

The Archaeological Study of Empires and Imperialism in Pre-Hispanic Central Mexico

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Received August 31, 1999; revision received January 6, 2000; accepted August 20, 2000;
published online June 1, 2001

The hegemonic-type empires of ancient Mesoamerica are difficult to study archaeologically because they left fewer material traces than more territorially organized empires such as the Inka or Roman cases. We present a material culture model for the identification of such empires using archaeological data. The model, based upon Michael Doyle's analytical approach to imperialism, is developed from historical and archaeological research on ancient empires from the Old World and South America. Empires can be identified from three types of evidence: characteristics of the capital city, evidence for varying types of political domination of provincial areas, and examples of the projection of influence in a larger, international context. We apply this model to archaeological data on three central Mexican cases—Tenochtitlan, Teotihuacan, and Tula. The results suggest that both Tenochtitlan and Teotihuacan ruled empires, whereas Tula did not. © 2001 Academic Press

The study of empires in pre-Columbian Mesoamerica has proved to be a difficult task for archaeologists and ethnohistorians. In contrast to the Old World, where ancient empires are well attested in the written record, early empires in Mesoamerica arose among societies with rudimentary writing systems that shed little light on political processes. Furthermore, most Mesoamerican empires were hegemonic in character, meaning that they relied upon indirect control and invested few resources in provincial infrastructure (Hassig 1985). As a result, they left far fewer durable material remains in their provinces than did territorial, or direct-rule, empires such as the Wari or Inka empires of Andean South America (D'Altroy 1992; Malpass 1993; Schreiber 1992). In the absence of rigorous archaeological criteria for the identification of ancient empires and imperialism, Mesoamericanists have been free to ascribe empires to societies that almost certainly lacked them (e.g., the Olmecs or the Toltecs), and to deny the existence of empires when there is in fact strong evidence that they existed

(e.g., the Zapotec or Teotihuacan empires). Simplistic criteria such as ceramic similarity have too often been used to document imperial conquest, a situation recently criticized by Zeitlin and Joyce (1999).

The subject of ancient empires and imperialism has seen renewed interest in the past decade. A number of monographs have appeared recently on individual empires (e.g., Alcock 1993; Berdan et al. 1996; D'Altroy 1992; Liverani 1993; Millett 1990; Morrison 1995; Schreiber 1992). Comparative studies are becoming more common (e.g., Alcock et al. 2001; Algaze 1993; Blanton 1996; Cherry 1992; Schreiber 1999). As a result of increased attention to ancient empires, archaeologists have made considerable progress in devising methods to analyze various aspects of the expansion, organization, and collapse of empires (e.g., Adams 1979; Cherry 1992; Costin and Earle 1989; D'Altroy 1992; Earle 1994; Morrison and Lycett 1994; Schreiber 1999; Sinopoli 1994; Sinopoli and Morrison 1995; Smith and Berdan 1992; Stark 1990). One thing is lacking in this growing body of literature, however—a rigorous

archaeological method for identifying empires using material remains. In most parts of the Old World, this is not a pressing need. One hardly needs to develop sophisticated methods to determine whether the Romans, Assyrians, or Achaemenids ruled empires. But in Mesoamerica, with its hegemonic empires, there is a real need for such a method (see Flannery 1998 for a similar approach to the archaeological identification of pristine or archaic states).

Our goal in this paper is to present an explicit material culture model for the identification of empires and imperialism using archaeological data, and to apply that model to three central Mexican test cases, Teotihuacan, Tula, and Tenochtitlan. Our model is based on historical and archaeological evidence from ancient empires around the world. When the model is applied to archaeological evidence from these three Mesoamerican societies, the results suggest strongly that both Teotihuacan and Tenochtitlan ruled empires, whereas Tula did not. The so-called "Toltec empire" based at Tula was an invention of the Aztecs, and modern scholars have been misled by an overreliance on Aztec mythical history at the expense of archaeological data. After discussing the three cases, we briefly explore the relevance of our model to some other likely ancient empires of the New World, including the Zapotec and Tarascan empires of Mesoamerica and the Wari empire of South America.

AN ARCHAEOLOGICAL MODEL OF EMPIRES AND IMPERIALISM

We follow political scientist Michael Doyle's (1986) definition of empires and imperialism: "I favor the behavioral definition of empire as effective control, whether formal or informal, of a subordinated society by an imperial society" (Doyle 1986:30). This definition, like most others in the literature (e.g., Larsen 1979; Luttwak 1976; Mann 1986; Sinopoli 1994) stresses the political na-

ture of imperialism. Unfortunately, political processes are among the most difficult for archaeologists to identify and analyze directly. Our approach is to consider some of the social and economic expressions of ancient imperialism to identify material evidence of a type that archaeologists can use. We find Doyle's analytical approach, which incorporates spatial processes and variables, useful for organizing our discussion:

Four intersecting sources account for the imperial relationship: the metropolitan regime, its capacities and interests; the peripheral political society, its interests and weakness; the transnational system and its needs; and the international context and the incentives it creates. (Doyle 1986:46)

Doyle's "metropolitan regime" refers to the political, economic, and social dynamics of the imperial capital and core society. We modify this factor to create the first of three general criteria of imperialism, a capital city, sufficiently large and complex to rule an empire, that exhibits material evidence of an imperial ideology. The "peripheral political society" refers to the conditions in the provincial areas conquered or dominated by an empire. Although crucial to the analysis of any specific case of imperialism, we do not find this factor useful for the purpose of identifying the existence of ancient imperialism. Empires conquered all sorts of provincial polities, from small, non-hierarchical groups to other empires, and the archaeological identification of imperialism must start with imperial impact on the provinces, not the indigenous situation that preceded incorporation.

Doyle's third factor, the "transnational system," refers to the nature of interactions between the capital and the provinces. We use this element, under the label, "domination of a territory," as the second component of our model. We divide transnational processes into two categories, economic exchange (between capital and provinces) and political control. Doyle's fourth factor, the "international context" of an empire, refers to political and economic dynamics

of the larger geopolitical setting in which empires expand and operate. We narrow this theme to the notion that empires project various kinds of influence—economic, political, and cultural—beyond their borders.

Table 1 presents a summary of our archaeological model for the identification of ancient empires. This is a polythetic definition in the sense that most ancient empires exhibited most of these traits, although not every empire exhibited all of them. In the following section we summarize the evidence for these traits among a variety of ancient empires, and after that we apply this model to the three case studies.

1. The Imperial Capital

Most ancient empires had a large and complex urban center that served as the im-

perial capital, and these cities almost always contained durable displays of imperial ideology, many of which have survived to the present. These two features—urban size and complexity, and material proclamations of imperial ideology—provide a starting point in the archaeological identification of ancient empires.

A. Large, Complex Urban Center

Imperial capitals were among the most prominent settlements of the ancient world, and today the remains of cities such as Rome, Athens, Xian, Persepolis, Vijayana-gara, and Cuzco survive as some of the most spectacular archaeological sites around the world. These capitals are impressive not only for their size and grandeur, but also for the evidence of social

TABLE 1
Archaeological Criteria for the Identification of Empires

Features	Examples
1. <i>The imperial capital</i>	
A. Large, complex urban center	
B. Proclamations of imperial ideology	1. Militarism 2. Glorification of king or state
2. <i>Domination of a territory</i>	
A. Economic exchange between capital and provinces	1. Provincial goods found at capital 2. Imperial goods found in provinces
B. Political control of provinces	1. Military conquest 2. Construction of imperial infrastructure 3. Imposition of tribute or taxes 4. Reorganization of settlement systems 5. Imperial co-opting of local elites
3. <i>Projection of influence in a larger international context</i>	
A. Economic influence	1. Trade with extraimperial regions
B. Political influence	1. Military engagement and activities along enemy borders 2. Centralization or militarization of extraimperial polities
C. Cultural influence	1. Adoption of imperial gods or rituals by distant peoples 2. Emulation of imperial styles and traits by distant peoples

complexity revealed by excavations. This urban complexity typically included the existence of multiple social classes, occupational specialization, and ethnic variation, among other types of social variability (e.g., Fritz et al. 1984; Hyslop 1990; Osborne 1987; Owens 1991; Stambaugh 1988; Steinhart 1990). Although there are one or two cases of political empires without major capital cities, such as the Carolingian empire (Moreland 2001), we suggest that in Mesoamerica the opposite pattern—large complex cities that were not imperial capitals—is far more likely.

B. Proclamations of Imperial Ideology

Almost without exception, the rulers of ancient empires invested considerable energy in producing public statements of imperial ideology. Although the content of state or imperial ideology varied with individual cases, all known cases included militarism and/or glorification of the king or state among their prominent themes. These public symbolic proclamations did not always reflect reality, and they are best viewed as examples of imperial propaganda. Empires relied upon military force, and militarism and military glory were prominent themes in imperial capitals. This expression took a variety of forms in ancient empires, including public images of battle, soldiers, and military themes (e.g., Cook 1983; Cotterell 1981), public royal proclamations (Larsen 1979), and the construction of symbolic fortresses in the capital (e.g., the Sacsahuaman fortress in Cuzco or the inner compounds of Chinese imperial cities; Hyslop 1990, Steinhart 1990). Similarly, imperial capitals typically contained public monuments designed to glorify the ruler or the state, often by establishing a correspondence between the city or empire and the cosmos (Bauer 1998; Briggs 1951; Fritz et al. 1984; Root 1979). These public proclamations of state messages served to materialize imperial ideology (DeMarrais

et al. 1996), often in a durable form that ensured its survival from ancient times to the present.

2. Domination of a Territory

We consider issues in the imperial domination or control of its territory under two headings, exchange and political control. All empires exhibited trade between the capital or core zone and their provinces, although the two directions of exchange were often not equivalent in value (i.e., exchange was one means of domination). The political control of provinces forms the core of the imperial relationship, but as mentioned above this is one of the more difficult processes to monitor with archaeological data.

A. Economic Exchange Between Capital and Provinces

Written documents and archaeological excavations reveal the presence of imported provincial goods in virtually all known ancient imperial capitals (e.g., Osborne 1987; Stambaugh 1988). For the present purposes it is not important whether these goods were obtained through coercion (i.e., taxation or tribute) or through commercial exchange; what is important is that they provide clear material evidence for economic interaction between capital and provinces. Conversely, imperial goods are commonly encountered in provincial contexts (Costin and Earle 1989; Millett 1990; Woolf 1992).

B. Political Control of Provinces

Territorial empires and hegemonic empires employed different forms of provincial control, and within individual empires a variety of different means of control were often present. In this section we review the most common forms of provincial control used by ancient empires.

1. Military conquest. Most ancient empires expanded through military conquest (or

threat of conquest), but this process left few direct material remains. Cities and towns were rarely destroyed entirely, since most empires were more interested in controlling provincial populations than in destroying them. Damages to buildings and settlements from the process of conquest were probably repaired soon after the fact, leaving few or no archaeological traces. In distinction to the low archaeological visibility of initial military conquests, continuing military control of provincial areas did leave archaeological traces in many cases; this is included under our next category.

2. *Construction of imperial infrastructure.* Territorial empires such as the Roman and Inca cases invested considerable resources in building a provincial infrastructure of towns, garrisons, fortresses, roads, bridges, and the like (Alcock 1993; Haselgrove 1987; Hopkins 1978, 1984, 1990; Millett 1990; Wells 1984). The remains of these imperial construction projects are typically the most obvious and dramatic evidence for ancient imperialism in such cases. In hegemonic empires, by contrast, imperial infrastructure was left to a minimum and archaeologists must rely upon evidence of a more indirect nature to document political control.

