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2



## Mesoamerica's First World City

### Teotihuacan in Comparative Perspective

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**T**EOTIHUACAN WAS A WORLD CITY. Within the context of the known Mesoamerican world in the Classic period, Teotihuacan stood out as the most international and cosmopolitan city. It was also the largest and most unique city in Mesoamerica. An understanding of Teotihuacan and the world beyond the city requires us to view the ancient city from two distinct perspectives: external and internal. The external perspective is the primary subject of this volume, and I offer some potentially helpful models in chapter 15.

When we consider Teotihuacan from an internal perspective, a striking picture emerges. Along with various cosmopolitan traits—such as the existence of neighborhoods of foreigners, the widespread distribution of imported goods, and the presence of foreign writing and artistic styles—were a series of unique features that point to a level of separation from the city's surrounding context in Central Mexico. The urban designers of Teotihuacan chose to create a novel plan for the city, with a new orthogonal layout and an innovative

form of luxurious residence, the apartment compound. These and other features of Teotihuacan signal forms of society and social relations very different from other Mesoamerican cities. Yet not everything about life and society in Teotihuacan was special and distinct; in many ways, the economy and society of Teotihuacan closely resembled those of its Mesoamerican peers. Teotihuacan's local and regional economies did not differ greatly from other cities, and the demographic processes that brought people into Teotihuacan do not appear to have been unique or radical. These combinations of unique and standard features, of foreign and local traits, give Teotihuacan its distinctive nature.<sup>1</sup>

### Teotihuacan as a World City

One way of highlighting the distinctive features of Teotihuacan within Mesoamerican is to use the “world city” concept. Coined by the Scottish planner and polymath Patrick Geddes (1915), the

concept refers to cities that stand out for their economic, political, and cultural prominence, and that have a range of influence that covers the known world (Hall 1984). Today, the terms “world city” and “global city” are used to describe large cosmopolitan urban centers, such as New York and London, that have strong economic influence around the globe because they are the seat of advanced global financial institutions. Their economic context and reach extend far beyond their own nation-state to encompass the entire world (Abu-Lughod 1999; Brenner 2001; Friedmann 1986; Sassen 2011). Because this concept of the “world city” is defined in relation to the modern capitalist economy, it is not directly applicable to the ancient world.

If we broaden the concept of “world city,” however, it can be a useful term for describing the roles of a few large and distinctive cities in ancient times. John Friedmann’s (1986) influential definition of the world city (see discussions in Knox 1996; Therborn 2011) has seven points. Four pertain exclusively to the contemporary economy, but three are broad enough to encompass cities in the ancient world. These three generalizable traits are: 1) a world city’s external or international relations affect its internal dynamics; 2) a world city is a place of concentration of capital; and 3) a world city is a major destination for international migration. From this broader perspective, some urban scholars have pointed to the existence of world cities in the distant past. Paul Knox (1996), for example, acknowledged the importance of world cities at least as early as the sixteenth century, and Peter Hall (1966) pointed out that throughout history some cities have been heavily involved in trade and other international interactions and can thus be considered global or world cities.

The best example of a world city in ancient times is Imperial Rome. Its distinctive features within the known world at the time are explored in *Rome the Cosmopolis* (Edwards and Woolf 2002). Rome was the largest city in the world prior to the Industrial Revolution. It was the setting for social, economic, demographic, and cultural processes that linked the city to the vast reaches of the Roman empire. No other city was like Rome, and it is impossible to

understand the world at that time without taking the city of Rome into account. Teotihuacan played a parallel role in Classic-period Mesoamerica. It was the largest city prior to Aztec Tenochtitlan. The social, economic, demographic, and cultural processes that linked Teotihuacan to the rest of Mesoamerica (which are the subject of this volume) were stronger and more prominent than at any other Classic-period city. Like Rome, Teotihuacan was a world city, unique and influential within its historical context.

### Teotihuacan as a Normal Mesoamerican City

In order to capture the distinctive nature of the city of Teotihuacan, I classify some of the city’s unique traits as either “normal” or “unusual” (Figure 2.1). I employ a similar scheme in chapter 15 to organize the city’s external relations with other parts of Mesoamerica. This judgment clearly requires significant simplification of complex traits; see note 1.

#### *The Teotihuacan Economy*

In the realm of the economy, Teotihuacan does not seem radically different from other Mesoamerican urban centers. This judgment is tentative, because there is still a lot we don’t know about agriculture, demography, craft production, exchange, and domestic consumption at Teotihuacan. Nevertheless, a brief review of craft production, markets, and demography at the city shows a pattern that is not greatly different from the one found at other ancient cities in Mesoamerica (or other world areas).

The topic of *craft production* at Teotihuacan is both particularly important and particularly frustrating. Many archaeologists argue for a high level of specialized craft production at Teotihuacan (Carballo 2017; Cowgill 2015; Manzanilla 2009; Manzanilla et al. 2011; Sanders and Santley 1983; see also Hirth, this volume). In my view, however, it is premature to make judgments about the extent or intensity of craft production at Teotihuacan until three issues can be resolved. First, many relevant studies remain unpublished. Whether locked up in

Normal	Unusual
<b>Economic:</b>	<b>Urban:</b>
Craft production	Population size
Markets	Degree of central planning
Demography	Rejection of Mesoamerican principles
<b>Cultural:</b>	<b>Social:</b>
Architectural types and styles	Apartment compounds
Central Mexican ritual complex	Wealthy commoners
Presence of foreign styles and goods	Relatively egalitarian society
	<b>Political:</b>
	Collective government

*figure 2.1*  
Normal and unusual features of Teotihuacan. Chart by Michael E. Smith.

theses and dissertations, or unpublished reports, such research needs to see the light of day through publication, and preferably through a peer-review process. Second, quantitative interpretations of urban economic phenomena, such as the notion that craft production was extensive at Teotihuacan, require quantitative data to compare levels of outputs, production locations, or the number of crafts, to the urban population. In the absence of quantification, such judgments will remain subjective and impressionistic. These two obstacles to understanding craft production are logistical and empirical issues. They can be remedied with some targeted concerted effort. But the third obstacle may be more difficult to overcome: a pervasive—yet often unstated—bias against surface artifact distributions by archaeologists working at Teotihuacan.

