Wealth Stratification in Ancient Mesoamerica

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ABSTRACT

Studies of social stratification in ancient Mesoamerica have taken two approaches. One is to identify legal or emic status positions as these may be defined by indigenous documents (nobility, commoners) or by prior theory (elite). Archaeologists using the direct historical approach can look for material patterns consistent with the historically named social categories. The archaeology then illustrates what is already known. The other approach is etic and offers inductive description of the social distribution of wealth. Commonly used indicators to rank individuals or households are domestic architecture, burials, and portable artifacts. These items are recovered from systematic excavations or systematic surface collecting. The objectives of the two approaches are not precisely identical, since wealth status may not coincide with status as defined by office, occupation, or law.

Our paper takes the second approach. We describe the degree of wealth differentiation among households in a Late Postclassic city in Oaxaca. The results show a distribution broader and more continuous than would be expected if wealth were accessed strictly by noble or commoner legal status. Comparison with other cases in Classic and Postclassic Mesoamerica suggests a similar conclusion, although there was variation over time and across space. Characterizations using only native legal categories fail to identify this important aspect of Mesoamerican society and economy.

Studies of social stratification in ancient Mesoamerica and in other civilizations have taken two approaches. One is to identify legal or

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emic status positions as these may be defined by indigenous documents (nobility, commoners) or by prior theory (elite). Archaeologists using the direct historical approach look for material patterns consistent with the historically named social categories (see, *e.g.,* Smith *et al.* 1999). The archaeology then illustrates what is already known. The other approach is etic and offers inductive description of the social distribution of wealth. The term *distribution* has several dimensions: concentration (a continuum from perfectly equal to all in the hands of one individual), spread or range (the wealth distance from the wealthiest to the poorest), and gradation (continuous *versus* discontinuous). In archaeology the commonly used indicators to rank individuals or households are domestic architecture, burials, and portable artifacts. These items are recovered from systematic excavations or systematic surface collecting. The objectives of the two approaches are not precisely identical, since wealth status may not coincide with status as defined by office, occupation, or law, but they are also not strictly incompatible (for discussions of the theoretical and methodological issues in the Mesoamerican context see Cowgill 1992; Kowalewski *et al.* 1992; Sanders 1992; Smith 1987; Stark and Hall 1993).

Our paper takes the second approach. We describe the degree of wealth differentiation among households in a Late Postclassic city in Oaxaca, Mexico. The results show a distribution broader and more continuous than would be expected if wealth were accessed strictly by noble or commoner legal status. Comparison with other cases in Classic and Postclassic Mesoamerica suggests a similar conclusion, although there was variation over time and across space. Characterizations using only native legal categories fail to identify this important aspect of Mesoamerican society and economy. The presentation begins with our case study of Inguiteria, the name of the Late Postclassic capital of the province of Coixtlahuaca. Then we bring in other well-described cases from Mesoamerica.

There have been lively debates in the pages of this journal about the state as a political institution (*e.g., Social Evolution & History* 7(1) is devoted to the theme ‘Thirty Years of Early State Research’), but little about the economy of states (beyond the factors of production) and less about how the economy may shape social stratification, and, potentially, the character of political institutions. One might ask, for example, if the more collective,

less autarchical institutions of the Greek polis (Berent 2006, and references therein) did not have a great deal to do with a relatively broad access to wealth. As we show in this study, in Mesoamerica states were geographically small and their power was limited by communal institutions that gave their members alternative access to authority and means of making a living.

COIXTLAHUACA

Coixtlahuaca was a large kingdom, a regional agrarian center, an important place in the Aztec empire, and a major international trade node. Coixtlahuaca is in the Mixteca Alta, in northern Oaxaca (Fig. 1). It is a 1000 km^2 valley situated at 2000 m above sea level. The valley has extensive deposits of soils derived from the Yanhuitlán Formation, which are fertile but also highly erodable. The land, described as rich and populous by sixteenth-century Spanish conquerors, is now eroded and depopulated. Although it has a rich history known from indigenous Mixtec, Chocho, and Aztec historical sources, it has received little archaeological attention since Ignacio Bernal excavated at the major Aztec-period site of Inguiteria sixty years ago (Bernal 1948).

