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T W O

Teotihuacan

*Cosmic Glories and Mundane Needs*

GEORGE L. COWGILL

**T**eotihuacan was a great prehistoric metropolis of the first millennium A.D. in the highland Basin of Mexico in central Mexico (figure 2.1). General summaries of our knowledge and beliefs about the city include Millon (1974, 1976, 1981, 1988, 1992) and Cowgill (1983, 1997, 2000a). In this chapter I focus especially on those aspects bearing on benefits and costs, satisfactions and dissatisfactions, of life in Teotihuacan as they may have been perceived by various elements among its inhabitants.

In the context of a well-established tradition of agricultural settlements and small polities in the Basin of Mexico, Teotihuacan began to grow very rapidly in the first or second century B.C. By around A.D. 200 it covered 20 square kilometers and had a population probably on the order of 100,000 or more. (For René Millon's map of the city at its height, see Cowgill 1983, 2000a; Cowgill et al. 1984; Millon 1973,

1974, 1976, 1981, 1988; or Sanders et al. 1979.) The city's size seems to have changed little thereafter for several centuries, but by the 500s (or possibly as late as the 600s) population began to decline, and somewhere around A.D. 600 (though possibly as late as 750) the main civic-ceremonial buildings were destroyed by fire. Teotihuacan was probably briefly abandoned, but was soon partially reoccupied by people whose ceramics belonged to a markedly different pottery tradition, called Coyotlatelco.

The early period of rapid growth of Teotihuacan seems to have been accompanied by the near depopulation of the rest of the Basin of Mexico. About 80 to 90 percent of the population was, for a time, concentrated in the city (Sanders 1981:174; Sanders et al. 1979:107). Some moderately large regional centers within the basin, such as Azcapotzalco and Cerro Portezuelo, persisted or soon appeared, but Teotihuacan was a primate city, at least 10 times larger than any other settlement in the basin. The disparity between the size of Teotihuacan and the next largest settlements in its sustaining area is perhaps unusual among early urban societies. Any attempt to understand the perceived advantages and disadvantages of living in Teotihuacan must take into account the extreme degree of population concentration in the city.

Much of our knowledge of Teotihuacan comes from excavations, which have been especially extensive at major civic-ceremonial structures but also include studies in residential areas. A notable recent example of the latter is the work of Storey and others in a compound of lapidary workers and specialized potters called Tlajinga 33 (site 33:S3W1 in Millon's Teotihuacan map), in the "Tlajinga" district in the southern outskirts of the city (Sheehy 1992; Storey 1992; Widmer 1991; Widmer and Storey 1993). Also noteworthy are work by Manzanilla and others in the northwestern "Ozttoyahualco" district, at a site labeled 15B:N6W3 (Manzanilla 1993, 1996; Manzanilla and Barba 1990), and excavations in the "Oaxaca" ethnic enclave near the western edge of the city (Rattray 1993; Spence 1992). Other important work on residences includes research by Rattray in an enclave with Gulf Lowlands and Maya affiliations on the eastern edge of the city (the so-called Merchants' barrio), and by Cabrera C. and others in a mix of high- and low-status compounds in the La Ventilla district, not far southwest of the Great Compound (Cabrera C. 1996).

A great deal of what we know of the extent and layout of the city and the characteristics of its various broad districts and smaller neighborhoods comes not from excavations, but from the intensive surface survey carried out by the Teotihuacan