There is a long-standing distrust of the informational value of surface artifact collections among urban excavators in many parts of the world. This distrust is usually based on a misunderstanding of the nature and value of surface artifact distributions. Excavators emphasize the many well-known problems of surface artifact collections (i.e., lower chronological control, vertical and horizontal mixing from later occupation and from plowing, etc.), and conclude that surface material does not provide anything close to the level of control and detail of excavated deposits. This, of course, is true. But surface materials have advantages that are lacking

in excavated deposits. Most significantly, they have far greater potential for studying spatial patterns on a wider and more detailed scale than excavations.

It is not reasonable to expect surface collections to provide the same level of detail and control as excavations. But if we consider the strengths of surface materials as offering important data on their own—distinct from what may be learned from excavation—then archaeologists can draw upon an extensive literature of methodological works designed to maximize the informational content from surface archaeology (Drennan, Berrey, and Peterson 2015; Francovich, Patterson, and Barker 2000; Johnson and Millett 2012; Lewarch and O'Brien 1981; Pasquinucci and Trément 2000; Sullivan 1998). These and other studies do not try to provide the same kinds of data as excavations; rather, they emphasize the unique contributions that surface remains can make. The primary insight of this work is that the surface archaeological record is a valuable source of information in itself, and not merely useful as a guide for where to excavate.

At Teotihuacan, the systematic analysis of surface artifacts collected by the Teotihuacan Mapping Project (Millon 1973) has long employed the insights and guidelines of the methodological works cited above (Cowgill 1974, 2006; Cowgill, Altschul, and Sload 1984; Robertson 1999, 2005, 2015; Robertson and Cabrera Cortés 2016). While archaeologists working on surface materials in

other areas point to the work of the Teotihuacan Mapping Project as a positive example (Whitelaw 2012:73–74), most excavators at Teotihuacan dismiss the value of the surface collections. While I can find only one published example of this view (Cabrera Castro 1991), it appears to be a deeply held viewpoint among almost all Teotihuacan excavators I have talked with.<sup>2</sup>

This bias against surface collection plays a major role in the current state of thinking about the obsidian industry of Teotihuacan (Hirth, this volume). Michael Spence (1981, 1987) identified a series of obsidian workshops from the surface collections of the Teotihuacan Mapping Project and argued that obsidian production played a major role in the Teotihuacan economy. John Clark (1986) published a critique (without looking at the artifacts), arguing that Spence's data were inadequate for documenting obsidian tool production. In fact, Clark claimed, very little obsidian production can be documented at the site. Since 1986, only a single reanalysis of these data—a study of a single context—has been carried out by an archaeological expert in technological analysis (Andrews 2002). The original collections are intact in the Arizona State University Teotihuacan Archaeological Research Laboratory in San Juan Teotihuacan, but no one has elected to reanalyze them beyond Andrews's single study. I can only conclude that the reason no one has looked at this material for several decades is the anti-surface bias among Teotihuacan excavators.

The limitations of surface collections as sources of information about craft production and other phenomena are well known; they are discussed in the methodological sources cited above. But careful attention to methodological guidelines and rigor can produce valid and useful findings from surface assemblages, as shown by numerous studies in Mesoamerica (e.g., Johnson 2014; Killion et al. 1989; Otis Charlton, Charlton, and Nichols 1993; Stark and Garraty 2004). Until the Teotihuacan Mapping Project surface collections are reexamined, the Spence-Clark debate will remain unresolved, and our understanding of Teotihuacan obsidian production—currently based on seven or eight small excavations—will remain limited.

I include *markets* as a normal urban trait at Teotihuacan. The argument that the Great Compound was a market is suggestive (Hirth, this volume), and I tend to accept it. But to my knowledge, methods for identifying commercial or market trade from household data (Garraty and Stark 2010; Hirth 1998) have yet to be applied at Teotihuacan. My inexperienced and non-quantitative take on Teotihuacan domestic assemblages is that they are consistent with the operation of a market system, but this is something that needs to be tested explicitly.

The *urban demography* of Teotihuacan is another normal trait, in which Teotihuacan resembles other early cities around the world. A recent reanalysis of the population and social organization of Teotihuacan concluded that the most likely estimate is 100,000 people in the Xolalpan period of maximal expansion, with minimal and maximal estimates of 60,000 and 120,000 (Smith et al. 2019). This study calculated residential areas for distinct categories of excavated residences and extrapolated them to the entire architectural map of the city (Millon, Drewitt, and Cowgill 1973). This new estimate is slightly higher than George Cowgill's final estimate of 85,000 people at the city's height (Cowgill 2015:141–143).

Several paleo-demographic studies have been carried out on excavated skeletal populations from Teotihuacan (Archer Velasco 2015; Huicochea and Márquez Morfín 2006). In her detailed paleo-demographic study of burial samples from the Tlajinga 33 apartment compound, Rebecca Storey finds that “Teotihuacan was fairly similar in demographic characteristics to other preindustrial cities” (Storey 1992:265). The population of this compound appears to have been declining through time due to high mortality levels caused by nutritional and disease stresses. Storey concludes that the magnitude of decline was “probably around 0.5 percent per year, or 5 persons per 1,000 population” (Storey 1992:263). This decline in urban populations before the modern era, caused by high mortality, is called the Law of Natural Urban Decrease or the Urban Graveyard Effect. First identified for cities in the Old World (De Vries 1984:179; McNeill 1976:95–96), the process also operated at

table 2.1

Immigrants as a percentage of all individuals in Teotihuacan burials, based on stable isotope analysis of human skeletal remains.

CONTEXT	TYPE	N	RESIDENT	IMMIGRANT	% IMMIGRANT	SOURCE
<b>Residential settings:</b>					32% (mean)	
San Jose 520	residential	5	5	0	0%	Nado, Zolotova, and Knudson 2017
La Ventilla Frente 2 and 3	residential	10	5	5	50%	Nado, Zolotova, and Knudson 2017
Tlajinga 33	residential	27	19	8	30%	White et al. 2004
Teopancazco	residential	40	20	20	50%	Manzanilla 2017
<b>Foreign enclave:</b>						
Oaxaca Barrio	residential	56	11	45	80%	White et al. 2004
<b>Sacrificial contexts:</b>					59% (mean)	
Moon Pyramid	sacrificial	32	10	22	69%	White, Price, and Longstaffe 2007
Feathered Serpent Pyramid	sacrificial	43	22	21	49%	Nado, Zolotova, and Knudson 2017; White et al. 2002

Teotihuacan—if we can extrapolate from this one commoner compound. Teotihuacan was like early cities in the Old World in that continual rural-to-urban migration would have been needed to maintain its population.