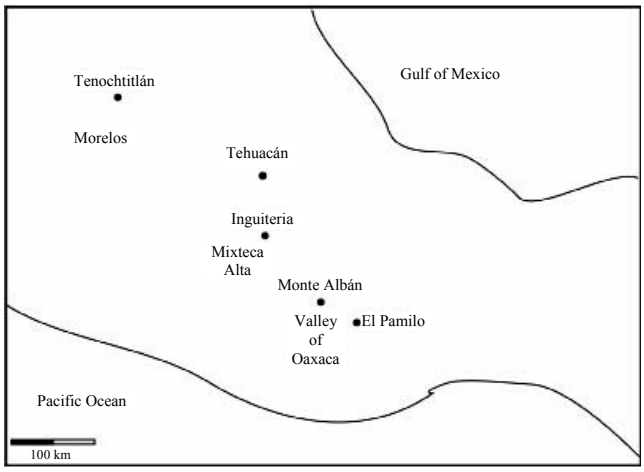


Fig. 1. The Coixtlahuaca valley in highland Oaxaca

In 2008 we began an archaeological project to study prehispanic urbanism in Coixtlahuaca. A primary research goal was to define the limits and understand the internal variability of the city of Inguiteria,

where Bernal had excavated. Our study methods included full-coverage survey, systematic surface collections, topographic mapping, aerial photography, remote sensing techniques such as magnetometry, resistivity, georadar, and test excavation. To gauge the size, study the history, and evaluate the degree of heterogeneity of Inguiteria we carried out a surface survey of the whole area. Surface visibility is excellent, and in many places the erosion helped our study because it exposed artifacts and house ruins.

This place had a long history of human occupation and there were substantial settlements in the Late Preclassic and Early Classic periods, but the predominant remains date to the last 200 years before the Spanish conquest. During this Late Postclassic phase the city of Inguiteria sprawled continuously over an area of 30 km^2 (Fig. 2).

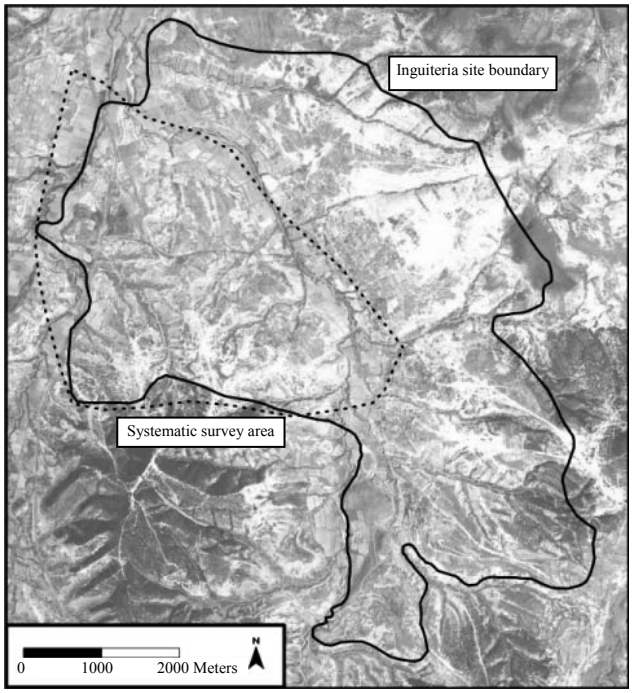


Fig. 2. Boundaries of Inguiteria and the systematic survey area

The settlement was extensive, but was it densely occupied? We attacked this question using an ordered array of surface survey, geophysical, and excavation techniques. We recorded the sizes of

houses and the distances between them in places where they could be seen on the surface. At ten places we carried out geophysical prospection. At all ten we found cultural anomalies and at nine these were suggestive of residential construction and domestic activities. We tested three of these by excavation and all had house remains and domestic debris. More prospection and testing needs to be carried out, but at this stage it is probably safe to say that the density of houses of this Late Postclassic phase ranged between four to seven per hectare, which would mean that the city had 50,000–100,000 inhabitants. Inguiteria was not as large as the Aztec capital of Tenochtitlán but it was in the next-highest rank among Late Postclassic Mesoamerican cities.

The city's principle civic-ceremonial architecture was fairly modest in scale, consisting of some thirteen platforms and several small plazas or courtyards. This complex measured about 300 by 150 m in extent (Fig. 3). The remnants of public architecture do not seem especially grand or imposing, especially considering the high population and large spatial extent of the city.

