

turally supportive position held by Yemenite Jews.

The reviewer totally lost perspective when she said that there was no foundation for Spector's claim that "in no other culture are men and women segregated as in Yemen" (p. 492). Here Spector was referring to *Jewish* societies, and though one might qualify and quibble about the absoluteness of this statement, Spector is essentially correct. Likewise, the marriage of a Kurd and Yemenite *Jew* could never have taken place in Yemen, since these communities had no contact with one another.

In sum, Spector carefully consulted the relevant ethnographic and travel literature on Yemen. Furthermore, she is well informed about the literature of Yemenite Jews. Unfortunately, it seems the reviewer is not! So I should like to conclude that this is a fine ethnographic film, well worth using in the classroom. The instructor should explain that this is indeed "cultural reconstruction," relying on the memories, the concerns, and indeed the nostalgia of an emigrant population separated from its previous setting by a thousand miles and 40 years.

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- and Webster's formulation: an overly typological orientation that suppresses variability, and an exclusive focus on large complex settlements as the only ones worthy of the designation "urban."
- Sanders and Webster justify their approach by stating that they are primarily interested in the general features of the "Mesoamerican urban tradition" in order to compare that tradition with other prehistoric urban traditions (p. 521). However, comparative research on Mesoamerican urbanism is still in its infancy, and we do not yet know enough about Mesoamerican cities to make the kinds of grand synthetic statements that Sanders and Webster propose. At this stage we need studies of the variability among Mesoamerican cities, not typological treatments that lump the diverse centers into two procrustean types. These points are illustrated with data on Aztec-period settlements in central Mexico.
- The two most significant contributions of Sanders and Webster's article are the analysis of the energetics of urbanism and the attempted reconciliation of the demographic and functional approaches to urbanism in Mesoamerica. The discussion of energetics, which builds on earlier work by Santley (1984) and Sanders (Sanders and Santley 1983), helps explain a number of distinctive characteristics of Mesoamerican urbanization. The small size of many centers, their limited development of craft specialization, and the economic importance of both rural and urban farmers are all related to basic technological constraints on production and transport (see also Drennan 1984). This work represents a significant advance in our understanding of Mesoamerican urbanism and economics, and it is hoped that Sanders, Webster, and others will continue to develop the energetic approach in the future.
- Sanders and Webster's attempted reconciliation of the demographic and functional approaches to urbanism is less successful, however. These two viewpoints have long been opposed within Mesoamerican archeology. Sanders has been the most vocal proponent of the demographic approach that defines cities as settlements with a large, dense population and social complexity (see Sanders and Price 1968; Sanders, Parsons, and Santley 1979; Sanders and Santley 1983). In this approach, Teotihuacan and Tenochtitlan are seen as the archetypical Mesoamerican cities, while other less densely populated centers (including those of the Classic Maya) are viewed as something less than urban.
- In the 1970s, an alternative functional definition of urbanism filtered into archeology from economic geography (e.g., Blanton 1976;

### Cities, Towns, and Urbanism: Comment on Sanders and Webster

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Sanders and Webster's recent article (*AA* 90:521-546, 1988) is a welcome addition to the scanty literature on Mesoamerican urbanism. While the article makes a number of important contributions, the approach they advocate is inadequate as a general treatment of urbanism in Mesoamerica. This comment briefly discusses two problems with Sanders

and Webster's attempted reconciliation of the demographic and functional approaches to urbanism is less successful, however. These two viewpoints have long been opposed within Mesoamerican archeology. Sanders has been the most vocal proponent of the demographic approach that defines cities as settlements with a large, dense population and social complexity (see Sanders and Price 1968; Sanders, Parsons, and Santley 1979; Sanders and Santley 1983). In this approach, Teotihuacan and Tenochtitlan are seen as the archetypical Mesoamerican cities, while other less densely populated centers (including those of the Classic Maya) are viewed as something less than urban.

In the 1970s, an alternative functional definition of urbanism filtered into archeology from economic geography (e.g., Blanton 1976;

Redman 1978). Cities are defined as high-order central places that fulfill various economic functions for their hinterlands, regardless of their population sizes. Mayanists were quick to seize this approach, which assigns urban status to the major centers (e.g., Marcus 1973; Matthewson 1977).<sup>1</sup> Later development expanded the nature of relevant urban functions beyond retail trade to include political, religious, and other sociocultural factors (Blanton 1981; Hicks 1982; Marcus 1983). Marcus's article (1983) represents the most explicit statement of the expanded functional conception of urbanism, and it is noteworthy for the discussion of the range of variability among Mesoamerican cities. One of the comparative works she draws on is Richard Fox's (1977) treatment of nonindustrial urbanism, where an expanded functional approach is applied to ethnographic and historical cases in the establishment of a typology of cities.