Recent stable isotope analyses of skeletal samples from Teotihuacan have documented just this process of rural-to-urban migration. The bioarchaeologists who have carried out these studies have been more interested in the places of origin of individuals at Teotihuacan than in documenting the level of migration. Table 2.1 reorganizes the basic data from these publications, classifying individuals as either residents (no evidence of major periods spent away from Teotihuacan) or immigrants; the reader can consult the original publications for details. The data in Table 2.1 show two interesting patterns. First, the relative frequency of immigrants in the three categories—residential settings, foreign enclaves, and sacrificial contexts—fits the current understanding of these groups at Teotihuacan (Manzanilla 2017; Nado, Zolotova, and Knudson 2017; White et al. 2010). Second,

there is a fair amount of variation in the frequency of immigrants in domestic contexts.

How usual or unusual is the level of immigration at Teotihuacan, compared to other ancient cities? While there are too few studies of population at Mesoamerican cities to make effective comparisons, some context is provided by stable isotope results on immigration at other cities; see Table 2.2. These are all urban contexts: cemeteries or other contexts in cities and towns. The amount of variation in these data is even greater, with immigration running from zero in Viking Dublin to 100 percent at Machu Picchu. As in the case of the Teotihuacan data, these results make sense in terms of our general understanding of urbanization in these various premodern urban contexts. For example, archaeologists have long suspected that the individuals buried at Machu Picchu were not local to the region but had been brought in as part of a labor tax arrangement (Rowe 1990).

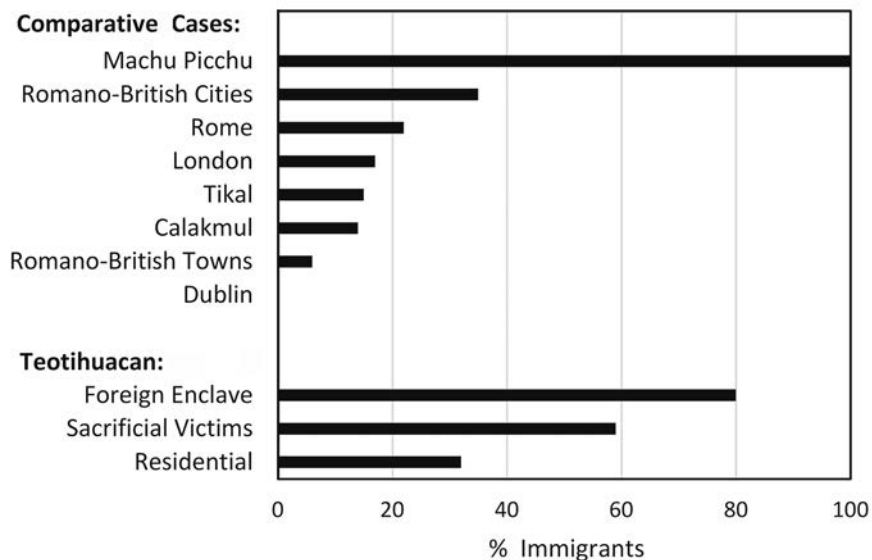
The two sets of results are compared graphically in Figure 2.2. One interesting pattern is that the average level of immigration in residential

**table 2.2**

Immigrants as a percentage of all individuals in burials at selected premodern cities, based on stable isotope analysis of human skeletal remains.

CONTEXT	TYPE	N	RESIDENT	IMMIGRANT	% IMMIGRANT	SOURCE
<b>Classical Rome:</b>					<b>22% (mean)</b>	
Portus	cemetery	61	41	20	33%	Prowse et al. 2007
Suburban Rome	cemetery	55	49	6	11%	Killgrove and Montgomery 2016
<b>Large Romano-British cities:</b>					<b>35% (mean)</b>	
York	cemetery	43	39	4	9%	Leach et al. 2009
Winchester	cemetery	40	21	19	48%	Eckardt et al. 2009
Chestershire	cemetery	21	11	10	48%	Chenery et al. 2010
<b>Small Romano-British towns:</b>						
Catterick	cemetery	33	31	2	6%	Chenery, Eckardt, and Müldner 2011
Medieval London	cemetery	30	25	5	17%	Kendall et al. 2013
<b>Tikal:</b>					<b>15% (mean)</b>	
elite	tomb	14	12	2	14%	Wright 2012
other	various	120	101	19	16%	Wright 2012
Calakmul	various	22	19	3	14%	Price et al. 2018
Machu Picchu	various	74	0	74	100%	Turner et al. 2009
Viking Dublin	various	11	11	0	0%	Knudson et al. 2012

*figure 2.2*  
Percentage of immigrants at Teotihuacan compared to other early cities; see Tables 2.1 and 2.2. Chart by Michael E. Smith.



contexts at Teotihuacan is comparable to the highest of the comparative cases, large Romano-British cities (leaving aside Machu Picchu). In other words, the level of immigration was high by comparative standards. This goes against expectations. A major portion of the high mortality that causes the Law of Natural Urban Decrease is generally attributed to the high levels of infectious disease in early cities of the Old World, caused in part by the presence of large domesticated animals in urban areas (McNeill 1976; Storey 1992:42–44). If the expectation that New World cities have lower mortality rates than Old World cities is correct, then the higher level of immigration at Teotihuacan is puzzling. One factor that may explain these data is the prestige and prosperity of Teotihuacan. As a true world city in Classic-period Mesoamerica, Teotihuacan may have attracted a greater number of immigrants than most other ancient cities.

### *Teotihuacan Styles and Rituals*

Teotihuacan does not stand out as radically different from other Mesoamerican cities in its styles of art and architecture, or the nature of its gods and rituals. In this section, I am less concerned with the content and meaning of Teotihuacan visual and ritual culture (see Robb, this volume) than with the general forms in these domains. I review briefly the themes of its architectural types and styles, the Central Mexican ceremonial/ritual complex, and the presence of foreign styles and goods in the city. These traits place Teotihuacan firmly within the canons of Pre-Columbian Mesoamerican cities and cultures, even when their expression at Teotihuacan is distinctive and different from other sites.