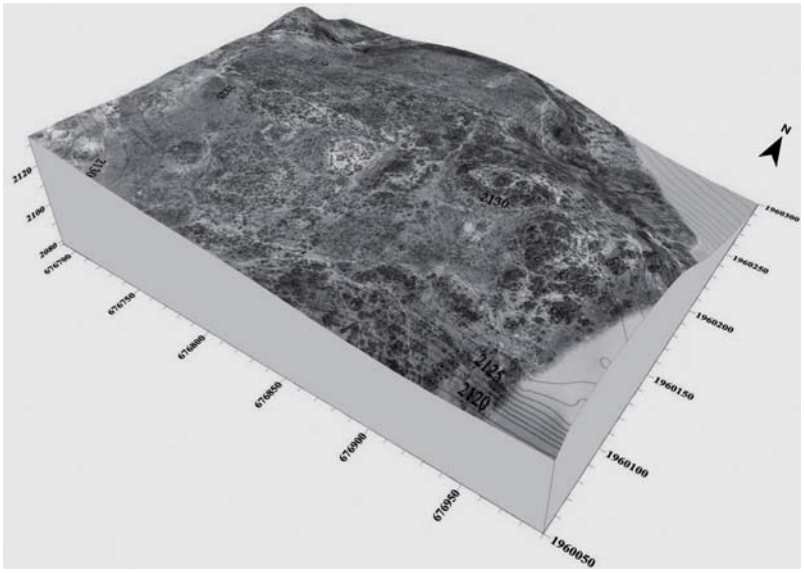


Fig. 3. Helium balloon photo mosaic and GPS/DEM topography of Inguiteria civic-ceremonial center

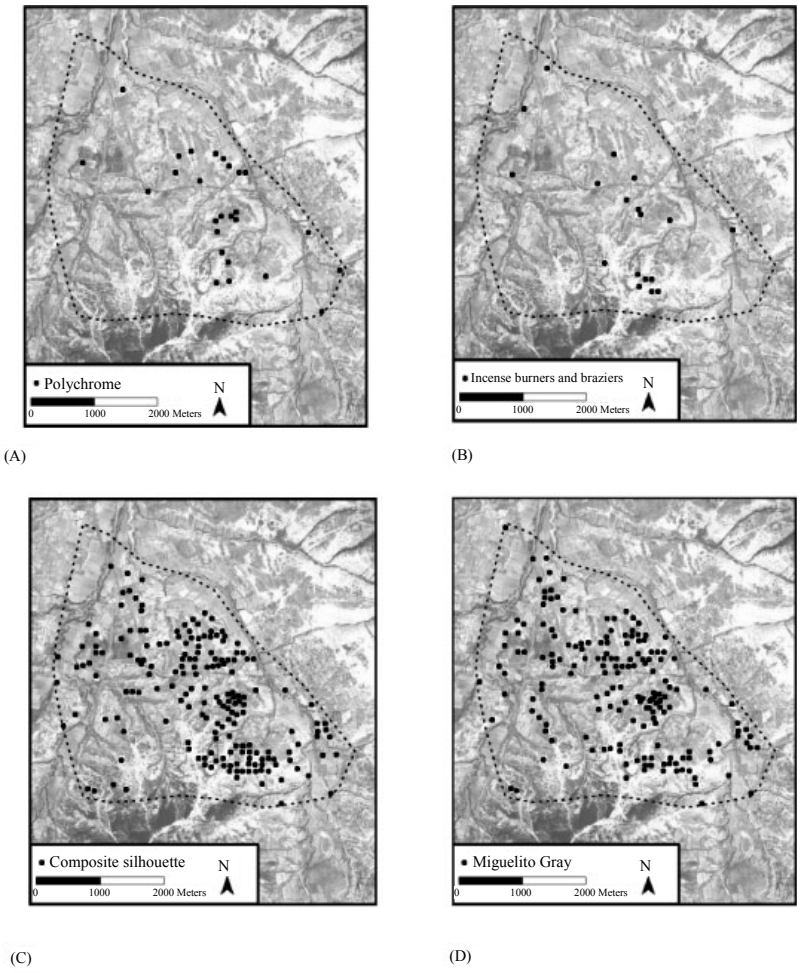
During the course of our survey we located 75 elevated structures and stone foundations beyond the 13 in the civic-ceremonial center. Many of these were elaborate residences or small civic-ceremonial buildings. Undoubtedly, many more existed, but these are the ones that survived erosion, plowing, and historical/recent construction projects. These structures are distributed fairly evenly across Inguiteria.

Inguiteria does not seem to have been a city of craft specialists. The survey and systematic artifact collecting found a remarkably homogeneous spread of essentially domestic refuse. We found no areas dedicated to craft production. Surely people made things (we found small scatters of basalt flakes, green stone flakes, and chert debitage), but the scale of production was not larger than the household and compared to other sites in Oaxaca there is little lithic and ceramic production debris. On the other hand, Inguiteria was a city of consumers. The inhabitants must have consumed large volumes of construction materials (stucco, basalt, the local stone *endeque* used in construction), pottery, wood, charcoal, chert, imported obsidian, manos, metates, food, water, and clothing.