3. *Imposition of Tribute or Taxes.* Nearly all ancient empires taxed their subjects in some form, and such taxation often produces material remains that can be recovered archaeologically. Provincial peoples may have had to increase their agricultural production to meet their taxes, resulting in the intensification of farming through the adoption of new techniques or the expansion of existing methods. Many such methods, including terracing and irrigation, are archaeologically visible (Hopkins 1978; Hopkins 1980; Morrison 1995; Redmond 1983; Sinopoli and Morrison 1995). Similarly, imperial subjects may have had to increase their production of manufactured goods for tax purposes, and changes in the intensity of craft production can be docu-

mented by archaeologists (Costin et al. 1989). Imperial taxation could lead to a lowering of standards of living in provincial areas, and again this is a process that archaeologists can document with excavation. The difficulty with this kind of evidence for imperialism is that all of these changes—agricultural intensification, craft intensification, and lowered standard of living—can also result from processes other than imperial taxation (see Smith and Heath-Smith 1994 for discussion). Thus such changes alone do not constitute clear evidence for imperial taxation.

4. *Reorganization of settlement systems.* Empires often move people around in order to better control them, to lessen chances of revolt, or to achieve particular economic ends. When such changes are systematic and/or large in scale they can be reflected in archaeological settlement patterns (D'Alroy 1992; Topic and Topic 1993). A common pattern is forced nucleation, where rural peoples are moved into towns where they are more easily monitored and controlled. The 16th-century practice of *congregación* in Spain's New World imperial provinces provides some dramatic examples of forced nucleation whose results are still visible in settlement patterns today (e.g., Gerhard 1977; Gibson 1966).

5. *Imperial co-optation of local elites.* Empires, whether territorial or hegemonic in nature, typically "buy off" provincial elites with gifts and privileges in order to gain their cooperation in administering the provinces. In hegemonic empires, or on the frontiers of various kinds of empires, this process can result in the creation of client states that are only weakly under the control of the empire (Braund 1984; Isaac 1990; Morkot 2001; Postgate 1992); for example, client states did not pay taxes in the Roman empire. This situation can be identified archaeologically by the emulation of imperial styles by provincial elites, or by the presence of high-value imperial imports in provincial elite contexts (Postgate 1992:258; Kuhrt 2001).

3. Projection of Influence in a Larger International Context

Empires exist within a larger international context, and they interact in various ways with other independent polities. One feature that differentiates empires from smaller states is that empires almost always exert various kinds of identifiable influence on other polities in the larger system. The world-systems approach, as modified for premodern societies, provides a useful framework for viewing the role of empires within their larger international context.^{1,*} We discuss the extraimperial influences of empires under the headings of economic, political, and cultural influence.

A. Economic Influence

Most ancient empires traded with external, independent polities, and these economic exchanges formed the backbone of ancient world systems. This kind of trade has been most extensively studied for the Roman empire, whose goods traveled all over the world (Begley and de Puma 1991; Whittaker 1983, 1994). Another example is Akkadian and Ur III trade with distant areas in the Arabian Gulf and elsewhere (Edens 1992; Edens and Kohl 1993).

B. Political Influence

The expansion of empires often had political effects on nearby independent polities. When an empire encountered a powerful enemy along its borders, military activities were common occurrences in the frontier zone (Whittaker 1994). If the frontier was stable for any length of time, fortifications could be built by one or both sides and these are common archaeological features on the edges of empires (Bartel 1980; Hyslop 1990; Millett 1990). Another common effect of imperialism was a process of political centralization among independent

states as they organized themselves to deal with the threat of a nearby expanding empire (Edens 1992). This can be determined archaeologically through evidence for state formation or centralization concomitant with the expansion of a nearby empire.

C. Cultural Influence

Because expanding empires are often perceived by outsiders as prestigious or powerful, distant peoples may adopt imperial gods or rituals in the absence of direct conquest or incorporation or prior to conquest. Similarly, distant elites or peoples may emulate imperial styles or adopt imperial practices or traits. Whittaker's (1994) study of Roman frontiers shows that these processes were quite common in extraimperial areas that were in contact with the empire or with frontier zones, and they can leave material traces for archaeologists to recover. This evidence should not be confused with evidence for political control within an empire's provinces, however. We suggest below that confusion of this sort has hindered the proper evaluation of Teotihuacan's role in Classic-period Mesoamerica.

INTRODUCTION TO TENOCHTITLAN, TEOTIHUACAN, AND TULA

Teotihuacan, Tula, and Tenochtitlan were all large urban centers whose influence was felt throughout many regions of Mesoamerica (Fig. 1), far beyond the extent of their local polities. In this section we provide an introduction to these polities.

Tenochtitlan

Tenochtitlan is a good test case for our model, since documentary sources clearly indicate the existence of an empire centered at this city. Some scholars have hesitated to call the Aztec polity an empire (e.g., "this was not an empire at all in the very strictest sense" (Davies 1973:110)) because of its lack of a provincial infrastructure and standing

*See Notes section at end of paper for all footnotes.

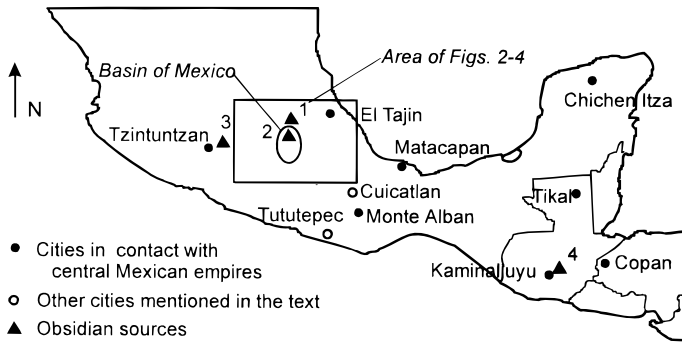


FIG 1. Map of Mesoamerica showing distant cities that interacted with Tenochtitlan, Teotihuacan, and Tula. Key to obsidian sources: (1) Pachuca, (2) Otumba, (3) Ucareo, (4) El Chayal.

army. Hassig, however (1985:90), shows that such views merely reflect various authors' inadequate understanding of ancient empires; the Aztec empire was not a territorial empire like the Late Roman or Inca empires, but was a hegemonic empire whose organization (and material remains) were quite different. The lack of obvious archaeological visibility of the Aztec empire in comparison with territorial empires has led some scholars to suggest that without the

documentary record we would never know that the Aztec empire existed at all. We offer the present analysis to counter this suggestion. Our map of the central portion of the Aztec empire (Fig. 2) is based upon the maps presented in Berdan et al. (1996).

According to Aztec native historical tradition, Tenochtitlan was founded by the Mexica people in the early 14th century, A.D. on a swampy island in the salt lakes of the Basin of Mexico. In 1428 Tenochtitlan

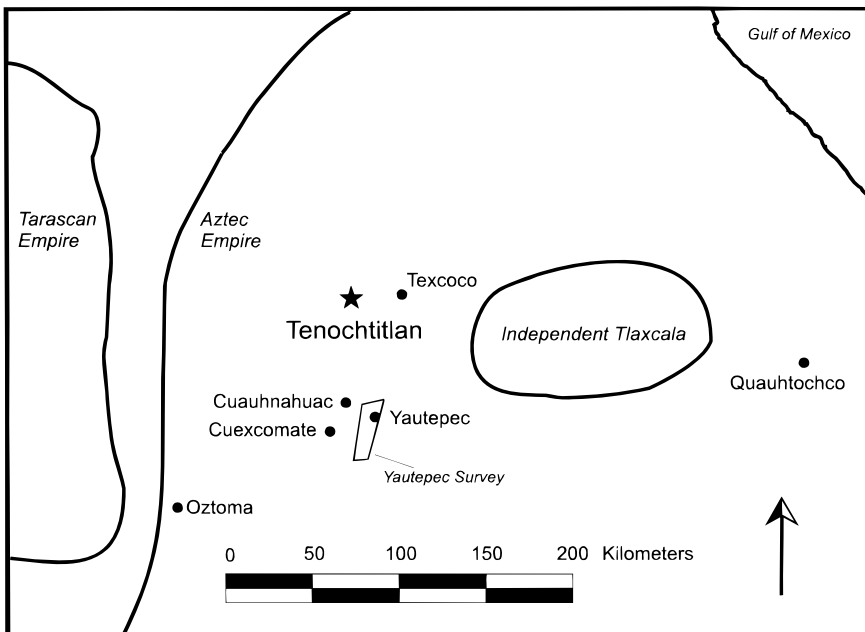


FIG 2. Map of the extent of the Aztec empire in central Mexico (based upon Berdan et al. 1996).

achieved political independence from its Tepanec overlords and immediately began imperialist expansion by conquering nearby city-states. In the traditional view, the Aztec empire was run by a Triple Alliance of Tenochtitlan, Texcoco, and Tlacopan (Carrasco 1996; Davies 1987), and over time Tenochtitlan emerged as the dominant partner. In a recent paper, Gillespie (1998) has challenged the existence of the Triple Alliance, arguing that Tenochtitlan was the sole capital city all along. The conquests of the Mexica kings are recorded in a series of prose and pictorial documents, as are the tribute payments made by the Aztec provinces (Berdan and Anawalt 1992; Berdan et al. 1996).

Prior studies of the material manifestations of Aztec imperialism have focused on the art and architecture of Tenochtitlan (Broda et al. 1987; Townsend 1979; Umberger 1996), sculpture and other art in the provinces (Umberger and Klein 1993), the distribution of trade goods (Smith 1990), and the effects of Aztec conquest on provincial society (Silverstein 2000; Smith 1992, 1997b, 2001, 1992).

Teotihuacan

The great Classic-period metropolis of Teotihuacan flourished in the northeastern Basin of Mexico from the second through seventh centuries, A.D. It has long been clear that Teotihuacan had important economic, stylistic, and perhaps political influence throughout Mesoamerica, and the study of these influences has been a major research theme by archaeologists and art historians (e.g., Berlo 1992; Pasztory 1978; Santley 1984). Early views of a Mesoamerica-wide empire centered at Teotihuacan (e.g., Bernal 1966; Borhegyi 1971) were abandoned in the 1960s and 1970s in favor of interpretations that stressed trade with Oaxaca, the Guatemalan coast and highlands, and other distant regions, and stylistic influence in the Classic Maya lowlands.

A number of archaeological studies produced settlement pattern and artifactual data suggesting that Teotihuacan exerted strong political and economic control over the Basin of Mexico and perhaps other nearby areas (e.g., Charlton 1991; Hirth 1980; Sanders et al. 1979). Sanders and others have remarked that Teotihuacan appears to have maintained stronger, more direct political control over the Basin of Mexico than did Tenochtitlan in Aztec times (Sanders et al. 1979; Sanders and Santley 1983), but none of these authors explicitly call the Teotihuacan polity an empire. Millon (1988) was the first to assemble a range of data on Classic-period central Mexico and argue that Teotihuacan was the capital of an empire in the central Mexican highlands. He later stated that "there was no Teotihuacan empire" (Millon 1994:28), but we assume that he is referring here to a Mesoamerica-wide empire. New data on the Teotihuacan affiliations of early rulers of the Maya cities of Tikal and Copan have caused at least some scholars to return to the earlier model of Teotihuacan control of the Maya area (Coe 1999:83–84), but we feel that this interpretation is premature. We show below that Millon's (1988) model best fits the archaeological data.