In most aspects of its architectural types and styles, Teotihuacan was not radically different from other Mesoamerican cities. As at all Mesoamerican cities, the dominant temples of Teotihuacan took the form of large pyramids, which were the locations of many rich offerings. Temples large and small were either adjacent to formal public plazas, or else plaza space was incorporated into the layout of a temple compound. There are a variety of elaborate buildings that were likely elite

residences and/or civic structures; these include many of the excavated structures along the Street of the Dead.

Although various scholars have argued for the presence of the Mesoamerican ballgame at Teotihuacan (Castillo Tejero and Arana 1991; Uriarte 2006), only one possible ballcourt has been excavated. Located in deposits under the Ciudadela compound (the “pre-Ciudadela” deposits), this structure was in use during Teotihuacan’s early years; it was buried with the construction of the Ciudadela compound (Gazzola and Gómez Chávez 2017; Gómez Chávez and Gazzola 2015). Thus, for much of its history, Teotihuacan lacked a dedicated ballcourt. While this was certainly unusual for a Mesoamerican city (Smith 2017b), most of the civic architecture at Teotihuacan clearly fits within the Mesoamerican urban tradition.

Teotihuacan, of course, does have its distinctive styles of architecture and visual art. The *talud-tablero* building facade has been much discussed (Gendrop 1984). Likely originating in the Puebla-Tlaxcala area (García Cook 1984; Plunket and Uruñuela 2012), this stylistic element came to be associated with Teotihuacan and was spread throughout Mesoamerica along with other stylistic and material markers of Teotihuacan. The profile of Teotihuacan’s largest pyramids is another distinctive trait. But these architectural markers—features that allow us to easily identify Teotihuacan, or Teotihuacan-related, buildings—are not at all unusual within the canons of Mesoamerican architecture (Gendrop 1997). In a similar fashion, the murals and other visual elements of Teotihuacan art certainly have their own distinctive and easily recognizable style (Fuente 1995; Pasztory 1976), but this is a Mesoamerican style, which was not at all out of place in the canons of Mesoamerican art (Miller 2001).

In a similar fashion, many of the material elements of ritual at Teotihuacan were part of a more widespread Central Mexican ceremonial/ritual complex. This complex developed in the Formative period and was then adopted by the people of Teotihuacan. As analyzed by David Carballo, the Central Mexican ceremonial/ritual complex

included a series of sacred concepts (about mountains, water, and cycles of time), two distinctive and important deities (the Old Fire God and the Storm God), and “a coherent suite of ritual paraphernalia” that included mirrors, bloodletters, censers, and other objects (Carballo 2016:213). These concepts, deities, and objects linked Teotihuacan to its antecedents as well as to contemporaneous settlements in Central Mexico (Helmke and Nielsen 2017; Nielsen and Helmke 2018). As I discuss elsewhere (Smith 2017b) and below, I disagree with Carballo’s inclusion of elements of urban design in the suite of traits that Teotihuacan inherited from early Central Mexican cities.

Finally, the presence of foreign styles and goods at Teotihuacan seems similar to other major Mesoamerican capitals, including those in Central Mexico (Xochicalco and Tula), Oaxaca (Monte Albán), and the Maya Lowlands (Tikal, Caracol, and other large cities). At Teotihuacan, there are several enclaves of foreigners, from Oaxaca, West Mexico, and the Gulf Coast (Gómez Chávez and Gazzola 2009; Manzanilla ed. 2017; Rattray 1990, 1993; Spence 1992). Present at these settlements were imported objects as well as locally made ceramics in foreign styles. Foreign ceramics were found beyond these three neighborhoods, however (Clayton 2005; Rattray 2001). Mural paintings exhibit Maya signs and glyphs in otherwise Teotihuacan-style murals (Helmke and Nielsen 2013; Taube 2003). The recently discovered fragments of a mural painted in Maya style (Sugiyama et al. 2016), as well as Sugiyama, Fash, Fash, and Sugiyama (this volume), suggest that one or more Maya artists may have been present at the Plaza of the Columns. Teotihuacan may have had a greater level of foreign styles and goods than other cities, in line with its role as a world city, but this is difficult to quantify.

### Teotihuacan as an Unusual Mesoamerican City

The strange or unusual features of the city of Teotihuacan may outnumber the normal features. I

organize these into three themes: urban, social, and political (Figure 2.1). These three domains form a scale or sequence in terms of the amount of data available and the strength of evidence for distinctiveness. The urban features of Teotihuacan are truly divergent from normal Mesoamerican patterns, an argument I set out previously (Smith 2017b) and review briefly here. Some data clearly point to the unusual nature of Teotihuacan social features, but more data and analysis are needed to confirm this. The political organization of Teotihuacan, on the other hand, remains a topic of much discussion. A number of authors have converged in arguing for a relatively collective form of government, but the evidence for this (or for alternative forms of government) is not yet particularly strong and convincing, and more work is needed.