We wanted to evaluate the degree of wealth differentiation and its spatial pattern within Inguiteria. Of all the material goods mentioned in the last paragraph, the most persistent and visible are basalt, chert, obsidian, and pottery. We developed a systematic collecting procedure to study the distribution of these items. We carried out this collecting not over the entire site, but over a contiguous block of about 6 km^2 of the best-preserved part, away from the modern/historic town. In this study area we made systematic collections of ceramics every 100 m (Fig. 2). Stone artifacts, including obsidian blades, flakes, and cores, chert flakes, basalt flakes and blocks, and other materials were counted in the field, but not kept. In all, we made 461 collections using this systematic technique. Each collection point is a sample of the preserved refuse from a nearby house or houses, so the procedure should provide a representative picture of domestic consumption for these artifact categories.

We can begin by looking at the distribution of ceramic types. Fig. 4 shows collection points with ceramics of the relevant time period, the late Natividad phase. The most commonly occurring pottery types and forms are Yanhuitlan Red-on-Cream and Fine

Cream bowls; Yucuita Tan jars, bowls, and other forms; and Chachoapan Sandy Cream bowls, comals, and jars (the types are defined in Spores 1972).



Distribution of (A), polychrome rim sherds; (B), incense burner and brazier fragments; (C), composite silhouette rim sherds; and (D), Miguelito gray rim sherds.

Fig. 4. Distribution of selected Natividad phase ceramics

Next we examine the location of the more costly ceramics, such as incense burners and braziers, composite silhouette bowls, Miguelito gray, polychrome, and Aztec-style wares. Incense burners

and braziers are found at only eighteen collection points, but they are fairly evenly distributed, with some clustering near a set of structures in the south-central part of the systematic survey area (Fig. 4). Composite silhouette bowls are also widely distributed, occurring in 183 collections. There is some clustering of this ceramic type around the civic-ceremonial zone and around structures in the southern portion of the study area, but in general composite silhouette sherds are widespread (Fig. 4). Miguelito gray has a distribution similar to the composite silhouette sherds, appearing in 173 collections (Fig. 4).

Polychrome, the most highly decorated and elaborate pottery type, appeared in only 26 collections, but it is fairly widespread in its distribution (Fig. 4). Note that while six of these collection points are near the civic-ceremonial zone, and another fourteen are in two loose clusters several hundred meters north and south of civic-ceremonial area, many occur in other places spaced kilometers apart.

To better understand the Aztec presence in Coixtlahuaca, we made additional, special collections targeting Aztec-style sherds. These are intentionally overrepresented in some areas, especially near the civic-ceremonial zone. However, even with this bias in the sample, it is still clear that Aztec sherds were not limited to the civic-ceremonial zone, but were spread out across the site, mostly in small quantities.

We developed a production step index (see Feinman *et al.* 1981) to quantify the cost of these various ceramic types – the more production steps, the greater the cost. For each systematic collection point, we calculated a standardized production step value (the sum of the production step values for Late Natividad sherds in each collection divided by the number of Late Natividad sherds in that collection). The average ceramic production step value for the systematic collections is .91 with a standard deviation of .48 and a coefficient of variation of .53. The values range from a minimum of .1 to a maximum of 3. The distribution is left-skewed and continuous, a pattern consistent with stratified societies (Fig. 5). There is no clean break in the distribution between ‘lower class’ and ‘elite’ values for ceramics.