At first glance, Sanders and Webster's application of Fox's (1977) urban typology to the Mesoamerican data suggests a joining of the expanded functional approach to the demographic approach of city definition and analysis. This is not the case, however, for Sanders and Webster merely apply two of Fox's types to Mesoamerican cities. The large, dense cities that fit Sanders's demographic definition are classed as "administrative cities," and other large, architecturally complex settlements with smaller resident populations are put into Fox's "regal-ritual" type. While this now permits Sanders to call the classic Maya centers "cities," it does not advance knowledge very far, since most Mesoamericanists already make that assignment (e.g., Blanton 1981; Hammond 1982; Marcus 1983). Sanders and Webster go on to state that *all* Mesoamerican cities (except for the few administrative cities) fit the regal-ritual type.

At this point one wonders at the utility of applying Fox's classification when *all* Mesoamerican cities (except for a few) are lumped into one type with little further discussion. If the applicability of Fox's regal-ritual type to Mesoamerica is accepted for the sake of argument, what have we learned about Mesoamerican cities that we did not know previously? Fox's category certainly draws attention to the importance of administrative and religious functions in Mesoamerican cities. This is nothing new, however, because Marcus (1983:239) reached the same conclusions in an article that considered a far greater number of Mesoamerican cities than do Sanders and Webster (see also Hicks 1982).

It might be argued that identifying nearly all Mesoamerican cities as "regal-ritual" in

character relates to Sanders and Webster's goal of describing the "Mesoamerican urban tradition" so as to make comparisons with other preindustrial urban settings. However, prior comparative research (e.g., Hardoy 1973; Blanton 1981; Marcus 1983) suggests that we do not yet know enough about Mesoamerican cities to make broad general statements with confidence. There is far more variation than Sanders and Webster admit, and there is a real need for research that will explore the formal variability of Mesoamerican settlements (both urban and rural) and relate form, function, and external (environmental) influences (e.g., Drennan 1988). The energetic approach outlined by Sanders and Webster should comprise part of such a research effort, for it would be useful to examine how energetic constraints differentially affect various kinds of settlements in different environmental and social settings. However, until more comparative and analytical work is carried out, it is premature to assume that Mesoamerican urbanism can be understood through a two-type classification.

A second problem with Sanders and Webster's approach is their tendency to view only the largest and most complex centers as truly urban. They are quite candid about this bias (p. 527), which derives from Sanders's demographic definition of urbanism. They note that many Mesoamericanists do not agree, and then suggest that "Fox presents a solution to this impasse" (p. 527). While it is true that functional approaches to urbanism will result in smaller centers being classified as urban, Sanders and Webster are not prepared to go very far. Their discussion of regal-ritual cities (pp. 529–535) focuses upon Copán and mentions Tikal, two of the larger and more elaborate Maya cities. It is implied that only large architecturally complex centers fit the regal-ritual type. Smaller centers, which may have a variety of central place functions (economic and other), are not cities in this view, and are thus left out of discussions of urbanism.

In the functional view, urbanism is viewed as a *process* rather than a settlement type. If a settlement fulfills urban functions, then it should be designated an urban settlement (e.g., Wheatley 1971; C. Smith 1976; Blanton 1976; Marcus 1983). This perspective is stated by Blanton as follows:

Such a functional definition of cities emphasizes the disposition in space of what might be called central institutions—institutions that mediate between specialized subsystems within a society. In order to optimally service a population, these central institutions are not likely to be randomly dispersed

over the landscape. Instead, they will tend to occur clustered in places that become the central places of the society, or in other words, the cities and towns. [Blanton 1976:251]