Tula

Our discussion of Tula as a possible imperial capital begins with the Aztec accounts of Tula and its Toltec rulers and inhabitants. The Aztecs had a highly inflated view of the accomplishments and grandeur of the Toltecs, and the scholars today who accept the existence of a Toltec empire base their views more on the exaggerated mythical accounts of the Aztecs than on empirical archaeological data. The Aztec kings traced the legitimacy of their dynasties to their (alleged) descent from the Toltec kings. Aztec accounts of the Toltecs merge myth and history, and the Toltecs were said to have invented the calendar and the various arts

and crafts, interpretations that are clearly false. Here are some of the descriptions of the Toltecs given in Sahagún's *Florentine Codex*:

The Tolteca were wise. Their works were all good, all perfect, all wonderful, all marvelous . . . They invented the art of medicine . . . And these Tolteca were very wise; they were thinkers, for they originated the year count . . . These Tolteca were righteous. They were not deceivers. Their words [were] clear words . . . They were tall; they were larger [than the people today] . . . They were very devout . . . They were rich. (Sahagún, 1950–1982: book 10, 165–170)

Most modern interpretations of a Toltec empire are based upon a speculative 1961 study by Paul Kirchhoff (reprinted as Kirchhoff 1985). Kirchhoff interpreted some vague and contradictory accounts in Spanish colonial sources on Aztec native history (principally Chimalpahin, the *Anales de Cuauhtitlan*, and the *Historia Tolteca-Chichimeca*) as suggesting the existence of a large empire based at Tula that controlled much of northern Mesoamerica. Davies (1977:296–312) reviews the textual evidence and Kirchhoff's interpretations and points out numerous problems and points of confusion. He then proceeds to ignore his own criticisms by presenting an imaginative reconstruction of the fragmentary and contradictory data, including a map of the purported Toltec empire (1977:312–328). Davies's map is shown in Fig. 4, along with our reconstruction of the extent of the Toltec regional state (see discussion below). Feldman (1974) presents an analysis similar to that of Davies. Kelley (1992) bases a claim for a Toltec empire upon tenuous correlations among royal genealogies from the Mixtec region as depicted in pictorial codices.

Many scholars apparently accept the interpretations of Kirchhoff, Davies, and Feldman uncritically, speaking of a "Toltec empire" as if it were an established fact that needs no empirical justification. This description applies to a number of members of the University of Missouri Tula archaeo-

logical project (e.g., Cobean 1990:503–510; Diehl 1993:283; Healan 1989:4), among whom the following statements are typical: "The Toltecs were imperialists motivated by economic goals . . . their brief but spectacular career as an imperial power set the pattern for later Aztec ventures along the same lines" (Diehl 1983:140); "Tula controlled a tributary empire comparable to the later, larger Aztec empire" (Healan 1993:459). Other scholars who accept uncritically the existence of a Toltec empire include Carrasco (1999:59), Coe (1994:131–132; 1999:167), Fowler (1989:274), Nicholson (2000:155), Noguez (1995:206–214), and Weigand et al. (1977:22). This trend continues unabated; at a recent symposium at the 2000 Annual Meeting of the Society for American Archaeology ("Tula and the Toltec World: Interregional Interaction During the Early Postclassic," organized by Robert Cobean), at least five participants mentioned the "Toltec empire" in passing as if it were an established entity.

Some scholars are more critical of the notion of a Toltec empire, invoking long-distance trade to explain contacts between Tula and distant areas rather than conquest and political expansion. Hassig (1992:110–120), for example, notes the lack of contemporary written accounts of the Toltec polity and concludes that "The available evidence suggests not so much a military as a trading empire, one that operated through merchant enclaves and settlements rather than military colonization of outlying areas" (Hassig 1992:117); similar views are expressed by Lee (1978:293), who suggests that Toltecs may have controlled the trade of Plumbate pottery in Early Postclassic Mesoamerica. Among the few scholars openly critical of the notion of a Toltec empire are Prem (1997:142); Weaver (1993:405), who states, "It is best to think of a Toltec sphere of influence rather than an empire"; Cowgill (2000:295), who suggests that "the area dominated by the Tula state was probably never very extensive"; and López Austin and López Luján (2000:69), who state that

"Tula was not the capital of a pan-Mesoamerican empire." Jones (1995:44–60) provides a useful historical review of scholarly attitudes toward the Toltecs, including changing opinions on the existence of a Toltec empire.

Most scholars accept the identification of the Early Postclassic archaeological site of Tula, Hidalgo, with the Toltec capital city Tollan as described in the Aztec histories,² and the archaeological evidence that we discuss is from Tula and other Early Postclassic sites in central Mexico.

The Yautepec Valley as a Provincial Area

We have conducted several fieldwork projects in the Yautepec Valley, including excavations of Aztec-period houses at the city of Yautepec (Smith et al., 1999), a full-coverage survey of the Yautepec Valley with intensive surface collections (Cascio et al. 1995; Hare et al. n.d.; Hare 2000; Montiel n.d.), and test excavations at a sample of Classic and Postclassic sites (Hare 2000;

Montiel n.d.). As indicated in Fig. 2–4, this area was part of the Aztec empire (Berdan et al. 1996); it was part of the Teotihuacan empire in the models of Millon (1988) and Montiel (n.d.); and it was part of the Toltec empire as reconstructed by Davies (1977). The Yautepec Valley therefore provides a good test case for the incorporation of presumed provincial areas into the three polities under consideration. Although many of the analyses from these fieldwork projects are not yet complete, we do have enough data available to evaluate models of imperial incorporation. Because we did not excavate any Early Postclassic contexts, we will use single-component surface collections from that period to compare to our Classic and Late Postclassic excavations.

THE IMPERIAL CAPITAL

Tenochtitlan

Although Aztec Tenochtitlan today lies buried under Mexico City, available archae-

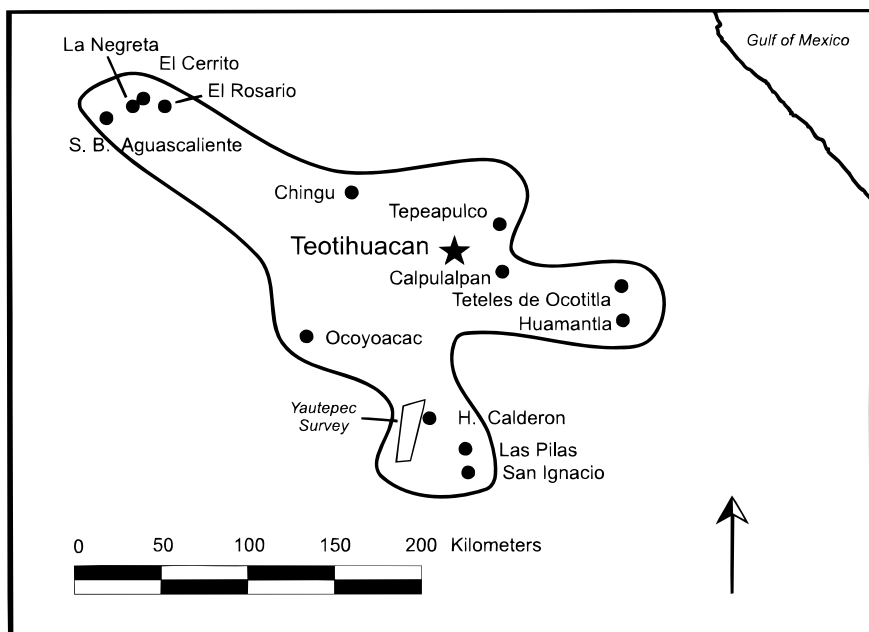


FIG 3. Map of the extent of the Teotihuacan empire (based upon Millon 1988 and Montiel n.d.).

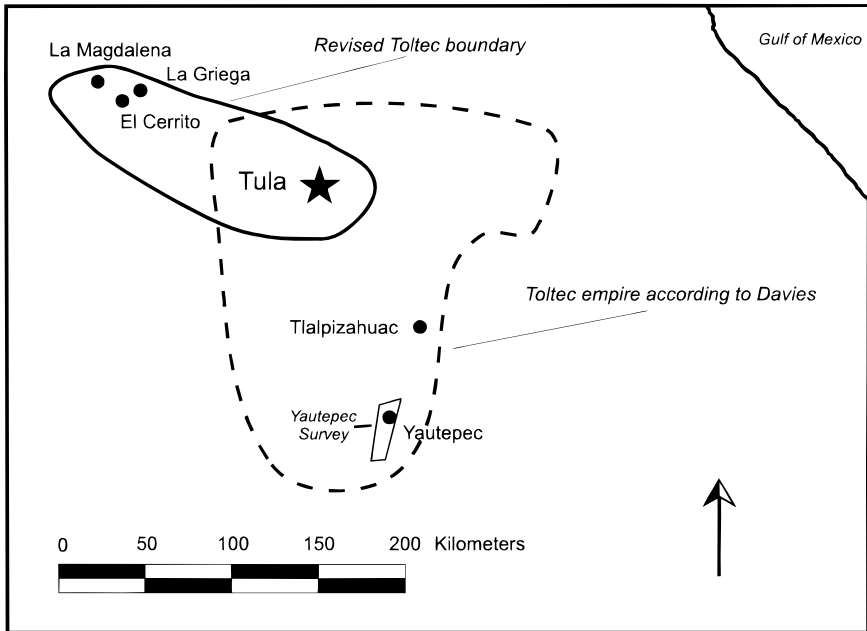


FIG 4. Map of the extent of the Tula polity and Davies's map of the "tentative boundary of the Toltec empire" (Davies 1977; see text for discussion).

ological evidence confirms the ancient city's imperial status (for a description of Tenochtitlan from historic sources, see Rojas 1986). Salvage excavations along the routes of Mexico City's expanding underground metro, although poorly published, are sufficiently extensive to demonstrate the large size of Tenochtitlan. An imperial level of social complexity is suggested by the variability in architecture excavated at Tenochtitlan, including simple houses, small temples, and massive state pyramids and other civic-religious buildings (Matos Moctezuma 1979, 1988, 1999). The presence of an explicit imperial ideology is indicated by massive stone carvings that portray images of militarism, sacrifice, and the cosmic glorification of the state and key emperors (Townsend 1979; Umberger 1996). This ideology has been a central focus of investigation by scholars working on the Aztec Templo Mayor (Broda et al. 1987; Matos Moctezuma 1988), and Brumfiel's (1998) analysis explores the social context of impe-

rial ideology at Tenochtitlan. The existence of an orthogonal grid plan covering the island city is also consistent with Tenochtitlan's imperial status (Calnek 1976; Smith 1997a).

Teotihuacan

The huge size and high level of social complexity at Classic-period Teotihuacan are well attested in the abundant record of recent archaeological fieldwork at the site (e.g., Cabrera Castro et al. 1991a; Cowgill 1997; Millon 1981). An imperial ideology that included prominent militaristic themes is evident in many of the polychrome mural paintings, figurines, and sculptures found throughout the ancient city (Barbour 1979; Cabrera Castro et al. 1991b; Cowgill 1997; Miller 1967, 1973; Sugiyama 1998). The military iconography in murals includes figures with tasseled head-dresses and ringed eyes (Millon 1973), bird/owl imagery, and representations of the Storm/War God, felines, spears, and shields

(Berrin 1988; Cabrera Castro 1992). Military orders are associated with owl, eagle, coyote, jaguar, and serpent imagery (Miller 1967; Von Winning 1948; Von Winning 1987:94). Unlike in many ancient empires, individual leaders were not depicted publicly at Teotihuacan, a situation much discussed in the recent literature (e.g., Blanton et al. 1996; Cowgill 1997; Pasztory 1997). As at Tenochtitlan, the high degree of urban planning suggested by the extensive orthogonal grid layout of Teotihuacan is consistent with city's status as an imperial capital.