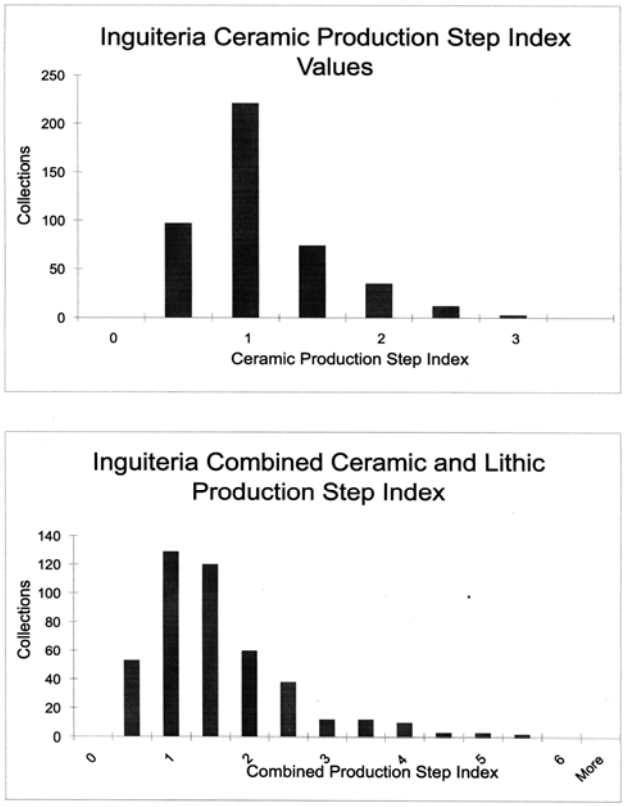


Fig. 5. Histogram of ceramic and combined ceramic and lithic production step index scores for all systematic collection points

We display these ceramic production step scores as though they were elevation data to illustrate the spatial distribution of wealth across the systematic survey area (Fig. 6). Areas with high scores appear as white 'peaks', while areas with low scores appear as black 'valleys'. There are some 'peaks' with scores three times above the average near the civic-ceremonial area, but there are equally high points elsewhere. This indicates some concentration of high-cost ceramics near the city center, but the overall spatial pattern shows high-scoring collection points spread evenly across Inguiteria. In this interpolated plot, some of the low-scoring areas are simply places where the artifacts have been carried away by erosion. It appears that most people at Inguiteria had access to some high-cost ceramics.

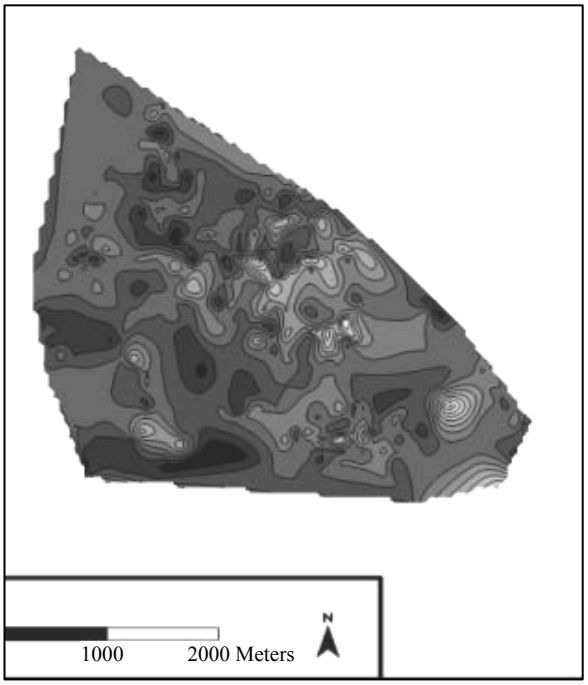


Fig. 6. Contour map representing ceramic production step index scores. Areas with high cost ceramics appear as white 'peaks', while areas with lower values appear as black 'valleys'

The distribution of obsidian also points to a continuous distribution of wealth. This highly desirable material was an import in Coixtlahuaca, the nearest sources lying 150 km away. Obsidian is present over most of the systematic collecting area, in low quantities (Fig. 7, showing the location of all collection points with obsidian flakes, cores, and blades). The values range from 1 to 7 pieces, with only a few dense concentrations, all of which are at some distance from the city center. Except for one possible obsidian work area just northwest of Inguiteria, our study revealed no major indicators of specialized obsidian working.