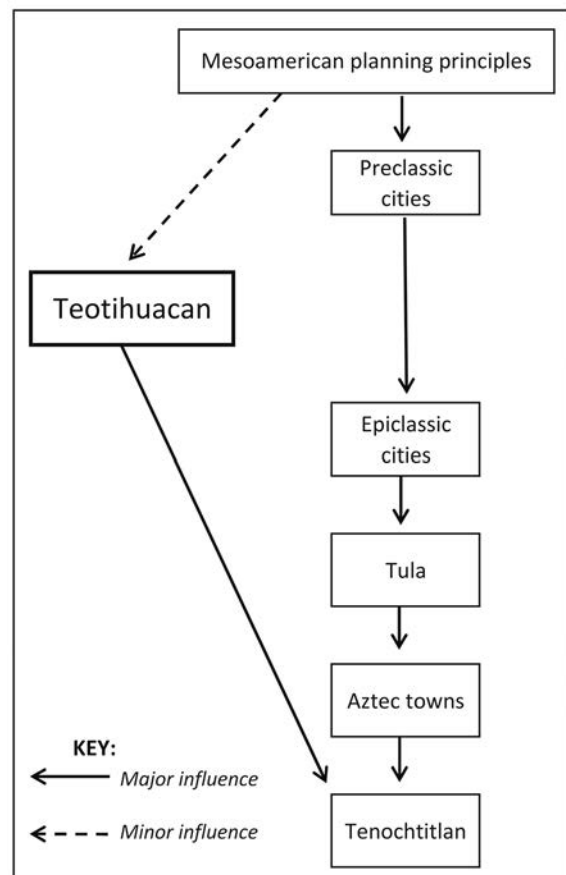
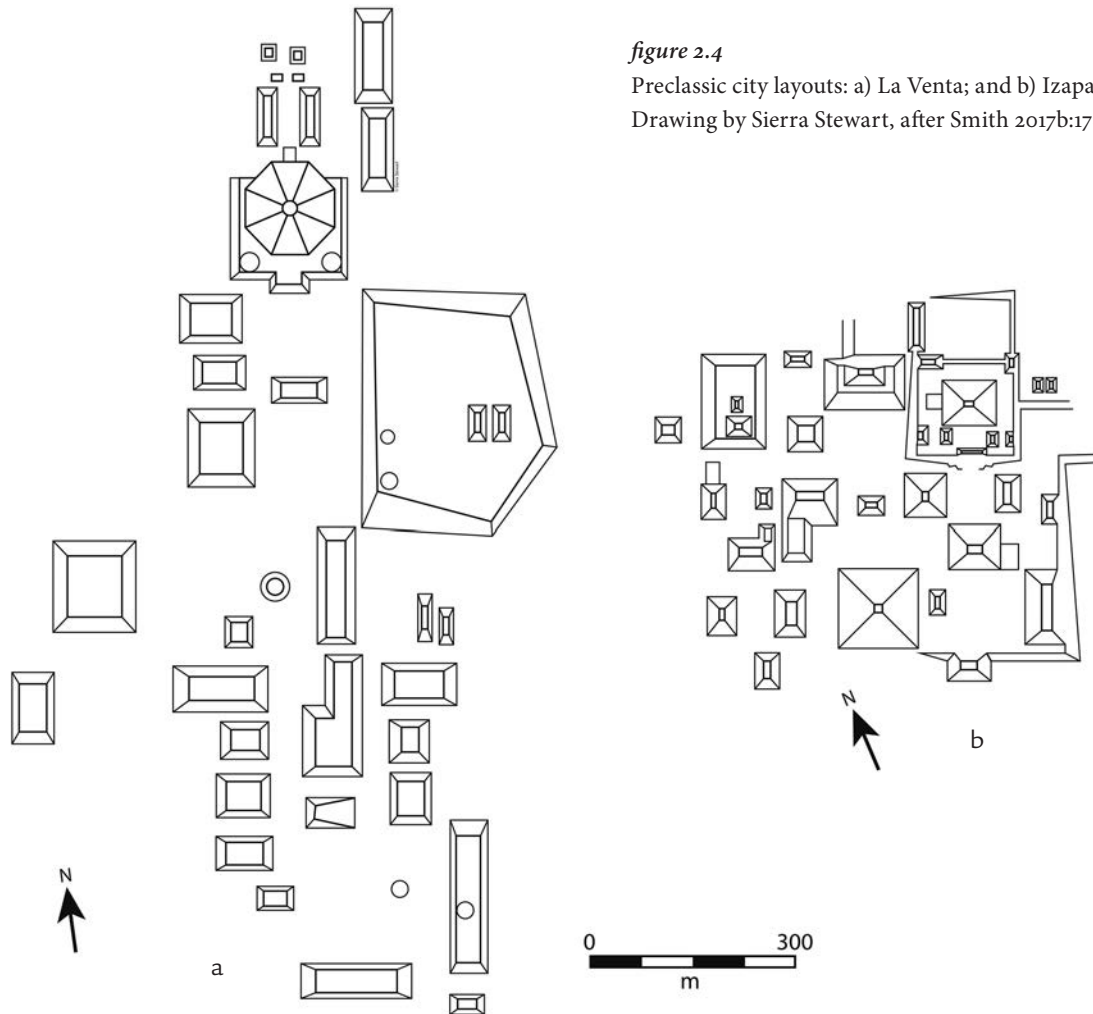


figure 2.3

Historical trajectory of urban planning in Central Mexico. Illustration reproduced from Smith 2017b.



*figure 2.4*

Preclassic city layouts: a) La Venta; and b) Izapa.

Drawing by Sierra Stewart, after Smith 2017b:178.

### *Teotihuacan's Urban Traits*

The utter uniqueness of the urban design of Teotihuacan has not been fully appreciated by Mesoamericanists. While the originality of traits such as Teotihuacan's orthogonal planning and its use of apartment compounds is generally acknowledged, many authors continue to stress the continuities of Teotihuacan's urban design with the cities that came before and after (e.g., Anderson et al. 2015; Carballo 2016:213; Murakami et al. 2017). But if we focus on key elements of urban design and planning—and use an explicit theoretical framework (Smith 2007)—it is hard to escape the conclusion that the designers and builders of Teotihuacan rejected earlier urban principles to forge a new and unique kind of city. Then, after the fall of Teotihuacan, Central Mexican designers rejected the urban

principles of Teotihuacan and returned to earlier Mesoamerican urban layouts. An outline of the trajectory of urban planning in Central Mexico is shown in Figure 2.3. The details of this argument are set out elsewhere (Smith 2017b); here, I will sketch an outline of the evidence.

In the Preclassic period, many settlements throughout Mesoamerica converged on a series of urban design traits that came to characterize cities and towns for several millennia. These include basic types of buildings (temple-pyramids, ballcourts, royal palaces, and plazas) as well as spatial principles (civic structures concentrated in a carefully planned epicenter and residential zones that show little formal planning). Two such centers are shown in Figure 2.4. The builders of Teotihuacan rejected most of these features in favor of new innovations



*figure 2.5*

Map of Teotihuacan. Drawing by Alexandra Norwood, based on data from the Teotihuacan Mapping Project (Millon, Drewitt, and Cowgill 1973).

in urban design: the orthogonal planning of the entire city, the reliance on a central avenue to provide spatial structure, and the use of apartment compounds. The huge size of the city and the massive scale of the pyramids were also innovations.

It is important to note that these innovations cannot be attributed to the arrival of a foreign group in Central Mexico. These traits are not found anywhere else in Mesoamerica at the time. The city and society of Teotihuacan were firmly rooted in earlier social and cultural traditions of

Central Mexico, but the key principles of urban design were new and operated on a scale previously unknown in Central Mexico (Figure 2.5). My argument here is that Teotihuacan was an anomaly in its urban design—not in the entirety of its culture or society.

