subterranean feature goes underneath the pyramid and whether it is human-made through further fieldwork, the sink hole alludes to the planned action for installing an entrance to the underworld. We think the coordinated materialization of these elements (cave, pyramid, and Huehuetéotl) could not have been carried out without the establishment of a sophisticated intellectual system. Therefore, the execution of materializing worldview at Tlalancaleca represents a certain degree of social maturity.

Other archaeological data supporting our interpretation include evidence of religion and time-keeping (Figure 8) and uniformity in architectural orientation and style. These cultural elements characterize other sites within the Puebla-Tlaxcala region [Carballo 2016] and were later homogenized at Teotihuacan [Carballo 2009; Cowgill 2015; Millon 1993; Murakami 2014; Sugiyama 2005]. This might mean that immigrants from the Puebla-Tlaxcala region contributed to the materialization of worldview—and thus, state—at Teotihuacan.

We think that some of the cultural traits that were masterfully executed at Teotihuacan were directly inherited from the Puebla-Tlaxcala region where Tlalancaleca played a principal role. Presumably Tlalancaleca was already organized by ruling elites with a complex social stratification by at least the Late Formative (500-100 BC). Therefore, the similarities observed at Teotihuacan do not simply represent those of style and the tradition of material culture; they imply the complexity of human behavior



Figure 8. Sculpture that represents the calendric system (exhibited at the Community Museum of San Matías Tlalancaleca).

that sought to express visibly the legitimacy of the government through the materialization of the worldview. This could be an indirect proof that Teotihuacanos took as their politico-religious foundation the intellectual system established at Tlalancaleca (Figure 9). We do not think, however, that Teotihuacan rulers inherited cultural elements of earlier societies randomly. Specific elements were selected with intention for managing the foundation of the state with success.

State Formation: from Tlalancaleca to Teotihuacan

Within the framework of the PATP, we have carried out nine field seasons between 2012 and 2022 exploring various parts of the La Pedrera and its surrounding area [Kabata, et al. 2014; Murakami, et al. 2017; Murakami, et al. 2018] through: 3D mapping with a total station and drone, survey and surface collection, auger probing, geochemical analysis of soils, and excavations. In this section we present some of the results and discuss alternative interpretations for better understanding urbanization and state formation at Teotihuacan.

The ceramic chronology of the Puebla-Tlaxcala region has well defined complexes/phases, but its absolute dates required and have undergone significant revision [Lesure, et al. 2006;

Lesure, et al. 2014; Murakami, et al. n.d.]. This made it difficult to compare social dynamics of the adjacent areas synchronically but as this project revises the absolute dates, we lay the evidence for interpretations that articulate Teotihuacan and Tlalancaleca as interacting peers. We argue that between AD 150 and 200 (Teotihuacan was developing as a state [Murakami 2014]), Tlalancaleca had not been abandoned but rather was a powerful polity undertaking the construction of numerous monumental structures [Kabata and Murakami 2015: 149-154]. This is based on the results obtained from excavations at Structure C1 (Fase IIIa and b: 71x58x14 m; Figures 10 and 11).

Within this pyramid, two substructures of earlier phases were found. The pyramid of the second construction phase had a volume of ca. 52x42x14 m (Figure 12) with four stacked platforms with talud and vertical wall. Later, another platform was built (71x58x1.3 m) covering the first (basal) platform of the Phase II. Radiocarbon samples collected from an earthen floor assigned to Phase II (capa X in Figure 13) date it to around AD 150-200. This corresponds to the penultimate construction stage and the final extension occurred after this date. This indicates that state formation at Teotihuacan and the urban apogee at Tlalancaleca occurred contemporaneously [Murakami, et al.