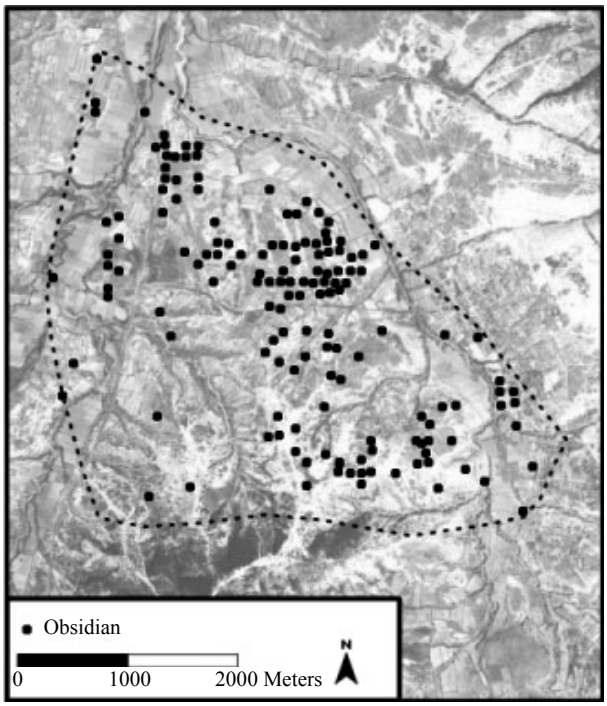


Fig. 7. Systematic collection points with obsidian

We also calculated a combined lithic and ceramic production step score. Each collection point was given .5 additional points per piece of obsidian, and .25 points per piece of basalt. These values are arbitrary, but account for the additional wealth represented by costly imported and worked stone. Like the ceramic production step index values, the distribution is left-skewed and continuous, with an average score of 1.39 and a standard deviation of .89 (Fig. 5). The minimum value is .1 and the maximum is 5.5. This distribution is more dispersed than the ceramic index alone, with a coefficient of variation of .64 and a longer tail to the right, but the general pattern is the same. The differences in ceramic and lithic costs across the site are gradual rather than abrupt, with a good deal of variability above and below the median.

The Gini coefficient is a commonly used index of income inequality (Gastwirth 1972). It has been employed by anthropologists to measure wealth distributions in non-monetary situations (Godoy *et al.* 2004). The Gini coefficient varies between two extremes,

0 for perfect equality and 1 for the total concentration of wealth by one person. If we assume that our systematic collections are each representative samples of the preserved domestic refuse of one or a small number of households, then we can use our combined ceramic production step and lithic score as a proxy for household wealth. We can characterize the distribution of wealth using the Gini coefficient, which for this large part of Inguiteria is .34, roughly on a par with the income distributions of Canada and European countries and unlike the more stratified countries of Latin America, which are in the .50–.60 range (United Nations Development Programme 2008: 281–284).

Some caution is in order, however. The Gini coefficient is good for describing the shape of a wealth distribution, which in our case tends to the egalitarian side. But our sample represents at best Inguiteria and not the whole Coixtlahuaca society, just as a sample of a large part of Montreal would not represent all of Quebec. Another problem with our archaeological data, throughout this discussion and not just in our use of indices, is the fact that we cannot deal with whole classes of consumer goods that are not preserved and visible to us. This uncounted wealth includes such important items as textiles, food, and access to land, as well as things like turquoise, marine shell, and gold, which have been found at Inguiteria by chance and in smaller quantities. The problem of uncounted wealth is common to all archaeological samples. Keeping in mind this limitation it is still fruitful to compare archaeological samples where the same classes of items are available for analysis.

In sum, our systematic collecting and mapping show that costly ceramics, costly stone artifacts, and potential high-status residences were not concentrated in a central precinct but were spread widely and rather evenly across the city. The distribution of wealth among households, as measured by artifacts, was also relatively egalitarian. Inguiteria reflects not a cosmological, pivotal urbanism designed and controlled by an exclusive nobility, but instead an open city with a broad and fairly even distribution of wealth, and no large class of the poor. Coixtlahuaca's major role in the interregional luxury trade certainly contributed to its urban social stratification, yet the city was also and, perhaps, primarily an intensive regional agricultural economy, and the latter factor might explain the city's great homogeneity.

COMPARISONS

Here we review comparable cases from other places in Oaxaca, the Maya area, and central Mexico. As it turns out, Coixtlahuaca's pattern of a continuous – not discrete – distribution of wealth and relatively well-off masses was common in much of Mesoamerica in the Classic and Postclassic periods.

There are several examples from Oaxaca. In 2002 Veronica Pérez Rodríguez set out to select and excavate two houses of commoners from the Late Postclassic period in the Mixteca Alta region. She settled on the site of Nicayuhu, a large, densely settled agricultural town roughly contemporaneous with Inguiteria (Pérez 2003). Surface collections from different residential areas at Nicayuhu exhibited 'only slight differences in material indicators of social status' (*Ibid.:* 49). The better preserved of the two houses excavated had floors made of stucco plaster. The exterior dimensions were 14 × 13.5 m, the open patio measured 7 × 7 m, and the total amount of roofed space (which included a sweat bath) was 85 m^2. Artifacts were abundant but the fanciest painted pottery was quite rare. This is similar to findings in the neighboring Mixteca Alta valley of Nochixtlán, where painted pottery in noble domestic middens outnumbered that in peasant middens by almost 3:1 (and for the fanciest polychrome pottery by 30:1) (Lind 1987: 87).