Tula

Although much smaller and less socially complex than Teotihuacan or Tenochtitlan, Tula was still an impressive urban center of 11 sq. km, with 30,000 to 40,000 inhabitants (Diehl 1983:58–60). Excavations have revealed evidence of social complexity in the form of varied residential architecture (Healan 1989) and workshops for obsidian and ceramics (Healan et al. 1983; Hernández et al. 1999). The large central plaza is surrounded by various monumental structures, including two temple-pyramids, a ballcourt, and other civic buildings. Carved stone reliefs with depictions of warfare, sacrifice, and other militaristic themes are prominent in the urban core of Tula (de la Fuente et al. 1988; Kristan-Graham 1999). An orthogonal grid layout was also present at Tula, but it may not have covered the entire extent of the city. The center of the early, Corral-phase, city at Tula exhibited a grid layout. When the later, Tollan-phase city center was built, a new grid orientation was established, at least for the central city layout (Mastache and Crespo 1982; Mastache and Cobean 1985:274–285, 1989:62–63).

Discussion

Teotihuacan, Tula, and Tenochtitlan were all sufficiently large and complex to have served as capitals of empires. Each was laid

out following a grid that covered part of all of the urban area, a pattern otherwise quite rare in ancient Mesoamerica (most Mesoamerican cities exhibited formal planning only in their ceremonial cores, and residential zones do not show evidence of planning). Comparative historical research suggests that the use of urban grids is usually related to strongly centralized political control (Carter 1983; Lynch 1981). All three of the cities under consideration here also contained prominent public art with themes of militarism and the glorification of the state.

In the case of Tenochtitlan, documentary and art historical evidence shows that its Mexica rulers deliberately imitated the art and architecture of Teotihuacan, Tula, and Xochicalco, a large urban center in Morelos that flourished between the dominant periods of Teotihuacan and Tula (Umberger 1987, 1996).

The Toltec rulers of Tula may similarly have imitated Teotihuacan in their use of the grid pattern and other urban features. These three cities participated in a central Mexican tradition of imperial city planning in which art and architecture made references to the past and were used by rulers to proclaim political messages of power, greatness, and cosmic legitimacy (Smith 1997a). For the Toltecs, however, we believe that these messages were more empty propaganda than social reality, since the notion of a Toltec empire fails on the criterion of domination of a territory.

DOMINATION OF A TERRITORY: EXCHANGE BETWEEN CAPITAL AND PROVINCES

Tenochtitlan

There is overwhelming archaeological evidence for economic exchange between Tenochtitlan and its provinces, and this is a topic for which archaeology surpasses ethnohistory in the quantity and quality of the evidence. The most spectacular archaeological finds are the offerings from the Templo

Mayor, which contained Mezcala-style stone sculptures from Guerrero, a variety of species of marine fauna from the Atlantic and Pacific coasts, and ceramics from diverse regions (López Luján 1994; Román Berrelleza and López Luján 1999). The offerings in the so-called “volador deposit” near the Templo Mayor included ceramics from Morelos and other provincial areas (Smith n.d.b; Solís Olguín and Morales Gómez 1991), and sherds from a variety of provincial ceramic types have been recovered in various salvage excavations in Mexico City (seen by Smith in the laboratories of the Departamento de Salvamiento, Instituto Nacional de Antropología e Historia, Mexico City). Obsidian from several source areas in the Aztec provinces is abundant in Mexico City excavations, and the presence of ceramic spindle whorls for spinning cotton in residential contexts (Cepeda Cárdenas et al. 1977) points strongly to the importation of raw cotton from provincial areas like Morelos and the Huasteca (cotton does not grow in the Basin of Mexico).

The most secure evidence for the exportation of goods from Tenochtitlan to the Aztec provinces is provided by Aztec III black-on-orange ceramics. Characterization research by Mary Hodge and colleagues (Hodge et al. 1993) has shown that vessels of this distinctive ceramic type were produced in several parts of the Basin of Mexico, including Tenochtitlan. Aztec III sherds from the provincial city of Yauhtepec include examples from the Tenochtitlan production area, as well as other areas (Neff and Glascock 1996). This type is found in many parts of the empire (Smith 1990), and many of those vessels were produced in the Tenochtitlan area (Smith, Neff and Fauman-Fichman 1999).

Smith's excavations at Yauhtepec and other Aztec provincial sites in Morelos uncovered numerous other artifacts originating in the Basin of Mexico, but given our uncertainty about Aztec exchange mechanisms and networks it cannot be assumed that all of these were imported directly from Tenochtitlan

and not from other places in the Basin of Mexico. Several ceramic types (e.g., Texcoco Fabric-Marked salt vessels and Xochimilco Polychrome jars) probably originated in other parts of the Basin, whereas Aztec-paste ceramic figurines could be from either Tenochtitlan or other places in the Basin. Guinda or redware bowls, pitchers, and cups were probably manufactured in both Morelos and the Basin of Mexico, and both types are found at sites in Morelos. Chalco/Cholula Polychrome tripod plates were imported from a number of areas, including Chalco in the Basin of Mexico and various locations in the Puebla/Tlaxcala region (Smith et al., 1999). Green obsidian from Pachuca predominates at Aztec sites in Morelos (where it generally comprises over 90% of all obsidian), and gray obsidian from the Otumba source area in the Basin of Mexico is also abundant (Smith, unpublished data). The Basin of Mexico was the Aztec core zone, and even if a Tenochtitlan origin cannot be established, these varied imports do provide evidence for exchange between the core and the provinces. Although we suggest that this commerce in ceramics, obsidian, and other goods was related to Aztec imperialism, we do not mean to suggest that this exchange was controlled by the state; in fact it was almost certainly conducted through commercial channels independent of direct state control (Isaac 1986; Smith n.d.b, 2001; Smith and Berdan 2000). Against this view, Pastrana (1998) argues that the Aztec empire controlled the mining, tool production, and exchange of obsidian, although he cites no evidence for this supposed control.

Teotihuacan

The exchange of goods between Teotihuacan and its provinces differed from the exchange outside of the empire in quantity and context. In the provinces, goods originating from or controlled by Teotihuacan include Thin Orange ceramics, censers, figurines, and Pachuca obsidian (particularly

in blade form). Rattray and Harbottle (1992) have demonstrated that the manufacture of Thin Orange took place in Puebla, an area Rattray claims was outside of the Teotihuacan empire due to the lack of intrusive Teotihuacan cultural elements (Rattray 1990). The overwhelming monopolization by Teotihuacan of the distribution of Thin Orange does, however, strongly suggest that this area was giving Thin Orange as tribute to Teotihuacan. While Thin Orange was traded outside of the empire in extremely low quantities as a prestige item, a much higher frequency of this import in Teotihuacan's periphery coincides with integration into the empire. Thin Orange comprises 18% of the Classic period ceramics at the provincial administrative site of Chingu during the Early Classic period (Díaz 1980:36) and 2–4% of the ceramics from the Classic period in the Yauhtepec area (Montiel n.d.). Rattray (1981, 1998) reports a Thin Orange frequency of 3–13% from test excavations of the Teotihuacan Mapping Project. The distribution of Thin Orange is also an important indicator of its imperial nature. At sites within the imperial periphery, Thin Orange is present throughout most residential sites, yet at distant sites like Kaminaljuyu, Copan, and Tikal, Thin Orange is mainly found in isolated (elite) funerary contexts.

Although the Otumba obsidian source is only about 15 km from Teotihuacan, the Pachuca obsidian source, located 50 km northeast of the city, appears to have been of more interest to the empire (Charlton 1978). The manufacture of tools from Pachuca obsidian took place mainly in workshops associated with public buildings in Teotihuacan, suggesting state control (Spence 1987). This monopoly included extraction, suggested by Teotihuacan sites such as Huapalcalco and Zazacuala located close to Pachuca (Charlton 1978; Santley and Pool 1993), production, distribution to the provinces, and trade with external partners. In the Teotihuacan provinces, Pachuca

obsidian became the dominant lithic material in the Classic period, a trend that reversed in the Epiclassic period (after the fall of Teotihuacan). The evidence from Morelos suggests that Pachuca obsidian was imported into the area already in blade form (Montiel n.d.).

Decorated censers were also imported into the provinces (Díaz Oyarzábal 1980; Montiel n.d.). The censers from the Yauhtepec area are so similar stylistically and technologically to Teotihuacan censers, that in the absence of characterization analysis it is difficult to determine if they were locally made imitations or imports. We consider these censers as imperial goods based upon the identification of a large censer workshop associated with the Ciudadela in Teotihuacan (Sugiyama 1998). Although Teotihuacan-type censers are found in distant areas outside of the empire (Berlo 1984), their presence is isolated from other indicators of Teotihuacan contact and such examples are probably local imitations of Teotihuacan censers. Figurines have been extensively described for two areas in the Teotihuacan empire, Chingu (Díaz Oyarzábal 1991) and the Yauhtepec Valley (Montiel 1999). These are identical to figurines found at Teotihuacan (Barbour 1979). The presence of molds in these areas suggests that at least some of these figurines were produced in the provinces. It is possible that Teotihuacan supplied the molds.

Teotihuacan's interest in its provinces varied with the economic and strategic importance of each area. Chingu was probably valued for its lime, which was needed for mural production and plaster manufacture for floors and walls at Teotihuacan. The Yauhtepec and Amatzinac valleys were probably cotton growing areas as they are known to have been in the Late Postclassic period (Maldonado Jiménez 1990; Smith 1994). A few possible crude spindle whorls and weaving picks have been found in Teotihuacan although they are not common

(Cabrera 1999). There are many bone needles implying that some form of textile was being produced. Cotton can not grow in the Basin of Mexico due to the colder environment, and Morelos is the closest cotton growing area. Morelos was also favored for its strategic location along a trade route with Guerrero. Granular ware, probably from Guerrero, is found in Teotihuacan, but there are higher frequencies in central and eastern Morelos (Hirth 1980; Montiel 1998, n.d.), suggesting that Granular ware moved through Morelos on its way to Teotihuacan.

Teotihuacan dominated trade routes to northern Mexico and Veracruz by controlling select towns in Puebla, Tlaxcala (García Cook 1981), Hidalgo (García Cook and Trejo 1977), and Queretaro. In the Valley of Queretaro, goods that may have been controlled by the state, such as red-on-buff bowls in cylindrical and annular-based forms, are found in a few large sites in strategic locations to control trade routes from Teotihuacan to areas in the north. The concentration of populations in these settlements by the Late Classic period is interpreted by the investigators as a response to the collapse of Teotihuacan (Brambila and Castañeda 1993; Crespo 1998; Saint-Charles Zetina and Argüelles Gamboa 1991).

Tula

Several areas within the central Mexican highlands exhibit Early Postclassic pottery similar to that of Tollan-phase Tula (ceramics at Tula are described by Cobean 1990 and Acosta 1956, 1957), and most archaeologists suggest that this material indicates some form of link with the Toltec city. The closest parallels are found in the Bajío area of Guanajuato and Queretaro, where El Cerrito, Morales, and other sites share many ceramic types with Tollan-phase Tula (Flores and Crespo 1988; Crespo 1991; Braniff 1999). Flores and Crespo (1988) suggest that these similarities indicate “la existencia de una población que en alguna forma es-

tuvo unida a Tula” (p. 218; see also Braniff 1975:281). We suggest below that these similarities may have resulted from the incorporation of this area into the Tula polity.

The Early Postclassic ceramics of the Basin of Mexico were part of the Mazapan ceramic sphere (Whalen and Parsons 1982; Cobean 1990), which shares many types (but with different frequencies) with the local Tollan ceramic sphere of the Tula region (Cobean 1990:38–40). Although no chemical characterization studies have been published, it is likely that vessels of some of the common ceramic types were exchanged between Tula and settlements in the Basin of Mexico.