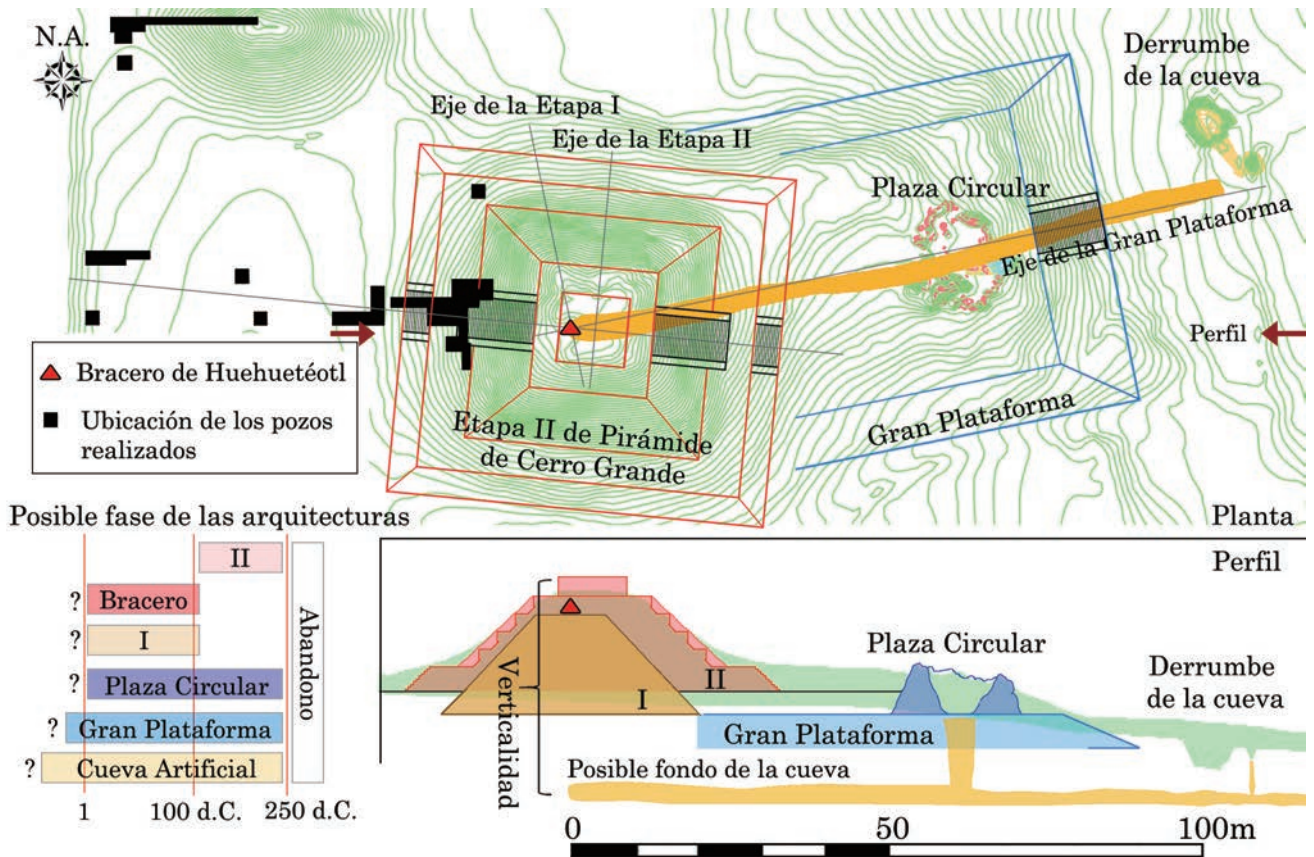


Figure 9. Schematic reconstruction of the possible vertical order with architectural elements observed at the Complex of Cerro Grande.