Heredia's archaeological study (2005) of the Classic period towns in the same Mixteca Alta region illustrates the complexity inherent in social stratification in urban societies. Heredia reasoned that primary cities would have the widest range of material consumption since these were centers of interregional as well as local exchange. To examine the degree of local stratification apart from that which might be enhanced by access to the more exotic goods, Heredia concentrated on secondary centers. She drew her sample towns using a recently completed, full-coverage regional survey (Kowalewski *et al.* 2009), selecting four large sites of several thousand people each, all located on hilltops. As at Nicayuhu, the inhabitants of these places were involved in intensive staple (maize) production with relatively little craft production. Surface artifacts were a good indication of daily domestic consumption and refuse, at least of preserved items. To represent every part of these towns Heredia used a random design of surface collections. These sites were presumed to have had a concentric layout with the public ar-

chitecture and wealthier households at the top of the hill, so for comparability Heredia divided each site into four concentric sectors, 1 being the supposedly most privileged at the top of the hill and 4 being the outer neighborhoods. Table 1 summarizes the relative cost of pottery serving bowls (the more production steps, the greater the cost). In these four sites no other sector had pottery fancier than that at the tops of the hills, but in three of the sites the difference is almost unnoticeable. Two sites (Encantado and El Vergel) had rather uniform distributions over the whole town but the other two, Cantera and Yucuayuxi, were more differentiated, as seen in the spread of the cost values, and in the standard deviations and coefficients of variation.

Why the difference in the degree of stratification for these consumer goods? The more stratified towns, Cantera and Yucuayuxi, had a different relationship with the market than Encantado and El Vergel. In terms of the marketing landscapes of economic geography, Cantera and Yucuayuxi were more centrally located, they had many market choices, and they probably consumed a lot more goods, both cheap and costly, at lower prices, so market forces would have created a greater range of wealth. Encantado and El Vergel, on the other hand, occupied a more marginal position in the regional market network, the volume of consumption was not as great, and the outcome was more egalitarian.

Jalieza was a large secondary city in the Classic period in the Valley of Oaxaca, east of the Mixteca Alta. Here we can examine the distribution of obsidian, which was a relatively scarce, imported good, using Finsten's (1995) systematic collections at eight sample areas spread over the site. The top of the hill, which has the most secluded civic-ceremonial architecture, was one sample area, where Finsten recorded 17 pieces of obsidian. The other sample areas had 24, 16, 15, 12, 8, 8, and 2 pieces. Apparently there were numerous households with sufficient means to obtain obsidian located in many places in the city of Jalieza.

El Palmillo was another secondary center in Classic-period Valley of Oaxaca and the scene of long-term research by Feinman, Nicholas, and their colleagues (Feinman and Nicholas 2004). Feinman and Nicholas see El Palmillo as an internally differentiated but socially integrated community. El Palmillo played a role as a specialized producer of xerophytic plant products (food, fiber, soap, medicines, *etc.*) for the regional market system. It is a hilltop settle-

ment with 1453 residential terraces. The terraces are closely packed together and on the whole they are rather small. The distribution of terrace sizes is left-skewed with most under 100 m^2, and a few along the long tail of the distribution. To study social stratification Feinman and Nicholas selected seven terraces for complete excavation. The seven represent a continuum from the small and presumably poorer households (near the bottom of the hill) to top-ranked terraces at the top. Table 3 shows the distribution of 21 classes of items, which we have arranged by their degree of variation among terraces. Apart from the top-most palatial house or two, Feinman's project found that '...access to certain craft goods, such as stone ornaments and exotic obsidian, varied among households. Consumption ... increased from the bottom to the top of the hill, in line with other axes of variation... Yet these differences in consumption and residential life are more graded and subtle than extreme' (Haines *et al.* 2004: 262–263). The data in Table 3 also suggest that some items (*e.g.,* dental modification) were associated with legal status, others (drinking vessels) with the hosting of feasts, while other goods (obsidian, shell) were available through open exchange.

Monte Albán was Oaxaca's greatest city of Classic times. Because the city was built on a mountain, virtually all dwellings had to be constructed on artificial terraces, which can be thought of as the house lot or solar. Terraces are thus a measure of domestic space and an indicator of access to labour. Monte Albán's survey and mapping project documented 2006 residential terraces (Blanton 1978: 68). Of these 1969 have non-elaborate residences and 37 have elaborate residences. Mean terrace areas for the two groups are 459 and 4314 m^2, respectively (with standard deviations of 728 m^2 and 4269 m^2, coefficients of variation 1.58 and 0.99). The residential terraces have a wide range of variation (much more so than at El Palmillo or the Mixteca Alta towns discussed above), and in addition to several dozen very large ones there are many terraces in the broad middle of the range.