In our survey of the Yautepec Valley we collected low frequencies of several ceramic types similar to Tollan-phase types at Tula such as Macana Red-on-Brown and Proa Polished Cream (Cascio et al. 1995). The type Macana Red-on-Brown, a very rare type in Yautepec, appears to be a distinctive Tula-based type that was probably traded from Tula. Cream-slipped ceramics, on the other hand, are more common in Morelos and also have a much more widespread distribution in Early Postclassic central Mexico (Cobean 1990:357–364; Whalen and Parsons 1982:437; Tolstoy 1958). It seems more likely that they may have been produced in the Basin of Mexico and Morelos in addition to the Tula area. None of the Toltec-like ceramics from Guanajuato, Queretaro, the Basin of Mexico, or Morelos have been subjected to chemical characterization, however, and our suggestions should be seen as highly preliminary. So-called “Mazapan-style” ceramic figurines are not uncommon in the Yautepec Valley, and we believe that these are better seen as evidence for participation in a central Mexican style zone that included Morelos, the Basin of Mexico, the Tula region, and parts of west Mexico (Schondube 2000) than as evidence for direct exchange between Yautepec and Tula.

In contrast to these likely cases of stylistic similarity is the site of Talpizahuac, near

Chalco in the southern Basin of Mexico, whose limited Early Postclassic deposits produced burial vessels and sherds very similar to the ceramics of Tula that may represent imports (Pfanckuch Wachtel et al. 1993). Most of the architecture and deposits at this site date to the terminal Classic and Epiclassic periods, however (Tovalín 1998), with Early Postclassic vessels found primarily in some intrusive burials. Talpizahuac also yielded ceramic imports from more distant areas, including Plumbate from Pacific coastal Guatemala and Fine Orange and other Gulf Coast types, indicating that the inhabitants of Talpizahuac were trading with diverse areas. The evidence does not suggest conquest or domination by Tula, and Tovalín (1998:177) concludes that the site was not occupied by Toltecs from Tula.

One of the few clear examples of hinterland goods imported into Tula is obsidian, although the mechanisms are not yet clear. The city had numerous workshops producing prismatic blades, bifaces, and other tools from obsidian. The raw material came from several source areas, including the nearby Pachuca source and the distant Ucareo/Zinapécuaro source area in Michoacan (Healan 1993; Healan et al. 1983). Analysis of Early Postclassic ceramics in this source area revealed no definite Toltec imports but rather an intrusive ceramic complex (called Cumbres) linked to either Huamango in the Bajío region (Piña Chán 1981; Lagunas 1997) or to sites in the Toluca Valley (Healan and Hernandez 2000). These authors suggest that populations from these latter areas may have quarried obsidian at Ucareo, part of which was then delivered to Tula as tribute. Alternatively, local groups in either the Ucareo or the Bajío region could have sent obsidian to Tula through commercial exchange networks. Kristan-Graham (1993, 1999) has interpreted figures carved in relief on a prominent frieze at Tula as merchants rather than as soldiers or chiefs (an alternative interpre-

tation), providing further evidence for the importance of commerce at Tula. Not surprisingly, excavations at the site of Teptitlán in the immediate vicinity of Tula (Cobean and Mastache 1999) reveal a level of exchange between the city and its inner hinterland far higher than between Tula and any distant area.

Discussion

Because the Yautepec Valley of Morelos was included in the Tenochtitlan and Teotihuacan empires and in Davies's model of the Tula empire (see above), it is instructive to compare the frequencies of "imperial" imports from these three cities at sites around Yautepec (see Table 2). For Teotihuacan and Tenochtitlan, we use sherd counts from our excavations; because we did not excavate any Early Postclassic sites, we use data from single-component surface collections for the Tula period.³ The lower level of probable "imperial" imports at Yautepec during Tula's reign compared to the earlier and later empires is striking. It should be noted that if some or all of the cream-slipped ceramics (comprising the category, "imperial style, uncertain origin") were imported from Tula, this would bring that city more in line with the frequencies of the other two cities. Although we consider this unlikely, it cannot be ruled out until chemical characterization research is done on the Early Postclassic ceramics. In contrast,

TABLE 2
Frequencies of Imported Ceramics in the Yautepec Valley, Morelos

Area of origin	Teotihuacan	Tula	Tenochtitlan
Local	70.8	93.3	91.6
Imperial imports	1.8	0.1	2.3
Imperial style, local origin	3.9	—	0.1
Imperial style, uncertain origin	9.5	6.4	5.1
Other imports	14.0	—	1.0
Total sherds	14,697	1,684	57,051

many of our attributions of Classic and Late Postclassic types to local vs imported categories are based upon recent neutron activation studies (Smith et al. 1999; Montiel n.d.). The presence of imported ceramics from areas other than the imperial capital in Teotihuacan and Tenochtitlan times (Table 2) points to higher levels of regional exchange in those periods.

The existence of exchange relationships between a city and provincial areas is a necessary but not sufficient criterion for the presence of imperialism, and it is difficult to imagine an empire having the low level of capital-provinces exchange indicated for Tula. The larger sizes of Tenochtitlan and Teotihuacan relative to Tula were associated with much higher levels of economic activity in these cities (including craft production and exchange), with greater exchange between the cities and their hinterlands, and with greater exchange between the provinces and areas other than the imperial capitals.

DOMINATION OF A TERRITORY: POLITICAL CONTROL OF PROVINCES

Tenochtitlan

In contrast with the topic of exchange, the political control of provinces by Tenochtitlan is far more heavily documented in written sources than in the archaeological record (Berdan et al. 1996; Carrasco 1996). Tenochtitlan relied on provincial city-state rulers for local rule in most cases (Smith 2000), and this indirect form of control epitomizes the archaeological difficulties in studying the empire. The military conquest of provincial polities is hinted at by the existence of locally built Postclassic fortresses in several parts of the Aztec empire (Smith n.d.a), but problems with chronology and the lack of excavations rule these out as unequivocal evidence for imperial conquest. The Aztec military settlements at Quauhtochco (Medillín Zeñil

1952) and Oztoma (see below) suggest conquest, or at least control, of these provincial areas, but again the picture is clouded by poor data. The two strongest indicators of Aztec imperial domination are the decline in standard of living at sites in Morelos following Aztec conquest and suggestions of the co-opting of provincial elites by the imperial rulers.

The transition from the Late Postclassic-A period (prior to Aztec conquest) to the Late Postclassic-B period (following Aztec conquest) was marked by a consistent lowering of the standard of living at sites in Morelos as inferred from a quantitative wealth index based upon frequencies of imported and local decorated ceramics. Although this trend was probably due in part to local demographic and agrarian processes (Smith and Heath-Smith 1994), the fact that it was consistent across a number of sites in different polities and environmental zones (Smith n.d.b) suggests a common origin in Aztec conquest. Current research by Jan Olson is examining issues of wealth levels and standard of living on the household level at three of those sites, Yautepec, Cuexcomate, and Capilco. Smith and Heath-Smith (1994) argue that although the direct effects of the imposition of imperial tribute at the household level were minor, Aztec imperialism had significant indirect effects that combined to produce major economic and social impacts on provincial households. One of these indirect effects was the support of provincial elites.

The co-opting of provincial elites, a common process in hegemonic empires, was a major component of the imperial strategies of the Aztecs (Berdan et al. 1996). Current research on excavated elite compounds in Morelos suggest that provincial elites at the important political center of Yautepec were better off economically after Aztec conquest, whereas contemporary elites at the rural town of Cuexcomate suffered greatly (Jan Olson and M. Smith, unpublished

data); this fits what we know of Aztec strategies in co-opting powerful provincial elites. Additional evidence for this process may be found in the scattered occurrence of Mexica-style sculptures in the provinces (Umberger and Klein 1993). For example, the presence of the carved name glyph of the Mexica emperor Ahuizotl in the ancient provincial temple of Tepozteco in Morelos suggests a proclamation of imperial control and a statement of alliance with the local elites who probably controlled the temple.

Teotihuacan

A lack of fieldwork at relevant sites makes it difficult to identify extensive evidence for control of a territory by Teotihuacan. There are a number of sites that are likely Teotihuacan administrative centers within its provinces (Table 3 and Fig. 3). These sites exhibit talud-tablero architecture, pyramid-plaza complexes, and orthogonal grid layouts, all features associated with Teotihuacan (Charlton 1991; Díaz Oyarzábal 1998; Nalda 1997; Torres Cabello 1998). The evidence in the provinces consists of urban planning influenced by Teotihuacan, the reorganization of settlements

around imperial regional centers exhibiting Teotihuacan state ideology, and state-controlled goods present at settlements surrounding these centers.

Ocoyoacac in the valley of Toluca has a north-south orientation, probable grid pattern, talud-tablero architecture, as well as Teotihuacan ceramics including cylindrical tripod and flat-bottom, flaring wall vessels, Thin Orange, imitation Thin Orange, censers, and figurines (Díaz Oyarzábal 1998). The site was abandoned in the Late Classic with the collapse of the empire. Tepeapulco in southeastern Hidalgo is a regional center that also exhibits Teotihuacan influence in its urban planning and contains a high frequency of Teotihuacan style ceramics and Thin Orange (Matos Moctezuma et al. 1981). In Tlaxcala, Teotihuacan ceramics and figurines are found in association with the apartment-type compounds and pyramid-plaza groups at the site of Calpulalpan (Linné 1942:56-89). While Teotihuacan influence in urban planning is absent in Tlaxcala outside of the "Teotihuacan Corridor" (García Cook 1981), a grave was found in the site of Teteles de Ocotitla containing a large offering of Teotihuacan ceramics (Vega Sosa 1981). From the preliminary work in the valley of

TABLE 3
Urban Characteristics of Administrative Centers in the Teotihuacan Empire

Provincial city	Compact/ Nucleated	Apartment compounds	Grid plan	Ceremonial avenues	Pyr./plaza complexes	Talud- tablero	State- controlled goods	Effect of Teo collapse present
Basin of Mexico:								
Central Basin	X	X	X	X	X	X	X	X
Southern Basin	—	—	X	?	?	X	X	X
Northern Basin	X	?	—	—	—	?	X	X
Other areas:								
Calpulalpan	X	X	?	?	X	?	X	?
Tepeapulco	X	X	?	X	X	X	X	?
Ocoyoacac	X	—	X	?	X	X	X	X
Chingu	X	X	X	X	X	X	X	X
Hacienda Calderon	X	—	?	?	X	X	X	X
San Ignacio	X	—	?	?	X	?	X	X

Sources. Charlton (1991: Table 15.2); Díaz (1998); Nalda (1997); Torres Cabello (1998).

Note. Key: (X) trait is present, (—) trait is absent, (?) presence of trait is unknown.

Queretaro, there appear to be many sites with strong ceramic and architectural similarities with Teotihuacan, including San Bartolo Aguascaliente (Brambila and Castañeda 1993), El Cerrito (Crespo 1991, 1998), and La Negreta and El Rosario (Saint-Charles Zetina 1998).

Chingu, near Tula, and San Ignacio in Morelos display many of the material correlates of Teotihuacan regional centers and were also abandoned with the collapse of the empire. Chingu is the only distant provincial center that contains all of the evidence for urban planning illustrated in Table 3 as well as a majority of Teotihuacan ceramics and figurines (Díaz Oyarzábal 1980, 1991). In Morelos, the surveys of the Amatzinac (Hirth 1978, 1980, 1996) and Yautepec valleys (Montiel n.d.), and intensive investigations at Las Pilas (Martínez Donjuan 1979) and Hacienda Calderon (Nalda 1997) provide the most detailed portrayal of a provincial area of the Teotihuacan empire. San Ignacio in the Amatzinac Valley (Hirth 1978, 1980, 1996) and Hacienda Calderon in the Cuautla Valley are regional centers exhibiting urban planning and a concentration of state goods. All reported Early Classic sites in the eastern half of Morelos contain numerous examples of Teotihuacan material culture, both imported and locally made, including Thin Orange and other ceramic wares, figurines, and Pachuca obsidian blades. Changes in settlement patterns reflect a nucleation of populations in fertile cotton growing areas and/or strategic positions, both conditions probably due to the effect of the empire. The Teotihuacan empire appears to have controlled its provinces outside of the Basin of Mexico using indirect rule, and recent fieldwork in these provincial areas points to a diversity of imperial interactions (Montiel n.d.).