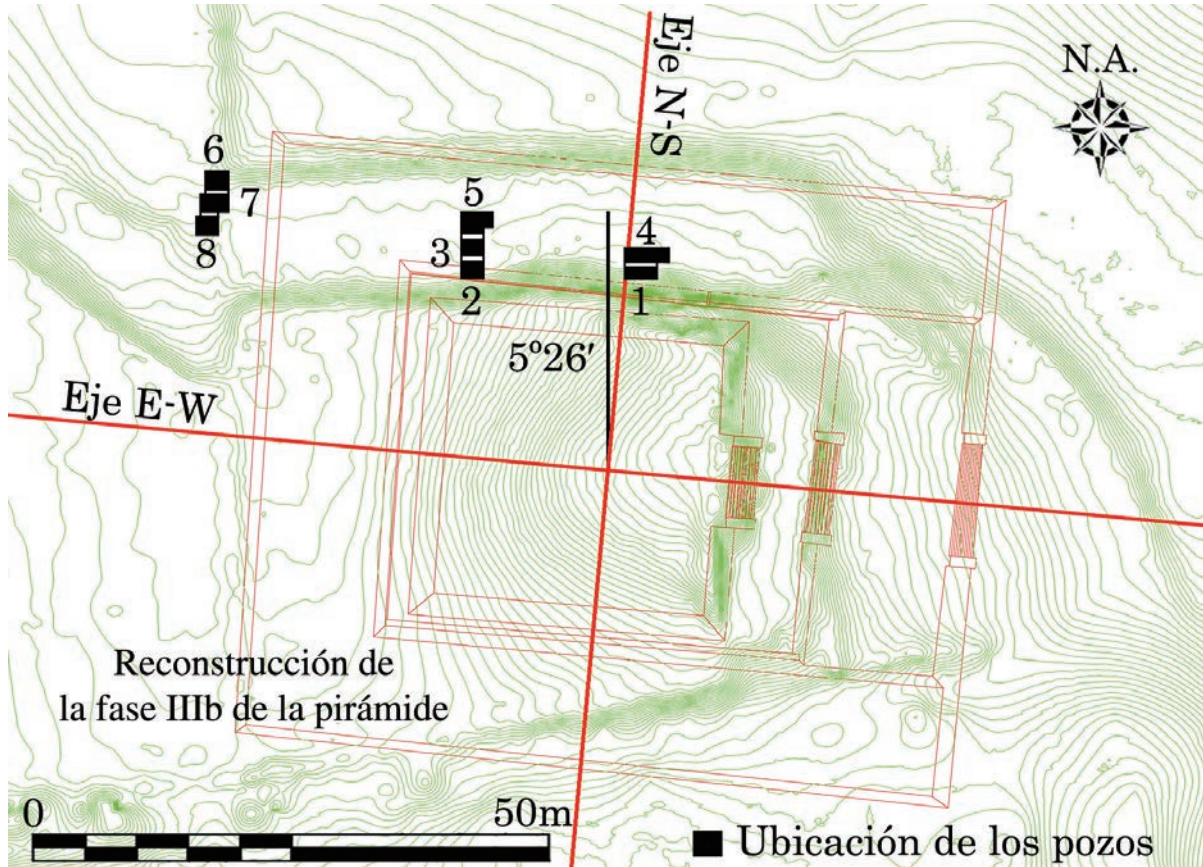


Figure 10. Plan of Structure C1 showing the location of test excavations and the reconstructed form of the platform.