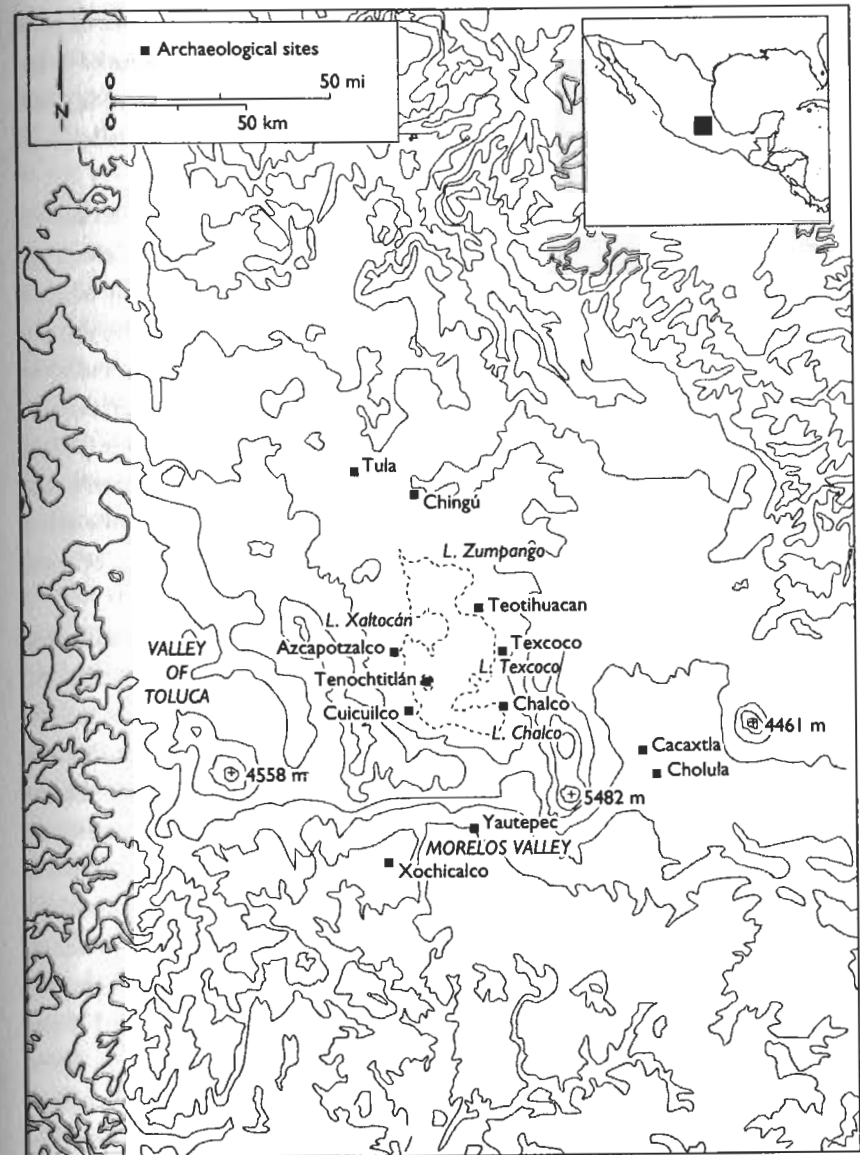


Figure 2.1. Teotihuacan in Mesoamerica (reprinted from R. E. W. Adams and M. J. MacLeod, eds., *The Cambridge History of the Native Peoples of the Americas*, vol. 2, with the permission of Cambridge University Press).

Mapping Project in the 1960s (Millon 1973; Millon et al. 1973). Discussions of what might be called the "anatomy" of the city, based on quantitative studies of Mapping Project data, include Cowgill (1974); Cowgill and colleagues (1984); and Robertson (1999, 2001). On the level of individual apartment compounds, Hopkins (1987) has carried out a network analysis.

Our knowledge of craft activities at Teotihuacan still depends mostly on surface survey. Spence has discussed the obsidian industry in a series of articles (e.g., Spence 1987). Except for the work at Tlajinga 33 noted above and a study of scale of production and product variability in cooking wares by Hopkins (1995), our knowledge of the ceramic industry is still largely based on surface survey and some incompletely published excavations. O. Cabrera C. (2001) has recently produced a study of the limited evidence for textile production at Teotihuacan, Turner (1987a, 1987b, 1992) and O. Cabrera C. (1995) have studied the lapidary industry, and Biskowski (1997) has studied ground stone implements. We still know little about craft specialization in Teotihuacan. Earlier estimates that there were 400 or more workshops in the city may be too high and need further evaluation.