After the fall of Teotihuacan, Epiclassic cities such as Xochicalco, Teotenango, and Cacaxtla rejected the Teotihuacan innovations and returned to the basic Mesoamerican principles developed prior to the rise of Teotihuacan. Subsequent urban

cultures—such as Tula and other city-state capitals of the Early Aztec period—each contributed their own design innovations, but they continued to avoid the Teotihuacan traits (Smith 2008). It was not until the Mexica started to differentiate their capital from other Aztec cities that some of the Teotihuacan traits were revived, as part of Tenochtitlan’s political message of legitimacy and continuity (López Luján 1989; Olmeda Vera 2002). Figure 2.3 outlines my model of this historical process. To summarize, Teotihuacan can be considered a uniquely designed city because its builders both rejected established principles and introduced new principles of their own.<sup>3</sup>

### *Teotihuacan Society*

The available evidence suggests that many aspects of Teotihuacan society were also unique within ancient Mesoamerica. But compared to its principles of urban design, Teotihuacan’s social uniqueness may have been less pronounced. These ideas are

difficult to evaluate, however, given the lack of comprehensive scholarship on the principles of social organization, inequality, and other societal features at Teotihuacan. These topics have been analyzed for individual excavated structures (Gómez Chávez 2000; Manzanilla 1996; Manzanilla ed. 2017; Storey 1991), and for particular categories of data, such as mural paintings (Headrick 2007; Pasztory 1997) or the surface collections of the Teotihuacan Mapping Project (Cowgill, Altschul, and Sload 1984; Robertson 2015), but comprehensive analyses that integrate multiple types of evidence are rare, and a major category of remains—the corpus of excavated residences—has yet to see much comparative attention. I organize this topic into three themes: apartment compounds, the prosperity of commoners, and the relative egalitarian nature of Teotihuacan society (see Figure 2.1).

The Teotihuacan apartment compound was a unique form of residence in the ancient world (Smith 2014). While no two apartment compounds



figure 2.6

Teotihuacan residences: a) Yayhuala; and b) Viking Group. Drawing by Sierra Stewart, after Smith 2017b:185.

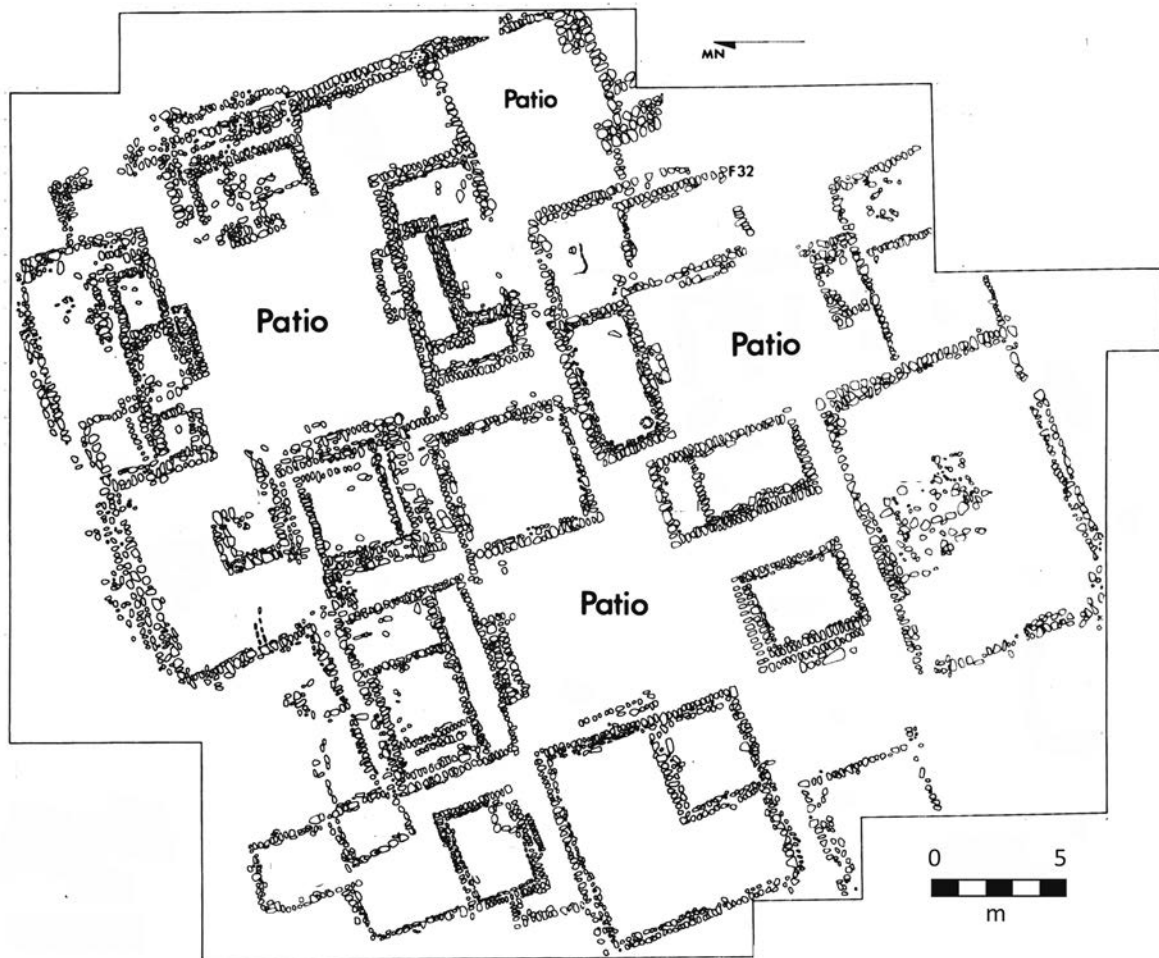


figure 2.7

A/B compound at La Coyotera in the Cuicatlan Cañada. Drawing by Michael E. Smith, after Spencer and Redmond 1997:313.