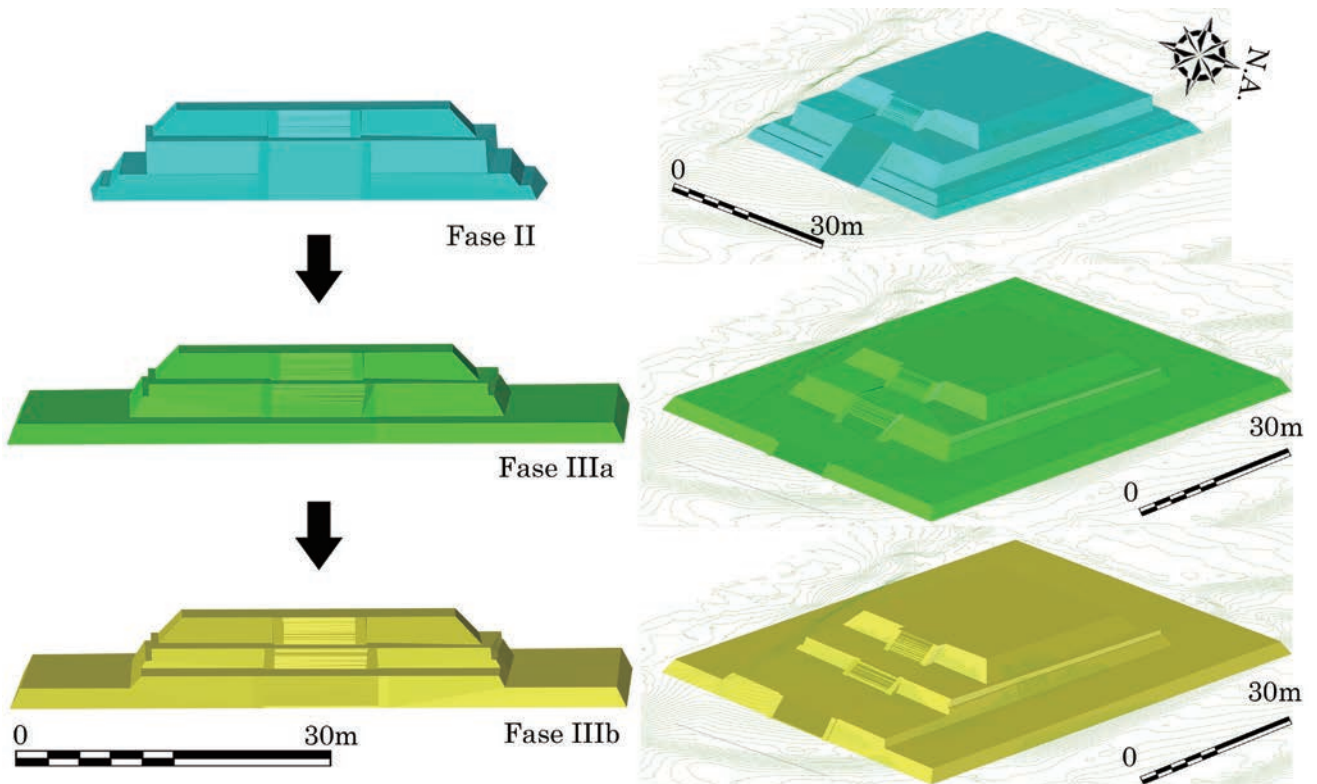


Figure 11. Construction process of Structure C1 created using AutoCAD (Fase I cannot be reconstructed due to the lack of data; reconstructed by Hironori Fukuhara).



Figure 12. General View of Pits (Pozos) 2, 3, and 5 (taken from northwest).

2017]. Tlalancaleca, therefore, clearly survived the Plinian eruption of Popocatepetl around AD 70. In fact, we did not identify any ash layer that would have derived from the eruption in auger probing across the site. We would also add that state formation at Teotihuacan does not only reflect social transformation associated with the development and decline of Tlalancaleca, but rather a macroregional dynamics in Central Mexico.

It is difficult to reconstruct in more detail the relationship between the decline of Tlalancaleca and the emergence of the Teotihuacan state with our data currently available. However, there are several scenarios we still think critical to evaluate at present: 1) ruling groups at Tlalancaleca migrated to Teotihuacan and promoted the foundation of the Teotihuacan state; 2) Tlalancaleca and Cuicuilco were competing with each other in the middle of social disorder and conflicts originated in the volcanic erup-

tions; Teotihuacan began to gain power as an independent entity; and 3) Tlalancaleca, Teotihuacan, and probably Cuicuilco built a confederate state, with Teotihuacan serving as the capital.

The first alternative is not sustainable to judge the current evidence. Considering the presence of several architectural complexes within the site that pertain to the same phases (Figure 3), we presume the objectives and desires of the leaders at Tlalancaleca were not uniform but variable, and so it is risky to assume that everyone was unanimously dedicated to building the Teotihuacan state. While some groups of people could have looked towards Teotihuacan for a new base, supposing Tlalancaleca was abandoned by the gods due to the volcanic eruptions, others might have stayed at Tlalancaleca and attempted to reinstate the polity. Those groups who stayed at Tlalancaleca, as in the second alternative, could have employed a strategy that disagreed with that of Teotihuacan (and Cuicuilco). Conversely, as in the third alternative, Tlalancaleca's leaders, with their sustained autonomy, could have selected a collaborative relationship with Teotihuacan to thwart off social disorder.

Regarding the timing of the abandonment of Tlalancaleca, the data from the Circular Plaza (Figures 9 and 14) located at the eastern side of the Cerro Grande Pyramid, though indirect, are suggestive. The inner space of the plaza is 15 m in diameter, and boulders (volcanic rocks larger than 1 m³) form its perimeter. To judge from the stratigraphy and the abundance of Tlaminilopa phase (AD 250-350) Thin Orange ware, it is feasible that groups linked to Teotihuacan, Cholula, or other polities reused this space. In other words, the abandonment of Tlalancaleca occurred