Nevertheless, some general points are clear. At the center of the city, along the northern 2.5 kilometers of the Avenue of the Dead, there is a district of some 150–250 hectares, bordered for the most part by free-standing walls, that is comprised primarily of large civic-ceremonial structures and complexes. This includes the largest monuments in the city, such as the Sun and Moon Pyramids, the so-called Ciudadela, the "Avenue of the Dead Complex," and the Great Compound. There are also numerous smaller pyramids and residential complexes and room groups that were probably residences for the highest-ranking elites, and that likely included offices and other facilities for bureaucratic, ritual, and other activities of the Teotihuacan elite. A workshop specializing in making ceremonial ceramic censers and their symbol-laden ornaments is in a large enclosure attached to the north side of the Ciudadela, and the immense quantities of obsidian debris in the fill of structures and precincts near the Moon Pyramid suggest obsidian workshops in close proximity. The walls enclosing most of this central district were probably intended more to control the movement of people than to provide defense. These walls by no means imply that access to the central district was denied to those living outside, but they do suggest that there was a good deal of control over access.

This civic-ceremonial core is surrounded by other distinctive broad districts within the city on the order of 100 hectares in size. These districts were never very homogeneous and they contain mixes, in various proportions, of temples and other

civic-ceremonial complexes, residences occupied by households of both high and low status, and varied kinds of craft workshops. Millon long ago (1976) noted this heterogeneity, which has been confirmed and amplified by more recent studies. Within these larger districts, distinct neighborhoods can sometimes be identified. In one particularly striking example furnished by the recent work by Rubén Cabrera C. and others in the La Ventilla district, apartments of "palatial" quality abut much more poorly built apartments that provide abundant evidence of lapidary and other craft specialization. This suggests that relations among occupants of these adjoining apartments may possibly have been those of patrons and clients. This is a topic for further study.

Of particular interest are the more than 2,000 distinctive "apartment compounds" in which nearly all the city's occupants lived after about A.D. 250. Nearly all were occupied during the city's height, although perhaps not all parts were simultaneously occupied in all cases. None appear to have more than one story. They are enclosed by thick concrete-faced walls with rubble cores and have only two or three entrances. In the higher-density parts of the city, compounds are separated from one another only by narrow streets, but in lower-density districts, fairly wide spaces often separate compounds. Some of these spaces could have been used for gardens, although most of the city's food must have come from outside. Many of the compounds are about 60 meters on a side, but there is great variation: many are smaller, a few are larger, and some are oblong in plan or have elbows or other extensions. Internal variation is also pronounced, although layouts imply occupation by two or more households in all but the smallest compounds. Typically, the rooms of an individual apartment are on low platforms arranged around a small, roughly square, central court or patio. These rooms are usually fronted by porticoes. Apartments may contain various additional rooms, passageways, and smaller patios or light-wells. Many have a larger patio with a central altar that may have served the compound as a whole (figure 2.2 shows examples of apartment compound plans).

Most significantly, the social units formed by households that shared occupancy of a multiapartment compound must have been larger than individual households but smaller than neighborhoods. Such units would have been important in the city's social organization and probably in its political administration. The composition of these units is uncertain, but most likely they included a fairly stable core of relatively close kin, together with a more fluctuating category of households or individuals bound by looser kin ties, or possibly in some cases by patron-client or