Sanders and Webster appear to object to such an expanded view of urbanism because it blurs important distinctions between such "real cities" as Teotihuacan and smaller central places (p. 527). However, the recognition that there are ranges or levels of urban centers can alleviate this objection. Expanding the definition of urbanism this way does not reduce the distinctiveness of the largest cities; rather, it directs attention to the regional configuration of urban activities and thus highlights the roles of the largest centers. Blanton's use of the terms "city" and "town" follows the practice of many historians and social scientists who use the terms to distinguish between larger and smaller urban centers (e.g., Pounds 1969; Hull 1976; Braudel 1981:479 ff); I suggest that this is a useful distinction for discussions of Mesoamerican urbanism.<sup>2</sup>

The example of Aztec society illustrates some of the benefits of the functional approach. A reading of Sanders and Webster (or Sanders and Santley 1983) suggests that the huge metropolis of Tenochtitlan (an "administrative city" in their framework) was the only urban center in Aztec central Mexico. However, the majority of the population of central Mexico carried out most of their urban activities at settlements other than the Aztec imperial capital. Rather than being the only or even the typical Aztec city, Tenochtitlan was the exception, an atypical primate urban center quite different from most Aztec urban centers.

The most common Aztec urban settlement was the city-state capital. Following the suggestions of Fox and Sanders and Webster, these settlements must be understood as part of their wider social context; specifically, they need to be considered in relation to the city-state. The Aztec city-state may be defined as "a socially stratified state community that occupied a definite, bounded territory with a capital (the location of the royal palace) and subject settlements and lands" (Licate 1980:36). These were the most important political units in Late Postclassic central Mexico (Calnek 1978; Licate 1980; Hicks 1982; Hodge 1985), maintaining their integrity even under the Aztec empire (M. Smith 1986). City-states then retained their significance into the Colonial period, where they provided the framework for Spanish *encomienda* grants (Gibson 1964:72). While Aztec nobles had wide net-

works of interaction, travel, and activity, it appears that most of the social, economic, administrative, and religious needs and obligations of the commoners were met within the confines of the city-state (Licate 1980; Hicks 1982, 1986; Hodge 1985).

The native term for city-state was *altepetl*. This concept stressed the importance of the ruler and his palace as the central features of the city-state (Schroeder 1984:136-166; Licate 1980:36-39). The temple of the patron god(s) of the polity was another significant component of the Nahuatl conception of *altepetl* (the glyph for conquest of a city-state consisted of a burning temple). The city-state capital may therefore be defined as the location of the palace and temple, the most important of its institutions. Other features present in the capitals include the palaces of lower-ranking nobles, residences of commoners, a market, and sometimes the workplaces of craft specialists (Hicks 1982). In Chimalpahin's Nahuatl account, the establishment of a new *altepetl* required four central institutions: a palace, a market, a jail, and some *calpulli* of commoners (Schroeder 1984:145). Thus, ethno-historic sources reveal that Aztec city-state capitals performed urban functions for the populace in the realms of administration, religion, and economics. What those sources do not illuminate are the areal extent, population size, or spatial organization of these cities or towns; for this the archeological record is more informative.

Most Aztec city-state capitals are now obscured by colonial and modern settlement, but available information permits some conclusions on their size and layout. The city-state capital of Huexotla was studied by Brumfiel, who places the "small urban settlement" at 300 ha in size (1980:461). This zone contains a walled precinct (the likely *tecpan* or palace; see Evans 1990 on Aztec palaces) and abundant civic-ceremonial architecture. Another example available for archeological study, Otumba, is currently being investigated by Charlton and Nichols; it is nearly 200 ha in size, with low mounds suggestive of civic-ceremonial activities located in the center of the settlement (Thomas Charlton and Deborah Nichols, personal communication, 1988). Most of the known city-state capitals surveyed by Parsons et al. (1982) in the southern Basin of Mexico are classified as "local centers," or large nucleated sites with public architecture and inferred populations of over 1,500 (1982:71). The only size data provided are for Amecameca, which was around 400 ha in extent (1982:162). In sum, known city-state capitals in the Basin of Mexico were from 1 to 4

sq. km in size, with residential areas surrounding a central zone with mounded architecture suggesting political and religious functions. The one study to examine craft production in such a settlement (Brumfiel 1980) found almost no evidence for intensive or specialized production (although Otumba has a number of surface concentrations of obsidian, ground-stone, and other artifacts suggesting specialized production—Thomas Charlton, personal communication, 1988). In a later article, Brumfiel (1987) argues that most utilitarian craft production in Aztec central Mexico was carried out by part-time rural craftsmen, a finding that provides support for Sanders and Webster's characterization of the nature of production in most Mesoamerican societies.