are identical, they clearly shared principles of design and layout (Figure 2.6). In structural terms, an apartment compound can be seen as a spatial amalgamation of several standard Mesoamerican patio groups (Carballo 2011:152). A pre-Teotihuacan compound whose form is intermediate between the patio group form and the apartment compound is the A/B compound at the site of La Coyotera in the Cuicatlan Cañada (Spencer and Redmond 1997); see Figure 2.7. This structure dates to the Perdido phase (600–200 BC). But while the spatial principles were not new in Mesoamerica, the amalgamation of different patio groups into a single walled compound was an innovation at Teotihuacan. Also innovative was the rapid construction of so many

residential compounds and their common cardinal orientation.<sup>4</sup>

The notion that Teotihuacan commoners were prosperous or wealthy began with Laurette Séjourné (1959), who carried out one of the first complete excavations of a Teotihuacan apartment compound. She was impressed with the luxuriousness of Zacuala; rooms and apartments were big, most walls were covered with mural paintings, central patios were open to the air, and drains carried excess water away. She, therefore, called the structure a “palace.” Indeed, most apartment compounds were larger than some known Aztec royal palaces (Smith 2008). Many Teotihuacan scholars scoffed at Séjourné’s use of the term “palace.” If this

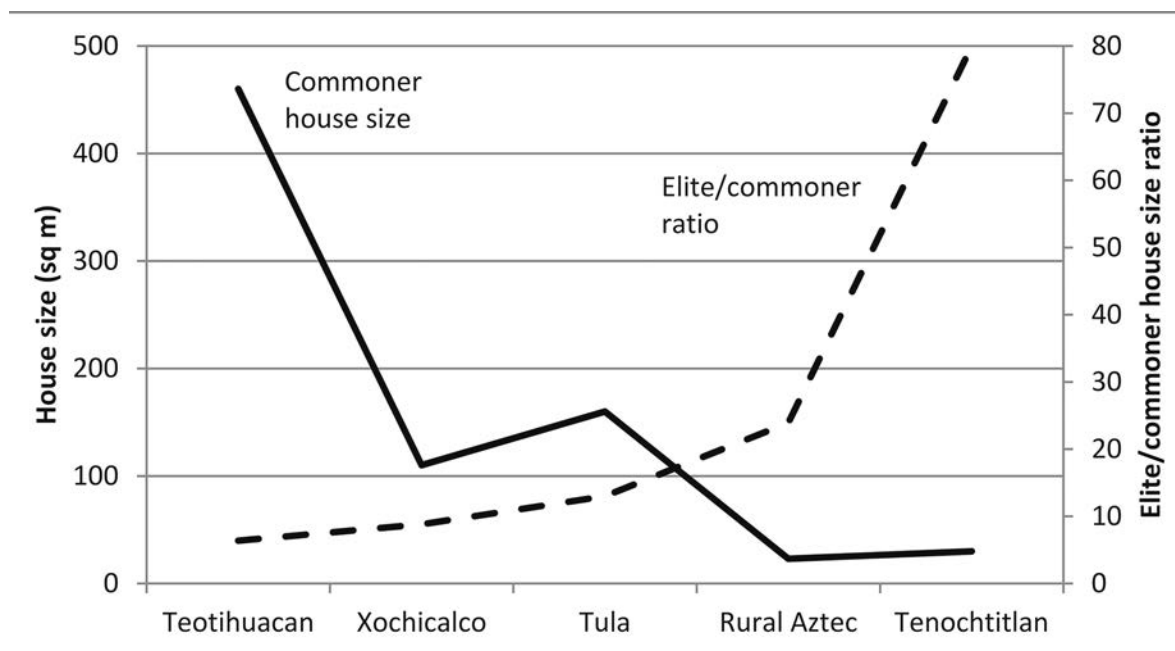


figure 2.8

Mean house size in Central Mexico. These data measure the size of the dwelling—the living space of an individual household—and not the size of an entire apartment compound. Chart reproduced from Smith 2018a.

was the standard form of residence at the site, they reasoned, then it must be a commoner residence, based on the principle of abundance (Ashmore 1981). Therefore, the argument went, these structures should not have been called palaces.

Nevertheless, I think Séjourné was on the right track. Compared to other commoner housing in Mesoamerica, the apartment compounds of Teotihuacan were indeed “palaces.” On this basis alone, I think it is valid to infer that the commoners of Teotihuacan were economically and socially well-off. This inference is strengthened by the distribution of valuable artifacts in the deposits and burials associated with excavated apartment compounds (although the lack of systematic quantitative data makes this a subjective inference). Some preliminary data are plotted in Figure 2.8, which shows a significant decline in the size of commoner dwellings through time from Teotihuacan through Tenochtitlan (see Smith 2018a). These patterns need to be investigated in more detail by Mesoamericanists, with increased attention to both household wealth and quality of life (Smith 2016,

2018c). We also need more information on the specific attributes of apartment compounds and on the degree of variation among structures.

If my suggestion about the prosperity of Teotihuacan commoners is valid, this would make Teotihuacan highly unusual in the ancient world: a society in which the majority of commoners were very well-off economically. Late Republican/Early Imperial Rome is one of the few comparable examples (Allen 2007; Ward-Perkins 2005). To economists, the widespread distribution of wealth in Roman society could only have come about through processes of economic growth, which were generated by some combination of technological innovation, specialization and commercial gains, and institutional/organizational elaboration (Goldstone 2002; Jones 2000). As in Rome, the prosperity of commoners at Teotihuacan was both a cause and an effect of the city’s development as a world city.

A closely related—but separate—claim for Teotihuacan society is that the city’s population exhibited an unusually low level of wealth inequality. As part of a study of wealth inequality at Aztec sites,

using the Gini index,<sup>5</sup> my coauthors and I added Teotihuacan to the sample of sites (Smith et al. 2014). Our assumption was that, in premodern settings, the size of a household's dwelling is a good measure of its wealth. This assumption is well supported empirically for many societies (Kohler and Smith 2018; Kohler et al. 2017). Much to our surprise, the residences of Teotihuacan, as measured by the Teotihuacan Mapping Project (Millon, Drewitt, and Cowgill 1973), produced a very low Gini value (0.12); with the addition of the Xalla compound as a residence, the Gini value changes very little (0.13).<sup>6</sup> For comparison, the Gini index for a series of Aztec sites was closer to 0.4. These results, if they stand up to continuing analysis, indicate a radically egalitarian society for a Mesoamerican state.<sup>7</sup> Other scholars have emphasized some of the egalitarian aspects of Teotihuacan society. Most notably, Esther Pasztory (1997, 2017) used art and architecture to interpret Teotihuacan society as uniform and regimented, the possible result of a utopian vision of society.