Tula

Two kinds of evidence suggest that the Tula state may have controlled settlements in the Bajío region. First, the extensive simi-

larities between Early Postclassic ceramics in the Bajío region and Tula, discussed above (see Flores and Crespo 1988), suggest close interaction between these areas. Both were part of the Tollan ceramic sphere, and on this basis Cobean (1990:507) suggests that the Bajío was part of the Tula empire. More impressive, however, is the presence of stone sculptures at the site of El Cerrito (Crespo 1991) that are virtually identical to sculptures at Tula (de la Fuente et al. 1988). These suggest local elite emulation of state/imperial styles, probably resulting from close communication between elites in the two areas. The regional polity extending from Tula to the El Cerrito area (Fig. 4) could be considered a large regional state, or perhaps a miniempire similar to the pre-Tenochtitlan states or empires of Texcoco and Azcapotzalco in the Basin of Mexico (Davies 1973; Carrasco 1996).

A few Tula-style stone carvings were also present at Tlalpizahuac in the southern Basin of Mexico (Granados Vázquez et al. 1993), but compared to El Cerrito there are far fewer examples and they exhibit fewer similarities with sculptures at Tula itself; in fact these could predate the Early Postclassic period (Tovalín 1998). The largest Early Postclassic sites encountered by the Basin of Mexico archaeological survey projects are fairly small and unassuming sites classified as "secondary regional centers" (Parsons 1971:87-88; Sanders et al. 1979). Although these have yet to be investigated in any detail, none of them appear to resemble Teotihuacan's regional administrative centers (Table 3) in size, complexity, or likeness to the political capital. We therefore see no reason to include the Basin of Mexico, Morelos, or other areas outside of the narrow corridor from Tula to El Cerrito in modern reconstructions of the Toltec polity.

Discussion

As noted above, it is very difficult to find material evidence of provincial control in

empires that were organized in an indirect or hegemonic fashion. Such polities did not invest much in provincial infrastructure, and they relied on the co-optation of provincial elites for control. The simple presence of imperial goods in distant elite contexts can indicate either imperial control or imperial interaction with extraempire elites (Whittaker 1994). The client states of the eastern Roman empire (Braund 1984) provide a textually well-documented example of indirect rule. Although nominally independent of Rome, these kingdoms were for all practical purposes under Rome's control. Yet archaeological evidence for this situation is quite elusive (Isaac 1990; Millar 1995).

Even with these difficulties, the differences in the quantity of evidence in provincial areas between Tenochtitlan and Teotihuacan, on one hand, and Tula, on the other, is striking. Our surveys and excavations in Morelos turn up considerable evidence of goods or styles from Tenochtitlan and Teotihuacan, but many fewer examples of goods or styles from Tula. Furthermore, our knowledge of the archaeological record in nearby areas such as southern Puebla and Toluca suggests that this situation is typical.

INFLUENCE IN THE WIDER MESOAMERICAN WORLD SYSTEM

Tenochtitlan

Mexica trade with places beyond the limits of their empire is well documented archaeologically. Obsidian from the Pachuca source area, almost certainly carried by the famous *pochteca* merchants (Isaac 1986), has been found in Late Postclassic contexts in a number of distant areas (Smith 1990). Aztec III black-on-orange ceramics, although probably less common than obsidian outside of the empire, were nevertheless traded as far south as El Salvador (Navarrete 1996). Turquoise, imported from the

U.S. Southwest (Weigand et al. 1977; Weigand and Harbottle 1993) is common at Tenochtitlan and other Aztec sites (Saville 1922). Several caches of copper or bronze bells from Michoacan and/or Jalisco have been recovered in Tenochtitlan (Seler 1990–1996), and bronze objects are not uncommon in other parts of the Aztec empire (Hosler 1994, 1996). In addition to bronze, obsidian from Michoacan (the Ucareo and/or Zinapécuaro sources) is not uncommon at Aztec sites in Morelos, and Pachuca obsidian has been found at Tarascan sites in the Patzcuaro Basin (Pollard and Vogel 1994). These materials are particularly important, for they document the existence of trade across the Aztec/Tarascan imperial border (a process not described in documentary sources, which emphasize hostile activities along the border). Other exotic goods found at Aztec sites, including jade and marine shell (Thouvenot 1982; López Luján 1994), provide additional evidence of active commercial exchange with extraimperial areas.

Perhaps the clearest case of political influence beyond the Aztec imperial borders is the militarization of the Aztec/Tarascan border. As these two expanding empires came up against one another in the mid- to late 15th century, a number of fortifications were built on each side. The Aztec fortress of Oztoma, described in a number of ethnohistoric accounts, is the best known, although to date only limited fieldwork has been done at the site (Silverstein 2000). There are many other fortified sites along both sides of this border, some quite large and impressive, and archaeologists are only beginning to study these sites (Gorenstein 1985; Hernández Rivero 1994b; Silverstein 2000).

The cultural influence of the Aztec empire beyond its borders is difficult to assess, since the transmission of many central Mexican styles and traits to distant areas began before the formation of the empire and existing chronologies are not sufficiently refined to pinpoint the dates of indi-

vidual occurrences (Smith 2001). One of the most visible examples of central Mexican iconographic elements in distant areas is the Postclassic International Symbol Set (Smith and Berdan 2000; Boone and Smith n.d.), a group of visual elements found as far away as Maya murals at Tulum and other sites on the coast of Yucatan (Robertson 1970 labeled these elements the “International style” of the Postclassic period). The spread of these symbols probably signaled the expansion of commercial and cultural networks in the Late Postclassic Mesoamerican world system (prior to as well as after the expansion of the Aztec empire), and thus it is only a weak candidate for imperial influence in the international context. Many of the items in Navarrete’s (1996) catalog of presumed central Mexican traits found in southern Mesoamerica predate the Aztec empire (and many of them probably do not even have a central Mexican origin at all). In sum, it is difficult to determine whether the apparent lack of Aztec cultural and stylistic influence beyond the empire is due to chronological imprecision or to a simple lack of such influence. This situation contrasts greatly with the earlier Teotihuacan empire, whose cultural influence was widespread and deep throughout Mesoamerica.

Teotihuacan

Teotihuacan had commercial contacts throughout most of Mesoamerica. Imports found in Teotihuacan include stone masks and Granular ware from Guerrero, shell and cacao from the Pacific coast, Lustrous ware from El Tajin, Polychromes from the Peten, and other fine ware ceramics from the Gulf Coast (Rattray 1979). Pachuca obsidian, whose distribution was almost certainly in Teotihuacan hands (Sanders and Santley 1983; Santley and Pool 1993; Spence 1987, 1996), is a rare but consistent commodity at Classic Maya sites (Spence 1996; Moholy-Nagy 1999) as are Teotihuacan ce-

ramics (discussed below). Teotihuacan-type decorated censers have been found with local censer types in Escuintla and Lake Amatitlan, Guatemala (Berlo 1984). Cylindrical tripod vessels, a hallmark of Teotihuacan, appear in sites throughout Mesoamerica, although many are locally made variants.

Surrounding areas responded politically to the rise, domination, and collapse of the Teotihuacan empire. Monte Alban in Oaxaca was a powerful state that had commercial and/or diplomatic relations with Teotihuacan. Marcus (1983) interprets stone reliefs at Monte Alban as records of Teotihuacan visitors, probably diplomats or traders. The so-called “Oaxaca barrio” at Teotihuacan (Spence 1989, 1992) was a neighborhood where foreigners, presumably from Monte Alban, were living within the Teotihuacan urban zone. Monte Alban declined about the same time as Teotihuacan, which suggests a close connection between the two states (Blanton 1983). Migration into areas of Puebla that were independent of Teotihuacan and nucleation into larger settlement have been interpreted as responses to the increasing domination of Teotihuacan (García Cook 1981:263; García Cook and Merino Carrión 1997:369). Even distant areas in Michoacan were effected by increasing mining of cinnabar and other pigments used for Teotihuacan mural production (Weigand 1982).

Matacapán in Veracruz has been suggested as a Teotihuacan enclave due to the presence of *talud-tablero* architecture on one structure and Teotihuacan type ceramics, such as candeleros, tripod vessels, floreros, censers, and effigy vessels (Ortiz and Santley 1998; Santley 1989; Santley et al. 1987). These ceramics are locally made, however, and Cowgill (1997:135) has noted that their resemblance to Teotihuacan ceramics are not as close as some had previously implied. This pattern may reflect the presence of a group originating from Teotihuacan, just as there were residents from the Gulf Coast liv-

ing in the "Merchant's Barrio" of the capital (Ratray 1979). The collapse of the Teotihuacan empire did not appear to affect the Gulf Coast greatly, however (Arnold et al. 1993), and we doubt if this area was ever part of the Teotihuacan empire.

Kaminaljuyu, near Guatemala City, also had links to Teotihuacan, evident in the use of *talud-tablero* architecture and goods from Teotihuacan present in some burials (Sanders and Michels 1977). The data suggest that the two cities were related through ties of elite exchange and interaction rather than through imperial conquest (see discussion of these processes in Stark 1990). Teotihuacan traits are restricted to parts of the acropolis and elite burial contexts, and they are found together with the regional Maya traditions.

Recent epigraphic decipherments of monuments from Tikal by David Stuart (2000) have brought up the old argument (again) that Teotihuacan conquered this city in the Early Classic period (Coe 1999: 90–97). In Tikal, the relevant evidence begins with texts associated with the ninth ruler. Stuart's reading indicates that this individual may have been from Teotihuacan, whereas Schele and Freidel (1990:156–159) claim that the ruler is from the Tikal dynasty but had close associations with a group of Teotihuacanos. At Early Classic Tikal, the warrior costume of Teotihuacanos appears on important monuments including Stela 31, the accession monument of the 11th ruler. Royal tomb offerings include Thin Orange, cylindrical tripod vessels, and green obsidian blades from Teotihuacan along with Maya ceramics. The "Merchant's Barrio" at Teotihuacan contains many Maya sherds probably from Tikal (Ratray 1979, 1989), indicating that Teotihuacan may have had a small resident Tikal population. At Tikal, a small structure (no. 5D-43) connected to the Central Acropolis (the royal palace) exhibits *talud-tablero* style architecture, although it has been claimed that the style may more closely resemble

the later cities of El Tajín and Xochicalco than Teotihuacan (Jones 1996:32–35; Schele and Mathews 1998:72).

The Teotihuacan "influence" at Early Classic Tikal is restricted to the royal lineage, and we agree with others (Schele and Freidel 1990; Schele and Mathews 1998) that this "influence" was probably not a result of conquest by Teotihuacan. Specific rulers of Tikal more likely had alliances with a group from Teotihuacan, perhaps through elite intermarriage. Tikal certainly had its own reasons for seeking powerful alliances at this time when it was probably at war with its close neighbor, Uaxactun. In fact, the victory of Tikal over Uaxactun is associated with the introduction of Teotihuacan weapons, warrior costumes, and military iconography (Schele and Freidel 1990: 130–165).