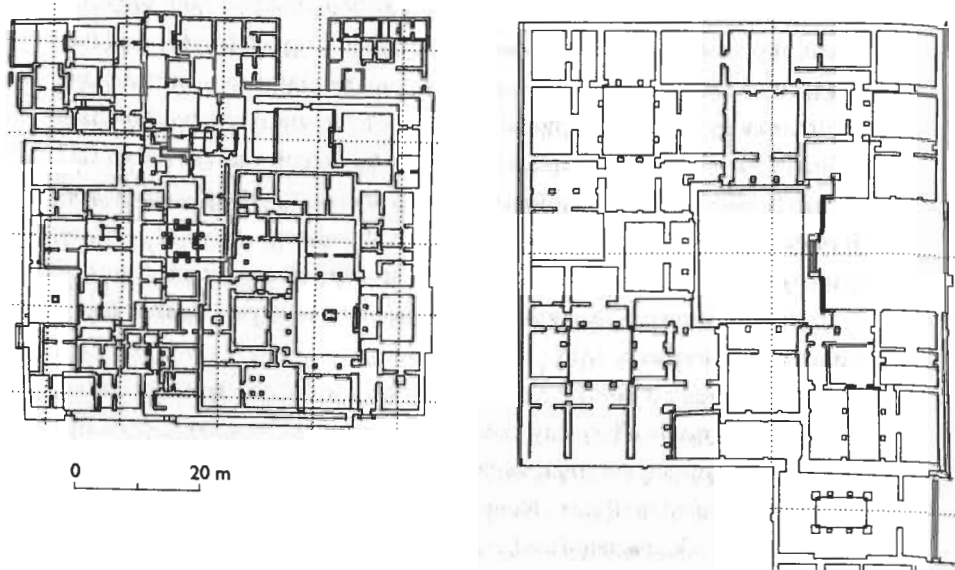


Figure 2.2. Plans of two Teotihuacan apartment compounds, Tetitla on the left and Zacuala on the right. The scale pertains to Tetitla; Zacuala is shown at a slightly larger scale. Both compounds are nearly the same size.

other relations. The fact that many burials are found under the floors of rooms and patios within apartment compounds suggests that at least many of the occupants expected that they and their descendants would continue to be closely associated with that compound in the future. Otherwise, it seems that the graves of ancestors would have been located in more accessible places outside the compounds.

At the same time, the relatively inflexible amount of living space in these walled compounds does not accord well with the developmental cycles of individual households or even extended families, as pointed out by Millon (1976). Households less tightly bound to the relatively stable core of compound residents may have shifted from one compound to another (especially at marriage) as various opportunities presented themselves (or in response to problems in their current compound). Such practices would also facilitate incorporation of newcomers to the city (see chapter 1). Localized enclaves of people with ties to Oaxaca, the Gulf Lowlands, the Maya area, and perhaps west Mexico are archaeologically very visible in elevated proportions of ceramics imported from those places (also found in small proportions everywhere in the city), in locally made imitations of foreign ceram-

ics, and to some extent in distinctive styles of burials or architecture. Studies of ratios of stable isotopes of oxygen and strontium in bones and teeth are beginning to add to evidence about these ethnically different residents (e.g., White et al. 1998). One way of dealing with ethnic diversity appears to have been spatial segregation, a very common practice in other ancient and modern cities. However, since the death rate of the Teotihuacan urban population was probably too high for replacement, there was likely a constant inflow of persons from relatively nearby who were not ethnically very different from the majority of the city's occupants. These people may have found housing in scattered apartment compounds where they had some sort of preexisting tie, such as kinship or trade partnerships.

Another distinctive feature of Teotihuacan is the remarkably close adherence, throughout the city, to an orientation 15.5 degrees east of astronomic north, probably based on astronomical properties of a sacred calendar (Cowgill 2000b; Millon 1981). Major structures follow this very closely in their north-south walls, while east-west walls are often closer to 16.5 or 17 degrees south of true east. Less carefully built residences (e.g., Tlajinga 33) are laid out less exactly, but their orientations do not seem to differ in any systematic way. In contrast to many ancient cities, different districts do not have different orientations. It is possible that the canonical orientation was of unusual sacred significance, and this might be the reason for the uniformity of Teotihuacan, which is exceptional among Mesoamerican cities. However, this uniformity suggests a rather strong and effective centralized authority within the city. This may have some bearing on thought about the extent to which rulership at Teotihuacan, especially after about A.D. 300, may have had collective (or "corporate") aspects.

Headrick (1999) argues that at Teotihuacan there may have been large kin groups composed of multiple lineages, venerating mortuary bundles of revered ancestors. If such groups existed, they were probably internally ranked clans. Leading members of such groups might have formed an elite oligarchy from which heads of state were recruited, possibly by some elite election process. Such a system of headship circulating among elite families or "houses" might explain why so little evidence has been found that powerful individual rulers or specific dynastic lines were publicly celebrated. To be sure, during the interval when Teotihuacan was growing most rapidly and the overwhelmingly large principal civic-ceremonial structures and complexes were created, circa 100 B.C. to A.D. 250, it is difficult to imagine that there was not a series of extremely strong-willed and capable individual leaders. But these persons may have been something of an anomaly in a society

whose political institutions were perhaps more oligarchic, both before and after this interval.

Any such oligarchic system would, of course, have lent itself to factionalism and would have had some divisive aspects. Were there crosscutting institutions, such as sodalities, that would have had more integrative effects? Iconography suggests there were military orders associated with fierce animals such as rattlesnakes, eagles, jaguars/pumas, and coyotes, foreshadowing the military orders of later Aztec times. Whether military orders would contribute much to cohesion in nonmilitary contexts is unclear. We can only speculate as to whether there were any guildlike organizations of merchants or artisans.