In Morelos, south of the Basin of Mexico, the Late Postclassic city-state capital of Coatlan was studied by Mason (1980) using intensive surface collection. The settlement only covers 15 ha (1980:54), but is arranged like its contemporaries in the Basin of Mexico: a central zone with civic-ceremonial architecture surrounded by residential areas. As at Huexotla, Mason found no evidence for localized intensive craft production at Coatlan (1980:155–167). The Postclassic Morelos Archaeological Project recently excavated Cuexcomate, a settlement virtually identical to Coatlan Viejo in size (14–15 ha) and structure. While it is not known whether Cuexcomate was a city-state capital, these excavations do provide more detailed data on a site similar to Coatlan and other city-state capitals in Morelos.

The central civic-ceremonial zone at Cuexcomate contains a large palace-like elite residential compound (similar in layout but smaller than the palace excavated by Evans at Siguatepecan in the Basin of Mexico—Evans 1990), other elaborate plaza groups, and a temple platform. Approximately 140 ground-level houses are spread out around the central zone. There is abundant evidence of craft production at Cuexcomate (e.g., cotton-spinning, cloth-sewing, papermaking, basalt tool manufacture, and limited obsidian and chert tool production, as well as unidentified production activities involving copper chisels and awls), but the artifactual remains are widely distributed. This suggests low-level household production for both domestic use (lithics) and export (textiles and paper). Preliminary information on this site may be found in Smith (1988) or Smith et al. (1989).

Other archeologically known city-state capitals in Morelos include Cuauhchichinola, a small settlement of less than 10 ha (Kenneth G. Hirth, personal communication, 1983) and

Cuentepec Viejo, a larger site with elaborate civic-ceremonial architecture clustered in the center (a large palace, a 10 m high pyramid, and at least one ball court) and several hundred houses (Osvaldo Sterpone, unpublished notes). In sum, these Morelos settlements were smaller versions of the Aztec city-state capitals in the Basin of Mexico. The basic layout is the same, however: a central zone with palaces and other elite residences and temple platforms or pyramids, surrounded by relatively dense residential areas (the population density of Cuexcomate was on the order of 4–6,000 persons per sq. km).

There are three compelling reasons for classifying Aztec city-state capitals (in both the Basin of Mexico and surrounding areas like Morelos) as urban settlements. First, they clearly fulfilled a number of central or urban functions for their hinterlands. The administrative and religious functions are well documented by both ethnohistory and archeology, while there is uncertainty over the level and significance of economic functions. Second, these settlements were the places where most of the population of central Mexico met most of their urban needs and obligations, since commoners probably traveled to Tenochtitlan rarely, if ever. I do not mean to downplay the economic and political importance of the Aztec capital, whose influence was felt throughout central Mexico, but as a city it was quite atypical.

Third, a consideration of Aztec city-state capitals as urban settlements brings Aztec studies in line with comparative research on other city-state systems of the ancient world. The archetypical city-state system was the network of *poleis* in Archaic and Classical Greece. Like their Aztec counterparts, most *poleis* were small centers with a well-defined nucleus of civic-ceremonial architecture surrounded by residential areas. Political and religious functions were paramount in the Greek city-state capitals, which had a heavy agricultural component and only very low-level economic functions (Pounds 1969; Osborne 1987). Athens, like Tenochtitlan, was a primate city quite atypical of other Classical settlements. Just as scholars must investigate both Athens and the smaller *poleis* to understand the nature of Greek urbanism, Mesoamericanists need to consider the smaller city-state capitals in addition to Tenochtitlan in order to get an adequate picture of Aztec urbanism. Other ancient city-state systems are similar to the Greek and Aztec cases in that they have numerous small urban centers; see Griffith and Thomas (1981) or Renfrew and Cherry (1986).

The Aztec example suggests that the functional approach is more informative about the sociocultural significance of urbanism and urban settlements. In Sanders and Webster's modified demographic approach, there is simply one Aztec city—Tenochtitlan—with a collection of smaller, less significant settlements. The perspective sketched above indicates a range of variability in Aztec urban centers that relates to variations in demography, political status, and economic factors.<sup>3</sup> This urban variability occurs not just within individual regional systems, but also among regions and across time. There has been very little informed comparative research on Mesoamerican urban settlements, and Sanders and Webster's energetic approach has great potential for making important advances in this area. However, instead of using this approach to pursue the analysis of variability, Sanders and Webster are content to generalize and lump nearly all Mesoamerican cities into one type borrowed from the work of Fox. The study of Mesoamerican urbanism needs a broader perspective, preferably one that combines the insights of the energetic approach with a functional definition of urban settlements. This would provide a firmer base for the kinds of broad comparative statements that Sanders and Webster and many others are rightly interested in making.