The founder of the royal lineage in Copan also appears to have had close associations with individuals from Teotihuacan. Altar Q, dedicated 350 years after the royal lineage began, depicts the founder with ringed eyes, reminiscent of Teotihuacan Tlaloc imagery. An Early Classic structure with *talud-tablero* architecture was found beneath Structure 16 (Sharer 1995). This structure, called "Hunal" by archaeologists, contains the burial of the dynastic founder accompanied by Teotihuacan-style ceramics. Ongoing stable isotope analysis of the skeletal remains suggest that he may have had Teotihuacan ancestry. As with Tikal, Teotihuacan "influence" at Copan is restricted to a limited interval during the Early Classic period and occurs within specific elite contexts. The relationships consisted mainly of elite alliances and the emulation of Teotihuacan military symbols for the "cult of war" by local rulers (Schele and Freidel 1990:130–165; Schele and Mathews 1998:18). Maya kings aligned themselves symbolically with the distant Teotihuacan empire to legitimize or reinforce their authority. These relationships may also have been an attempt by individuals from Teoti-

huacan to establish footholds in the Maya area for economic gain, although there is not a lot of evidence from Teotihuacan of a large-scale trade network with the Maya lowlands.

By the Late Classic period, there is no evidence of direct contact between the Maya lowlands and Teotihuacan. However, even after the imperial collapse, Teotihuacan military iconography continues to appear on royal monuments at Maya sites. Yaxchilan Lintel 24 shows the queen with a Tlaloc headdress, and Lintel 25 depicts her having a vision of a serpent with the lineage founder dressed as a Teotihuacan warrior emerging from its mouth. Piedras Negras, Stela 8, and Dos Pilas, Stela 2, both depict the rulers with balloon headdresses, Tlaloc and Mexican year sign imagery reminiscent of Teotihuacan warrior costumes (Schele and Friedel 1990:Fig. 4.17). Centuries after the fall of the Teotihuacan empire, its symbolic importance in the Mesoamerican world was still strong.

Much of the confusion in the literature about Teotihuacan's imperial status can be attributed to its widespread cultural influence in Mesoamerica. Traits derived from or related to Teotihuacan were noted by early scholars, who attributed them to the conquest of much of Mesoamerica by the highland city. This was a time when conquest and empires were invoked to explain much of the Mesoamerican past; as an example, the Classic and Postclassic periods in the Maya lowlands were given the labels of "old empire" and "new empire." Later scholars revised their interpretations of Teotihuacan elements in distant Mesoamerica, rightly arguing that they did not signal imperial control but rather processes of trade, stylistic emulation, and political manipulation of foreign symbols by local elites (e.g., Stark 1990). In our model, such traits do not signal imperial conquest of areas like Oaxaca or the Maya lowlands, but their prevalence in these areas does provide support for our interpretation of the power and

prestige of Teotihuacan, some of which probably derived from its rule of an empire within highland central Mexico.

Tula

Although Tula's economic and political importance within central Mexico was far less than one would expect for an empire, several lines of evidence suggest that the city was heavily involved in the larger Mesoamerican world system during the Early Postclassic period. Sherds of Tohil Plumbate, a widespread Mesoamerican trade ware produced in Pacific coastal Guatemala, are not uncommon at Tula; Diehl calls this ware "especially abundant at Tula" (Diehl 1993:268). Strangely, however, the other major Early Postclassic trade ceramic, Silho Fine Orange from the Gulf Coast, is absent from Tula. A cache of Central American polychromes excavated at Tula (probably the Las Vegas type from Honduras; see Lange 1986) provide further evidence for the city's participation in exchange with the distant reaches of Mesoamerica, and the prevalence of Zinapécuaro obsidian at Tula shows an additional commercial connection. The quantity of exotic imports at Tula is not matched by Toltec exports in more distant areas, however. The Pachuca obsidian found at Maya sites in Yucatan in this period (Coe 1999: 165–169) was probably obtained through trade with Tula, but Mazapan-style figurines from Apatzingan, Tizapan, and other sites in west Mexico (Mastache and Cobean 1985:295; Cobean 1990:506–508) may represent stylistic interaction rather than exchange (Schondube 2000).

The Early Postclassic period was a time of widespread trade and communication throughout Mesoamerica, and the inhabitants of Tula must have participated in these networks. A number of scholars, however, have stressed the noncentralized nature of Early Postclassic exchange systems. Smith and Heath-Smith (1980), for example, show

that during the Epiclassic and Early Postclassic periods most Mesoamerican long-distance trade systems followed coastal routes, with only limited involvement by the cities of central Mexico (in strong contrast to the Classic and Late Postclassic periods, when Teotihuacan and Tenochtitlan were far more heavily involved in long-distance exchange than Tula). Diehl (1993) proposes the existence of a "Toltec horizon" in Early Postclassic Mesoamerica marked by openwork censers, wheeled toys, and other ritual objects, and he notes that Tula participated in this horizon but was probably not the place of origin of the objects or the exchange networks.

Given Tula's quite limited political role within central Mexico, it is not surprising that there is no clear evidence for political impact on more distant areas. When we turn to cultural influence, however, the data tell a different story. Tula and the Toltecs were renowned throughout Mesoamerica, and Tula clearly played a major role in the larger Mesoamerican world system. Diehl's (1993) Toltec horizon suggests the inhabitants of Tula were active participants in the interaction networks that created and maintained the horizon style. We would rephrase his discussion in world system terms; the widespread occurrence of this ritual complex points to important systems of stylistic interaction and information exchange. Tula was an important participant in these interaction systems, even if the major traits did not diffuse outward from there.

The most widely discussed case of stylistic interaction involving Tula is the relationship between that site and Chichen Itza. Detailed architectural similarities between these two Early Postclassic sites have long been noted, and a strongly polarized debate has emerged over the nature and direction of influence between the two cities. The traditional argument combines the architectural data with origin myths from the two areas suggesting that the god-king Quetzalcoatl left Tula and arrived in Yucatan as the

leader of the Itza peoples who conquered Chichen Itza and imposed their architectural styles (Tozzer 1957). An opposing model, based upon an earlier dating of the so-called "Toltec" architecture at Chichen Itza, holds that architectural styles either spread from Yucatan to Tula or spread to both areas from an unidentified origin place (e.g., Andrews 1990). Many scholars now date most of the Chichen Itza architecture prior to A.D. 1000 (e.g., Schele and Mathews 1998:198-201, 357-360; Ringle et al. 1998), throwing the former model into doubt. Given the uncertain chronological resolution at Chichen Itza, however, this debate cannot yet be resolved with confidence. Following Kepecs et al. (1994) and others, we believe that the direction of architectural influence is less important than the fact that Tula and Chichen Itza were clearly interacting with one another both commercially and stylistically. These were two of the largest and most influential cities in the Early Postclassic world system, and this two-way interaction is not surprising.

Discussion

All three cities had important economic and stylistic influence throughout large parts of Mesoamerica. This kind of long-distance influence is typical of powerful empires, but it can exist in the absence of an empire. World history has numerous examples of large cities that had wide-ranging influences but were not capitals of empires. These include religious cities (e.g., Rome in post-imperial times or Mecca) and cities that were trade centers (e.g., Venice and Genoa in early modern times). This is common in periods with vigorous world systems, defined as systems of widely separated polities that are linked through commercial exchange and often other forms of interaction (Abu-Lughod 1989; Chase-Dunn and Hall 1997; Peregrine and Feinman 1996). We suggest that all three major cities participated in world systems

(see note 1) that linked most or all of Mesoamerica through trade and stylistic communication. The relevance of the world systems approach for present purposes is that it provides a framework for understanding the ways in which long-distance stylistic and commercial influences can exist independently of the presence of empires.

CONCLUSIONS

The Nonexistent Toltec Empire

The material culture indicators of ancient imperialism reviewed above suggest that Tenochtitlan and Teotihuacan ruled empires covering large areas of highland central Mexico, but Tula did not. Our interpretation of Tenochtitlan is hardly surprising, since the documentary record is clear about the existence of an empire centered at this city (e.g., Berdan et al. 1996; Carrasco 1996). This case lends support to our model by showing that a historically known Mesoamerican empire can indeed be identified from its material remains alone. The existence of a central Mexican empire based at Teotihuacan has been less widely accepted, but there have been few explicit arguments against such an interpretation. Most scholars have been too preoccupied with Teotihuacan's interaction with the Maya states to worry about the Teotihuacan polity in central Mexico. We feel that the data presented above provide strong support for Millon's (1988) model of a Teotihuacan empire, and Montiel's (n.d.) dissertation elaborates on the nature and local effects of Teotihuacan imperialism.

Our interpretation of the Toltec case departs most strongly from currently accepted interpretations. As mentioned above, most scholars who have dealt with the issue of the Toltec polity classify it as an empire. The archaeological evidence reviewed here, however, provides little support for the notion that Tula exerted political or economic con-

rol over a large hinterland in central Mexico. Tula does appear to have maintained close economic interactions with the Bajío region northwest of Tula, and these interactions may have included political control. We have deliberately avoided a precise definition of the lower limits of the category of empire, since subjective evaluations come into play (just how much territory must be controlled? at what distance from the center? do small-scale regional states based upon the conquest of nearby neighbors qualify?). But even if we take an inclusive approach and call the Tula/Bajío polity an empire, it was an order of magnitude smaller than the Teotihuacan polity (Figs. 3, 4), which was not a particularly large empire compared to examples like the Aztec and Tarascan empires. On the other hand, the city of Tula was certainly large and complex enough to have been an imperial capital, and it contained public monuments with imperial-type ideological messages. Also, Tula was an important part of long-distance commercial and stylistic exchange networks in Early Postclassic Mesoamerica. In sum, we interpret Tula as the capital of a regional state that some might consider a miniempire.

We believe that scholars have been led to misinterpret the Toltec polity as a large and powerful empire for three reasons. First, there is a tendency to give too much weight to the native historical record in central Mexico, in spite of its obviously propagandistic nature (see Marcus 1992 or Smith 1986 for comment). Thus many scholars have been tempted to believe Aztec accounts of Toltec greatness, even when they are contradicted by the archaeological record. Second, there has been very little intensive archaeological research on Early Postclassic central Mexico (outside of Tula, the Bajío, and a few other sites), making it difficult to disprove the common view of great similarities among the roles of Teotihuacan, Tula, and Tenochtitlan (e.g., Sanders and Santley 1983). Third, there has been a general lack of models in archaeol-

ogy and anthropology for the large-scale influence and role of large cities beyond the imperialism model (see Feinman and Nicholas 1991 or Stein 1999 for examples and discussion). We feel that the world systems perspective provides an alternative view that helps explain these seemingly anomalous features of Tula. A city did not have to rule an empire to be an important force at the level of Mesoamerica as a whole. We can acknowledge Tula's considerable cultural, ideological, and economic influence throughout Mesoamerica without having to call it the capital of an empire.

Other New World Empires

The material culture model presented here can be applied to other ancient polities of the New World to assess the likelihood that they were empires. Although there is not space to review these cases in detail here, we can offer a few preliminary suggestions about several well-known examples. The status of the *Tarascan* polity of Michoacan as an empire is well documented in the documentary record, and archaeological evidence largely conforms to our model (e.g., Gorenstein 1985; Hernández Rivero 1994a; Pollard 1977, 1993). The capital Tzintzuntzan was a large and complex urban center, material evidence for exchange between the capital and the provinces is abundant, and there is evidence for several types of political control of provinces, including the construction of imperial infrastructure (fortresses) and co-option of local elites. Tzintzuntzan traded with extraimperial areas, both to the west and across the hostile Aztec/Tarascan border to the east (see Fig. 2), and the Tarascan center exerted political influence in the form of militarization of the Aztec border. The available evidence suggests that the Tarascan empire employed more direct forms of territorial control than did most other Mesoamerican empires.

The imperial status of *Monte Alban* in the Monte Alban II phase (100 B.C.–A.D. 200) has

been the topic of recent debate. Monte Alban was a large and complex urban center at that time (Blanton 1978), and public reliefs in the main plaza have been interpreted as conquest monuments (Marcus 1992). In the Cuicatlan Valley to the north, archaeological evidence points strongly to conquest and imperial administration by Monte Alban (Redmond 1983; Spencer and Redmond 1997). Settlement patterns were reorganized, fortresses built, and economic ties with Monte Alban were strong. The presence of the earliest known skull rack in Mesoamerica at the provincial site of La Coyotera suggests the imposition of imperial ideology in this provincial area. Other nearby regions underwent political centralization at this time, probably in response to the expansion of the Monte Alban polity (Balkansky 1998).