#### PERCEIVED ATTRACTIONS

No discussion of the perceived costs and benefits of living in Teotihuacan can ignore the grandeur of the central part of the city and its sacred aspects. Even today many visitors find the ruins awe-inspiring and overwhelming, although what we see now consists mainly of substructures for the temples, mansions, and other edifices, blazing with color and ornamentation, that once stood atop these low foundations. It is not just the scale of the largest structures that is impressive, though some are colossal, but also the vast and orderly panoramas afforded by the Avenue of the Dead and the central 2 or 3 square kilometers of the city. Perhaps all this satisfied the egos of early powerful leaders and their architects. Certainly it must have made most people feel insignificant by comparison. At the same time, it very likely made anyone who could identify with the grandeur feel proud and important to be a part of it all. The majority of Teotihuacanos may have felt small alongside the monuments and the sacred world the monuments represented, but nevertheless privileged compared with any humans who lived elsewhere. To judge by historic and present-day accounts of city-dwellers, such feelings would have gone a considerable distance in offsetting perceived disadvantages for many Teotihuacanos. This could have been a powerful means of creating sentiments of solidarity among elements of the population whose interests conflicted in many ways. The Gramscian concept of "hegemony" applies here.

The notion of Teotihuacan as a privileged place was reinforced by special sacred aspects. Teotihuacan, like many other ancient cities and even small municipalities (cf. Gossen 1974), was surely viewed by its inhabitants as the center of the universe, an *axis mundi*. One should not be seduced by the number games of "mega-

lithic yard" devotees, but even a hard-headed look at standardized directional orientations and distances between key structures that are simple multiples of one another reveals much that cannot plausibly be attributed to chance (e.g., Cowgill 2000b; Sugiyama 1993). It would be too simple to say that the contemporary Maya people of Guatemala and the Yucatan peninsula to the southeast were preoccupied with counting and the Teotihuacanos with geometry, but I think this captures a broad contrast. Much remains to be learned and supported by convincing arguments about the geometry of Teotihuacan and its meanings. I strongly suspect that this knowledge will improve our understanding of Teotihuacan as a cosmic center. But that is a task for other occasions. For the present, the point is simply that by residing close to the center—the intersection of cosmic axes—one was close to exceedingly strong currents of cosmic energy. Today, we of a secular or scientific bent ridicule "pyramid power" enthusiasts. There is no reason to consider such ideas ridiculous in the context of Mesoamerican thought.

A city like Teotihuacan very likely evoked in its residents a duality in thinking and feeling. People must have viewed it as being sacred and laden with symbolism, yet they would have had to get on with the mundane activities, calculations, and negotiations of daily life. The civic-ceremonial core would have been sacred space par excellence, but probably also a place where routine government business was transacted. Many ordinary activities connected with daily living must have gone on in the apartment compounds, yet on ritual occasions their central patios and altars would have been transformed into sacred space.

A further possible reason to think that Teotihuacan was very likely seen as a supernaturally privileged place is provided by the volcanoes of central Mexico. I emphasize, however, that what follows is highly speculative and not central to my main theses. Much of Cuicuilco, Teotihuacan's early rival in the southern part of the Basin of Mexico, was overrun by a series of lava flows and falls of volcanic ash (for a recent review of the geological stratigraphy of Cuicuilco, see Pastrana 1997). This eliminated Cuicuilco as a serious rival to Teotihuacan and very possibly provided an influx of refugees. Plunket and Uruñuela (1998) report striking complementary evidence from the settlement of Tetimpa in the Valley of Puebla, just outside the Basin of Mexico and about 80 kilometers southeast of Teotihuacan, which was ruined by a heavy volcanic ash fall from Popocatepetl at about the time when Teotihuacan was developing most rapidly. Tetimpa is fascinating in its own right, as another example of rapid abandonment and excellent preservation, comparable to Cerén in El Salvador and to Roman Pompeii. It also provides further evidence



of the spectacular effects of volcanic eruptions on early Teotihuacan's neighbors. There are extensive lava flows and layers of volcanic ash beneath parts of Teotihuacan and its environs, but these are from eruptions that occurred long before the beginning of Teotihuacan. Teotihuacanos would have asked themselves why they were spared the destruction wrought upon their neighbors. It is easy to imagine leaders attributing this to their special relationship with the Volcano God. They may have claimed that they could control the volcano power, both to protect their own city and to punish their enemies (as well as being able to invoke the lightning power of the Storm God). The devastation of Cuicuilco to the south and of Tetimpa and other sites to the east may have been perceived as something like that rained upon Biblical Sodom and Gomorrah.