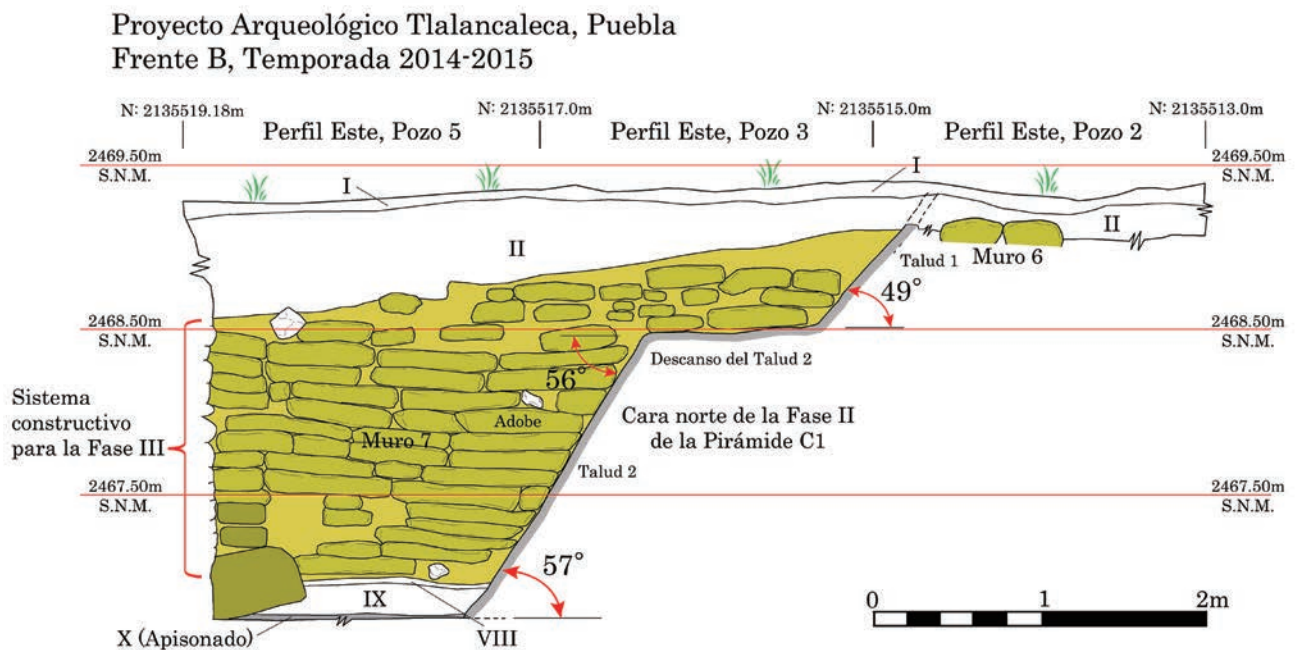


Figure 13. Profile drawing of Pits (Pozos) 2, 3, and 5 (Roman numerals refer to layer numbers).



Figure 14. General view of the Circular Plaza (taken from west).

between AD 250 and AD 350.

Conclusion

Teotihuacan certainly inherited part of the intellectual system and its materialization conceived by Formative societies. However, taking into account that the moment of depopulation at Tlalancaleca coincides with the expansion of the Teotihuacan state [García-Des Lauriers and Murakami 2021], there was probably some paradigm shift; Teotihuacan's ruling elites refined the intellectual system and materialized it more faithfully, which may have been represented in the construction of the Feathered Serpent Pyramid [Sugiyama 2005]. This would have allowed the state to expand successfully to other regions. We emphasize that in order to clarify state formation at Teotihuacan, it is necessary to examine cultural continuities and discontinuities between Formative and Classic societies placing these societies on the same historical axis.

While there are a number of studies that focused on the factors that fueled the development of state society at Teotihuacan, there are few studies that delve into why the Teotihuacan state formed in the specific place that it did, and the mechanisms by which social transformation resulted in power centralization and population nucleation. We see in the majority of previous studies problematic dichotomy between internal and external factors. We think articulating both in interpretations is key, which we can do by studying geopolitical relations in the surrounding areas, the environment, and internal factors. The internal and external dichotomy characterizing interpretations is in part due to the influence of politics in the academia and the formation of nationalism in Mexico, particularly in the sense of promoting tourism; the flow of researchers and funding gets concentrated both qualitatively and quantitatively at Teotihuacan, a phenomenon that increases archaeological data from the metropolis on the one

hand but decreases data from sites representing the surrounding societies. All this has resulted in a Teotihuacan-centered perspective in archaeological interpretations. This centrality has made it difficult to develop a diachronic perspective to study Formative societies in relation to Teotihuacan and its state formation. Moreover, it has inhibited to develop a synchronic perspective that sees macroregional processes without imposing a pre-defined center-periphery structure. In this sense, our project has a potential to develop a new perspective that views societies that developed earlier than Teotihuacan or those in the surrounding areas as equally important constituents of sociopolitical dynamics in the Formative-Classic transition.

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