### *Government at Teotihuacan*

Archaeologists have long recognized that government at Teotihuacan seems to have been quite different from that of other Mesoamerican societies, particularly the Classic Maya (Blanton et al. 1996; Cowgill 1983; Nielsen 2014; Pasztory 1997). The publication of Blanton and Fargher (2008) gave scholars an explicit social model for a collective form of rule, but not a material-culture model that can be used with archaeological data. Since that date, the number of authors who see some form of collective governance at Teotihuacan has grown (Carballo 2016; Froese, Gershenson, and Manzanilla 2014; Manzanilla 2015).

Unfortunately, some of the studies that claim to support the collective governance model at Teotihuacan are marred by methodological problems. For example, advanced modeling studies by Manzanilla and Froese claim to support the collective model, but unrealistic assumptions cast doubt on their conclusions. They claim that three-temple groups at Teotihuacan represent focal areas for neighborhoods, or facilities engaged in

neighborhood governance (Froese, Gershenson, and Manzanilla 2014; Froese and Manzanilla 2018). This is highly unlikely; these compounds are all located close to the Street of the Dead, and not distributed among the neighborhoods of Teotihuacan. It would be highly unusual if facilities involved in neighborhood governance were located outside of their corresponding neighborhoods, and I concur with George Cowgill (personal communication, 2016) that the three-temple groups were not neighborhood centers. Feinman and Carballo (2018) published a comparative study of governance in Mesoamerica, showing Teotihuacan as a relatively collective society. Their coding methods, however, do not conform to widely accepted methodological guidelines (Ember and Ember 2009; Smith et al. 2016), leaving their results poorly supported.

Some archaeologists disagree strongly with the collective governance model for Teotihuacan (Sugiyama 2005, 2013). Carballo reviews the evidence and scholarly views in this volume. In spite of some methodological advances (Blanton 2016; Fargher, Heredia Espinoza, and Blanton 2011), however, we still lack adequate material-culture models for distinguishing collective and autocratic rule, and consequently there have been no formal tests of these models at Teotihuacan. The kind of post hoc explanations (Smith 2015, 2017a) that have been applied to this question so far are not convincing. Until better methods and measures can be applied, pronouncements about Teotihuacan government should be taken as hypotheses or suggestions, not as firmly supported conclusions.

### **Conclusions**

I have divided some of the interesting features of the city of Teotihuacan into the categories of "normal" and "unusual." While this is obviously a simple dichotomy, it has the virtue of highlighting key features of ancient Teotihuacan that merit further attention. In many ways, particularly with respect to the economy and to styles and rituals, Teotihuacan appears to be a normal Mesoamerican

city, not radically different from other large capital cities throughout the region. It does seem to stand out as having a higher level of economic activity than many other cities, and this is one reason the category of “world city” fits Teotihuacan. Given the city’s size and its varied and intensive relationships with other parts of Mesoamerica, it is not surprising that it would have a dynamic economy and evidence of a variety of foreign styles and goods. But these features were well within the standards of ancient Mesoamerican cities and societies.

Teotihuacan’s unusual traits—the ways it stands out as different from its Mesoamerican peer cities—lie primarily in the realms of urban design, social organization, and governmental form. I have argued that the urban design of the city was an “anomaly” (Smith 2017b) in that the builders likely rejected the canons of ancient Mesoamerican urbanisms to forge a new urban form and organization. After the city was burned and destroyed, city builders throughout Central Mexico rejected the principles of Teotihuacan’s urban design and returned to the ancient Mesoamerican patterns. One fascinating aspect of this trajectory is that it was done within an overall context of cultural and social continuity with earlier societies in Central Mexico (Carballo 2016).

Several aspects of Teotihuacan society also stand out as very different from other Mesoamerican cities, including residences in the form of apartment compounds, a high level of wealth or prosperity among commoners, and an overall egalitarian pattern of wealth distribution. These aspects of Teotihuacan society cry out for further analysis. Was Teotihuacan really so different from other Mesoamerican cases? Or do our limited sample and the lack of scholarly attention produce the seemingly anomalous results? This will be a fruitful avenue of study in the coming years.

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## NOTES

- 1 I should perhaps clarify the approach to scholarship taken in my two chapters. One of the reviewers was critical of the level of “simplification” and “scientific-sounding terms” in these chapters. I approach my task for this volume from a comparative perspective, and this requires simplification in order to compare and understand cities, institutions, practices, and their material record (Drennan and Peterson 2012; Smith 2018b). As a comparativist, my work has two goals: to improve our understanding of Teotihuacan by comparing it to other cities and societies; and to improve our understanding of topics like global urbanism

by using information from Teotihuacan to inform broader models. Readers who only want the details of Teotihuacan will find them in the other chapters. I also approach scholarship from the perspective of current research in the social sciences (Gerring 2012; Tilly 2008), and this necessitates the use of established social-science terminology; I try to do this, however, without resorting to academic jargon. I adapt these two approaches to the findings of archaeology and art history at Teotihuacan; readers can judge whether I succeed or not.

- 2 Efforts to evaluate the Teotihuacan Mapping Project surface data objectively are hindered by the

failure of critics to publish their views, by their unwillingness to engage with the methodological literature or to construct empirical arguments for and against the usefulness of the surface artifacts, and by the absence of rigorous comparisons of surface and subsurface remains at Teotihuacan. While this is not the place to argue about the scientific value of the surface archaeology of the Teotihuacan Mapping Project, I should mention a recent finding that—of all the residences excavated since 1965—some 83 percent of structures conform to the interpreted wealth/status level from the initial Teotihuacan Mapping Project surface investigations (Smith et al. 2019). In other words, the initial interpretations of residence category by the Teotihuacan Mapping Project were remarkably accurate. We need similar analyses of surface and subsurface artifacts at Teotihuacan.

- 3 For alternative recent views of urban planning at Teotihuacan, see Cowgill 2005, Espinosa 2008, and Sugiyama 2013.
- 4 For further analysis of apartment compounds and other residences at Teotihuacan, see Smith et al. 2019.
- 5 The Gini index is a measure of the concentration of wealth within a community or population. It ranges from 0 (every household as the same amount of wealth) to 1.0 (one household controls all of the wealth).
- 6 I am engaged in reanalyzing the quantitative wealth data for Teotihuacan, using an enlarged sample of excavated residences to measure dwelling size and an improved method for estimating the Gini index.
- 7 I am currently engaged in a reanalysis of inequality measures for Teotihuacan, based on additional data. It is possible that the Gini value for the new work will change.

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