There is abundant evidence of a widespread Mesoamerican view of sacred mountains as vessels full of the water so vital for agricultural fertility. Indeed, a distinctive kind of ceramic jar at Teotihuacan is in the form of the Storm God (a precursor of the Aztec Tlaloc), often carrying a wavy lightning bolt in one hand, and often with three tabs projecting upward from the rim. Langley (1986) shows that the three tabs are the "triple mountain" sign. I suggest that, just as the Storm God had dual aspects (the bringer of benevolent rain needed for food, but also of the terrible and destructive hail and lightning associated with war), so did sacred mountains, a source of the water that flows out of springs, but also of lava, a red-hot fiery liquid. This could explain, for example, why the diamond-shaped "fire" sign occurs in the headdress of a personified mountain in a Teotihuacan mural. Moreover, pyramids were generally regarded as sacred mountains in Mesoamerica. It is noteworthy, for example, that Cerro Gordo, a great extinct volcano, looms behind the Moon Pyramid, dominating the view along the Avenue of the Dead.

These observations lead into aspects of Teotihuacan iconography and thought that I will not pursue here, although I note that Pasztory (1997) expresses partially similar ideas. For present purposes, the point is that there is reason to suspect that people may have believed that by living at Teotihuacan they were protected from volcanic threats, at least as long as they enjoyed the goodwill of the rulers, and as long as the rulers enjoyed the goodwill of the Volcano God. This may have been another perceived advantage, offsetting perceived disadvantages, of life in the city. Whether or not these speculations about a Volcano God are supported by further studies, we can safely assume that Teotihuacan elites appealed to the sacred to help legitimize their status and authority.

Sacred caves, especially as places of ancestral emergence, are another prevalent concern in Mesoamerican thought (Heyden 1975). Caves abound today at Teotihuacan; many have been highly altered by humans, and some are perhaps entirely manmade (as argued by Barba et al. 1990). The earliest pyramid-temple complexes at Teotihuacan are scattered over a fairly wide area in the northwest part of the later city, and many are near cave entrances. The Sun Pyramid itself is built above a cave, which over time must have come to be accorded greater importance than the other caves. Sixteenth-century Aztec origin myths and migration stories refer to caves, but these caves seem to have been much farther away, well outside the Basin of Mexico and in keeping with the Aztec view of themselves as in-migrants. By contrast, dominant ethnic components of Teotihuacan society quite possibly believed they had lived in the Basin of Mexico since Creation. At any rate, the relative ceramic continuity in the Basin of Mexico from before 300 B.C. until about A.D. 600 lends some support to this conjecture. If so, the local caves would probably have added to the sacred significance of Teotihuacan as a place of origin and emergence.

A further kind of perceived advantage would have been that Teotihuacan is situated in a choice and lush area for agriculture. The Basin of Mexico as a whole poses challenges for agriculture—it is semiarid and the altitude (around 2,250 meters) creates a significant frost hazard. However, there is a swampy area of about 100 hectares just downstream from year-round springs on the southwestern fringe of the ancient city where intensive drained-field agriculture is practiced today. Downstream from that are several thousand hectares of normally dry land that can be irrigated by simple canals fed by the placid water that wells up steadily from the springs (or did, until the advent in the twentieth century of deep well drilling that has disastrously lowered the water table).