Although the imperial conquest of the Cuicatlan Valley is accepted by most scholars, the expansion of the Monte Alban empire to the south and southeast, toward the Pacific Ocean, is more controversial. Marcus and Flannery (1996:201–202) suggest that the lower Rio Verde Valley was conquered by Monte Alban on the basis of a shift to grayware ceramics at that time. Scholars working in the Rio Verde Valley and the Tehuantepec area, however, have not found the kinds of evidence for imperial conquest described in our model (Joyce 1993; Zeitlin 1990, 1993; Zeitlin and Joyce 1999). These areas engaged in trade with Monte Alban, but imports from the Valley of Oaxaca at sites in the lower Rio Verde Valley declined at the time of Monte Alban expansion, and the graywares, which resembled wares at Monte Alban, were locally produced (Joyce n.d.). Although more data are needed before definitive conclusions can be drawn, our reading of the evidence suggests that the Monte Alban empire in period II controlled the Cuicatlan area but did not conquer distant areas to the south and southeast.

The Postclassic Mixtec polity of *Tututepec* in Pacific coastal Oaxaca has been interpreted as

an empire by Spores (1993) and Davies (1968:181–213) based upon ethnohistoric evidence. Mixtec pictorial histories talk of conquests and marriage alliances by the famed Mixtec king 8 Deer Tiger Claw from his capital of Tututepec, and local administrative documents from hinterland towns mention being conquered and paying tribute to Tututepec. This is a problematic case. The archaeological remains clearly do not fit our model, perhaps due to a lack of relevant fieldwork, although the documentary evidence does suggest that Tututepec was a large and powerful polity, perhaps on an imperial scale. The Postclassic settlement at Tututepec was quite small, hardly qualifying as an urban center, much less as an imperial capital (O'Mack 1986; Spores 1993). Documents mentioning tribute payments (Spores 1993:171) favor the interpretation of empire, although capital–hinterland trade has yet to be documented. There is modest evidence for political influence beyond Tututepec's borders in the care taken by the Aztec empire in approaching and surrounding this area (Berdan et al. 1996:141; Davies 1968). Tututepec appears to have been a powerful and expanding polity, and perhaps should be classified as a miniempire or a conquest-state, similar to the polities of Azcapotzalco, Texcoco, and Cuauhnahuac in central Mexico prior to the founding of the Tenochtitlan empire.

As a final example, we mention the Middle Horizon *Wari* polity of the Andes. In contrast to the hegemonic empires of Mesoamerica, Andean empires such as the Inka and *Wari* exhibited a greater degree of direct territorial control, and consequently the durable evidence of their expansion is quite extensive and visible. The combination of documentary and archaeological evidence on the Inka polity leave no doubt that this was a powerful empire (e.g., Bauer 1998; D'Altroy 1992; Earle 1994; Hyslop 1984; Malpass 1993; Murra 1980). There is no documentary evidence for the earlier *Wari* polity, but its archaeological remains clearly fit our model of ancient empires. The city of *Wari* was a large

and complex urban center with various manifestations of imperial ideology. Exchange between capital and provinces has not been extensively researched, but chemical characterization of *Wari* pottery from several provincial areas reveals it to have come from the *Wari* area.

Political control of the *Wari* provinces is amply documented in most of our categories. There are military themes in the provinces suggesting *Wari* conquest; the construction of imperial infrastructure is clear in the trademark “*Wari* compounds” and D-shaped structures; settlement patterns were reorganized in several areas, including the Mantaro Valley, Carahuarazo, and Nazca valleys; and *Wari* iconography and elite burials in the provinces suggest the co-option of conquered elites. Projection of influence beyond the empire is evident in the complex economic and political relationships between the *Wari* and Tiwanaku polities, particularly at the *Wari* outpost of Cerro Baul within Tiwanaku territory. These features are documented in a number of publications (e.g., Czwarneo et al. 1989; Isbell and McEwan 1991; McEwan 1987; Schreiber 1992, 1999). In sum, the *Wari* polity clearly fits our criteria for an empire, a finding in agreement with current interpretations as presented at a recent symposium (Malpass and Jennings 1999). Other Andean polities—the Moche, Tiwanaku, and Chimor states—have been classified by some as empires, and it might be instructive to apply our model to their archaeological manifestations; such efforts lie beyond the scope of this paper, however.

The Archaeology of Imperialism

We view our material culture model for the identification of ancient empires not as a mere typological exercise but rather as an organizing principle for the archaeological analysis of these polities. Ancient empires were large and complex entities, and archaeological fieldwork can only illumi-

nate bits and pieces of them. Our categories can help organize the available data on individual ancient empires, and they can help guide continued fieldwork and archival research. This scheme can also help identify areas where evidence is weak and more data are needed. For example, the clarification of Monte Alban's role outside of the Valley of Oaxaca in period II will require additional data that bears explicitly on our second category, the domination of a territory. The mere presence of grayware ceramics, taken by some as evidence of imperial conquest, is insufficient by itself to resolve the issue. Without additional information the "Zapotec-imperialism argument" (Zeitlin and Joyce 1999) cannot be fully resolved. Once it is acknowledged that Tula most likely did not rule an empire in central Mexico, scholars can work on developing more appropriate models for Tula's widespread influence in Early Postclassic Mesoamerica. Inversely, now that we can speak safely of a Teotihuacan empire, it is time to move on to more refined analyses of that polity in the light of our theoretical and comparative understanding of ancient empires. Thus our interpretation that Tenochtitlan, Teotihuacan, and several other New World polities were most likely empires is less a conclusion than a starting point for the continuing analysis of these polities by archaeologists.

ACKNOWLEDGMENTS

Much of our interest in the identification of central Mexican empires comes from our work with the Albany Yauatepec project. The Yauatepec excavations were supported by grants from the National Science Foundation, the National Endowment for the Humanities, and the Heinz Foundation. The Yauatepec survey was supported by the National Science Foundation (dissertation grants to Montiel and Timothy S. Hare), the Wenner-Gren Foundation for Anthropological Research, the National Geographic Society, the Institute for Mesoamerican Studies, and the University at Albany. We are grateful for help and support from offi-

cials of the Instituto Nacional de Antropología e Historia, especially Norberto González Crespo, Hortensia de Vega Nova, Victor Hugo Valencia Valera, and Joaquín García-Bárceña. We would like to acknowledge the assistance and insights of our colleagues on the Yauatepec project, especially Timothy S. Hare and Cynthia Heath-Smith. Smith would also like to thank the participants in two recent conferences for stimulating discussion on issues relating to our theme, "Imperial Designs: The Comparative Dynamics of Early Empires," organized by Susan Alcock, Terence D'Altroy, Kathleen Morrison, and Carla Sinopoli in Mijas, Spain, in October, 1997, and "The Postclassic Mesoamerican World System," organized by Smith and Frances F. Berdan in East Lansing in April, 1999 (both conferences were funded by the Wenner-Gren Foundation for Anthropological Research). A preliminary version of some of the ideas discussed here was presented by Smith at the Texas Maya Symposium in Austin, TX, in March, 1998. We thank George Cowgill, Timothy Earle, Arthur Joyce, Jay Silverstein, Katharina Schreiber, and an anonymous reviewer for their helpful comments on earlier drafts of this paper. We also thank Cynthia Kristan-Graham for pointing out the El Cerrito sculptures to us and Timothy S. Hare for providing the Early Postclassic type counts from the Yauatepec survey and for providing digital base maps of central Mexico.

NOTES

¹We follow a modified world-systems approach similar to that currently advocated by many archaeologists (e.g., Blanton and Feinman 1984; Chase-Dunn and Hall 1997; Peregrine and Feinman 1996; Edens and Kohl 1993). As described elsewhere (Smith and Berdan 2000), our world systems approach to ancient societies emphasizes the systemic role of exchange that crossed political borders and provides insights into large-scale economic and political dynamics in early complex societies. This "world systems perspective" (Peregrine 1996) differs considerably from the original formulation of "world systems theory" by Wallerstein (1974), which has been criticized by Stein (1999) and others for its inapplicability to precapitalist economies. More detailed discussions of our world systems approach can be found in forthcoming case studies (Montiel n.d.; Smith and Berdan n.d.). We realize that the phrase "world system" often has a polarizing effect among archaeologists (e.g., Stein 1999), and we wish to emphasize here that our material culture model of imperialism does not depend upon the world system approach.

²Prior to 1940, most scholars associated the ruins of Teotihuacan with the semilegendary Toltec capital city Tollan as described in the Aztec native historical ac-

counts (e.g., Vaillant 1938). In a highly influential paper, Wigberto Jiménez Moreno (1941) changed the minds of most archaeologists by using toponyms to show that the city Tollan in the Aztec migration histories corresponds to the Early Postclassic ruins at Tula, Hidalgo. More recently, however, a number of authors have shown that Tollan was an important ideological concept in Mesoamerica, where it meant a sacred and powerful city of great symbolic importance. The label Tollan was probably applied by Mesoamerican peoples to a number of ancient settlements, including Teotihuacan, Tula, Cholula, Tenochtitlan, and probably others as well (Carrasco 1992:126; Boone 2000; Schele and Mathews 1998:200–201). Our concern here is with the Early Postclassic city Tula and its polity, regardless of what other cities or peoples may have been called Tollan or Toltecs.

³The data in Table 2 are of diverse origin and they are only comparable in a rough sense. For Teotihuacan, the data are mean frequencies from test excavations in 12 residential midden deposits at seven sites in the Yautepec Valley. The middens date to the Teotihuacan imperial phase, covering the Terminal Formative through Middle Classic periods at Teotihuacan (Millon 1973, 1992). "Imperial imports" refers to Thin Orange, whose distribution was controlled by Teotihuacan. "Imperial style, local origin" includes two imitation Thin Orange types, censers, floreros, and candeleros; this interpretation is based upon macroscopic analysis of ceramic pastes. Large basins ("craters") and red-on-buff bowls are stylistically very similar to those from Teotihuacan, but our preliminary neutron activation analyses exclude the Teotihuacan area as the place of manufacture (Montiel n.d.). Until we conduct further characterization analyses on sources in Morelos, we include them in the category "Imperial style, uncertain origin." As discussed in the text, Granular ware is probably from Guerrero, so we classify it in the category "Other imports" for Classic-period Yautepec. Fuller presentation of these data will be given in Montiel (n.d.). For Tula, the data are mean frequencies for all 11 sites with single-component, Early Postclassic, surface collections from the Albany Yautepec Valley survey. We classify Macana Red-on-Brown as an "imperial import," and cream-slipped sherds (including some orange on cream) as "imperial style, uncertain origin"; see text for discussion. For Tenochtitlan, the data are mean frequencies for eight residential middens from Molotla-phase (A.D. 1440–1520+) houses excavated at Yautepec (Smith et al. 1999). "Imperial imports" refers to ceramics from the Basin of Mexico, including Aztec III black-on-orange, Texcoco Fabric-Marked salt vessels, and several additional low-frequency types (the Basin origin of the first two types has been confirmed through neutron activation). "Imperial style, local origin" describes a local imitation of Aztec III black-on-orange. Polished redwares, or *guinda ce-*

ramics, are included as "Imperial style, uncertain origin," since their origin in Morelos or the Basin of Mexico is uncertain. "Other imports" includes a variety of types from other areas of Morelos, from Guerrero, the Toluca Valley, the Tarascan borderlands, and Puebla.

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