### Notes

*Acknowledgments.* My thinking on urbanism as a Mesoamerican phenomenon and as a general process has benefited greatly from conversations over the years with William Sanders and Richard Blanton. Susan Evans and Susan Schroeder kindly let me examine unpublished works related to the topic of this comment. Excavations at Cuexcomate were supported by the National Science Foundation (grant BNS-8507466) and Loyola University.

<sup>1</sup>Reports that a number of Maya sites had larger population sizes and densities than previously thought also contributed to the growing recognition of the Classic Maya as an urban society (see Haviland 1970).

<sup>2</sup>These terms do not need precise definition in a general comment like this. Definitions and classifications are determined by research goals, and for some purposes it will be necessary to develop rigorous definitions of city and town, or else to apply an alternative classification of urban settlements. One value of the functional approach is that it fosters nontypological analyses that emphasize urban variability (e.g., Marcus 1983).

<sup>3</sup>In addition to the variation between Tenochtitlan and other centers, and between Basin of Mexico city-state capitals and those of Morelos, a comprehensive study of Aztec urbanism needs to take into account the larger Aztec city-state capitals like Texcoco or Xochimilco in the Basin of Mexico, or Cuauhna-huac in Morelos.

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## **“The Mesoamerican Urban Tradition”: Reply to Smith**

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We propose a model of urbanism in which a set of pan-Mesoamerican energetic limitations produced a distinctive process of urban development by constraining demographic and functional variation. The implication is that the Mesoamerican urban tradition contrasts in important ways with that of the Old World, particularly Europe. Smith's principal criticism is that we are too typological and gloss over variation. He endorses and apparently agrees with our energetic approach, but asserts that our demographic and functional conclusions are incorrect. Our typology and its implications are analytically linked to the constraints and processes we describe. As we take pains to point out repeatedly, there is considerable variability within the principal types we identify, and some of the reasons for

such variability are discussed in clearly processual terms. In our model the demographic and functional interpretations flow from the energetic constraints, coupled with local environmental and historic factors. Smith ignores his most essential critical task—to show why our energetic conclusions, with which he agrees, fail to reconcile with the demographic and functional patterns we specify. We feel a bit like biologists who have made the reasonable observation that, according to certain essential shared structures, dogs, whales, and bats are all mammals, only to be castigated for not addressing the variation among mice, rats, and shrews.

Smith also objects that we cannot generalize about Mesoamerican urbanism, or compare it with other urban traditions, because we know so little about Mesoamerican centers. Yet he himself cites with favor several papers on Mesoamerican urbanization that have used highly typological concepts. The problem as we see it lies not in using categorizations, but in choosing fruitful ones and linking them to process. Paradoxically, the character of the Mesoamerican urban tradition seems to be sufficiently well known to Smith to permit his facile application of economic central place models derived from a European cultural tradition that he admits is energetically very different from that of Mesoamerica (for a criticism of his earlier use of such models see Evans [1980]). We in fact agree with the quote he provides from Blanton: certain institutions are nonrandomly clustered in central places. In Mesoamerican urban centers these institutions tend to be the palace of the ruler, the establishments of the nobility, and the temple—that is, the regal-ritual apparatus of the society. This is precisely the characterization Smith makes of Aztec central places in his critique, and he comments as well on the apparent lack of large-scale economic specialization at many Aztec centers. One could hardly hope for a description more congruent with the regal-ritual model than he himself provides. In fact, the archeological and ethnohistoric substance of Smith's argument articulates better with our abstractions than with his own abstractions, a curious position for an erstwhile critic.

His detailed discussion of Aztec settlement continues the obfuscating application of urban concepts to practically all levels of the settlement hierarchy, particularly in his discussion of Cuexcomate, which he believes might have been an urban central place, or even city-state capital, presumably because it has a “palace” (*tecpan*) and a temple. Such features are common to many rural Aztec-period agricultural