Although one might be tempted to consider military defense another incentive for living in Teotihuacan, the city lies on the flat valley floor rather than on high ground, and there is no evidence that it had an outer wall or other fortifications. Long walls within the city were more likely used for defining districts and controlling the movement of people. Nevertheless, the sheer size of the population would have provided safety in numbers. In any case, with so much of the basin's population in the city, not enough people would have remained elsewhere in the basin to pose much threat. By A.D. 200 or soon thereafter, even in regions that were not depopulated, there do not seem to have been any centers within a hundred kilo-

meters, and probably much farther, that could have been very dangerous. Military defense has often been a reason for population aggregation in other times and places, but it does not seem likely to have been an important factor at Teotihuacan.

It has also been suggested that the excitement, bustle, and variety that many find inherent in city life would have been an additional attraction at Teotihuacan. It is hard for me to assess this. Country-bred, I count this a mixed blessing of urban settings. But perhaps I underestimate this attraction, and I leave it for others to judge. Was Teotihuacan a bustling place? The much later Aztec capital, Tenochtitlan, as described in sixteenth-century accounts, certainly seems to have been. Bustle seems conspicuously absent from surviving Teotihuacan scenes in mural and other art. Most scenes are rigidly formal; a few are what I would call bucolic. However, Teotihuacan art is notoriously selective in what it depicts, so this negative evidence counts for nothing. Any place with 100,000 people concentrated in 20 square kilometers cannot help but be busy and varied. I think that the extent to which Teotihuacanos perceived that busy-ness and variety as attractive is an open question.

#### PERCEIVED DISADVANTAGES

As for the perceived disadvantages of living in the city, the ones that come first to mind are crowding, provisioning, sanitation and health in general, and safety and public order. We still lack data on early residences at Teotihuacan, but they may have been quite similar to those at Tetimpa, the Late Preclassic site in the Valley of Puebla mentioned earlier. Residences at Tetimpa consisted typically of platforms with sloping aprons surmounted by vertical panels, so-called talud-tablero construction, arranged around three sides of a rectangular courtyard. Sometimes two of these units adjoin and seem related, but they do not appear to be surrounded by walls, and they are well separated from other such units or unit-clusters. Making several such courtyard-platform units more compact and enclosing them within a substantial outer wall would create an apartment compound of the sort well documented for Teotihuacan after about A.D. 200–250, in which the large open courtyards of Tetimpa are replaced by smaller unroofed patios. Such enclosing and modifying seems, in part, a simple response to greater crowding. Interestingly, however, it was not single courtyard-platform units, such as might have been occupied by a nuclear or small extended family, that were enclosed by a single wall, but clusters of several such units. These built environments would have created, if they did not already exist, sociopolitical units significantly larger than extended families but

smaller than neighborhoods. Lineages based on real or fictive kinship may have formed the cores of these sociopolitical units, as discussed earlier.

Concerning provisioning of food staples, the apparently very scarce population in the countryside and the limited surpluses that can be produced by premodern agriculture imply that a high proportion of Teotihuacan's population must have been at least part-time specialists in the craft of farming, even though scarcely any artifacts identifiable as farming implements have been found in the city (or in the countryside). There is no question that total person-days required to get food from fields to mouths were significantly greater than would have been required if more of the population had lived outside the city and closer to many of the fields. However, the radius of the needed catchment area would have been well within the range of economically feasible overland foot transport (Drennan 1984). A different problem is faced by farmers who have to make frequent visits to fields for field preparation, sowing, tending growing crops, and harvesting. Daily round trips by foot of 20–30 kilometers are far beyond what is known ethnographically and would have left no time for fieldwork. I strongly suspect that city residents tending fields more than a few kilometers from the city had insubstantial field houses (as yet archaeologically undetected) in which they spent several days at a time. There may also have been a small number of full-time rural residents, perhaps too few and too dispersed to be easily recognized at the somewhat low intensity of the Basin of Mexico archaeological survey (Sanders et al. 1979).

One open question is how residents of the city gained rights to food and other provisions. To what extent, if at all, was the state involved? If the state was involved in the storage and redistribution of food, this could have been among the attractions of life in Teotihuacan. However, nothing suggestive of state storage facilities has yet been recognized, although some likely candidates, such as the structures atop the large north and south platforms of the Great Compound, have not yet been adequately investigated. For that matter, storage facilities are unexpectedly hard to recognize in apartment compounds, except for occasional very large ceramic jars. The extent to which provisioning was carried out through market institutions rather than administered by government institutions is highly unclear. One possibility (among many) is that most apartment compounds had rights to specified plots of land that were worked by some of their occupants, while other occupants pursued other craft activities.

Sanitation and health were probably not very good. Apartment compounds are well supplied with subfloor drains, but these must have been used mainly to carry

off rainwater. Without drains, courtyards would have regularly flooded during the torrential storms of the rainy season. The drains lead to the streets just outside the compounds, in which the water seems to have flowed in open channels. Human excreta and food remains would not have been carried off to any extent by these drains, especially during the dry season. Presumably wastes would have been disposed of outside the apartment compounds, but the extent to which they were dumped nearby or carried outside the city is unclear. I suspect that it varied considerably, depending on the general state of the society. A little-known but important fact is that immense quantities of sherds have been found in the streets just outside the walls of some apartment compounds, such as Yayahuala (Séjourné 1966:21–24), in such amounts that they would have raised the street level considerably. This dumping may or may not be limited to the final decades of the Teotihuacan state. It is a matter that urgently needs further study, both as to its chronology and as to what other materials may have also been dumped in the streets. Presumably these dumps were not allowed to block drains.

Tlajinga 33 is a well-studied apartment compound in the southern part of the city, some of whose occupants engaged in fine stoneworking and, later, the specialized manufacture of utilitarian pottery. Judging by the quality of construction and other evidence, their socioeconomic status was quite low. Rebecca Storey's (1992) paleodemographic study indicates startlingly high mortality and low life expectancy, as well as a high proportion of episodes of stress survived before death, as indicated by skeletal and dental evidence. Such markers are not very informative about causes of stress, but presumably they reflect diseases, serious malnutrition, or both. I am not convinced that the Tlajinga 33 deaths represented by the recovered skeletal material are unbiased by age, and life expectancy may not have been quite as short as Storey calculates. Nevertheless, mortality must have been high and health and nutrition poor at Tlajinga 33.

Paleodemographic work comparable to Storey's has not yet been reported for other Teotihuacan residences. It is easy to imagine that health and nutrition were on average better and mortality rates lower in most other nonelite apartment compounds. Nevertheless, it looks as if Teotihuacan was not an especially healthful environment. But one should remember that, by present-day standards, mortality was probably high everywhere in ancient Mesoamerica, including rural as well as urban settings. Differences that look statistically significant to us may not have been very noticeable to Teotihuacanos and their neighbors. It is not at all clear that living in Teotihuacan would have been perceived as "hazardous to your health."

Safety and public order have become concerns in modern cities, whose middle classes generally consider suburban and rural contexts safer. It is not clear whether Teotihuacanos would have seen it that way. At any rate, the stout outer walls of apartment compounds, which usually had only two or three entrances, would have enabled the occupants to control access to them. Whether the Teotihuacan state provided anything like patrols or watchmen for areas outside the compounds is an open question.

#### COERCION

Up to now I have spoken as if, during Teotihuacan times, households or small groups of households in the Basin of Mexico were free to weigh perceived benefits and costs of living in Teotihuacan and make their decisions accordingly. Surely such calculations of perceived costs and benefits were important. But it is also certain that some degree of coercion was involved, which would have taken various forms. One form would have been tangible physical force or threat of its use. Another would have been the threat of exclusion from material benefits provided by the state, and a third the threat of supernatural displeasure, punishment, and withholding of good fortune. All this is familiar, but we should not lose sight of it. I know of no tangible evidence of means of coercion at Teotihuacan, such as prisons, instruments of punishment, or scenes of punishment. There is ample evidence of human sacrifice, but it is not clear whether victims were ever selected because of disobedience or violation of norms. Phrasing the matter as "carrot and stick" is a feeble metaphor that I hope has seen its day. Whether or not Teotihuacan coercion was at all sticklike, it should be abundantly clear that the manifold attractions of Teotihuacan are hardly suggested by the lowly carrot image.

Nevertheless, we still lack a reasonably accurate and nuanced concept of the mix of attraction, persuasion, danger, and duress that moved people to Teotihuacan and kept them there. It is likely that the mix changed considerably over time, but we still have only inklings of this.

#### ACKNOWLEDGMENTS

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## NOTE

1. My planned inclusion of the map in this volume could not be accommodated by the Press.

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