In conjunction with the building of a new road to the top of Monte Albán, González Licón (2003) was able to excavate twelve houses (with their tombs and burials) in the affected areas, giving us a sample of what he termed the middle segments of society. Within this 'middle' status group González Licón found considerable status and gender related differentiation in funerary treatment,

burial offerings, osteological health, meat and other dietary intake, portable artifacts, and domestic architecture.

For the Maya area, there has been considerable archaeological work on household differences, which allows us to make some comparisons. Puleston (1973) described 30 excavated habitation structures from Classic-period Tikal. The houses are fairly small but exhibit a four-fold difference in size (24 to 96 m^2) (see Table 2). This sample is probably in the lower to mid-part of the total range at Tikal and no cases of large houses are included. Such dwellings are similar in size and range of variation to twentieth-century Maya peasant houses (Blanton 1994: 240).

In her study of eight rural Late Classic-period households outside Copán, Gonlin (1994; see also Hendon 1991) found a surprising range of variability in the quality of house construction, including overlap in quality with urban building. High-cost Copador polychrome pottery was recovered from each household. Gonlin notes that the relative quantity of costly ceramics, not just their presence or absence, is necessary to evaluate wealth differences between households, but she also argues that 'it should no longer be assumed that rural areas of complex societies are homogenous in either chronology, function, or sociocultural dimensions' (Gonlin 1994: 195).

Excavated houses yield accurate measurements and good dating, but surveys can provide larger samples. Liendo Stuardo (2002: table 3.1) mapped Late Classic dwelling platforms and range structures (long masonry structures also thought to be residential) in a survey area adjacent to Palenque. There was a five-fold range of variation in house platforms at the lower end of the distribution. In contrast to Puleston's selection, this series includes houses that are much larger. Overall there was a considerable variation in house size, as reflected in the coefficient of variation in Table 2.

Carmean (1991) published a selection of 57 house platforms from Sayil, a Terminal Classic city in Yucatán. According to Carmean the poorest and richest houses at Sayil may be underrepresented but the sample includes all the houses within a large block near the site center. Here as in all these cases wealth in domestic architecture (measured both by area of the platform and an estimate of the labour involved in construction) has a left-skewed distribution, the form taken by income distributions in contemporary

societies. The range of differences in houses at the lower end is substantial eight- or ten-fold among the cases falling below the median.

At the Late Classic city of Cobá, investigators mapped house platforms that were typically arranged within a bounded compound or solar, to use the modern term (Folan *et al.* 1983). They measured the areas of all the house platforms in a sample of solares, and the areas of the solares (Table 2). For the house platforms there was a four- or five-fold difference between the minimum and the median and between the median and the maximum, and a greater spread among the house lots (solares). Folan *et al.* (1983) compared their Cobá results to the distribution of house platform and solar sizes at Mayapán, the well-known Postclassic center in Yucatán, and found that the Postclassic houses and solares were somewhat smaller and the distribution somewhat more uniform.

Investigators at Aguateca, a Late Classic site in the Pasión region, describe residential units composed of several structures, often arranged around a formal or less formal patio (Inomata 2008: 167–178). The project studied 178 of these residential units. Apart from a royal palace with a total room area of 2307 m^2 and a construction volume of 14,475 m^3, the rest of the residential units were 'rather continuously distributed' (*Ibid.:* 169), ranging between 5 and 617 m^2 in room area and between 2 and 1045 m^3 in construction volume. There is a tendency for residential unit size to decrease with distance from the site center.

In sum, wealth stratification among the Maya of Classic times seems to show a broad range and considerable variation or gradation along the continuum. The currently available data suggest some stratification differences within major cities, between richer central districts and less wealthy peripheries, but rural areas were not uniformly poor or undersupplied. Sampling issues preclude explaining more about relative and absolute material wealth differences, but there is no question about the variation, as noted by all researchers. Kintz has marshaled sixteenth-century documentary descriptions of Maya social stratification (Folan *et al.* 1983) and draws attention to its depth and complexity.

Aztec society of the last two centuries before the Spanish conquest was quite stratified, as attested in the sixteenth-century accounts of Bernardino de Sahagun (1975) and others. The principle class division was between the hereditary nobility and the com-

moners. Among the nobility distinctions were made between supreme rulers, lesser rulers, and the pipiltin, 'sons of nobles'. Among the commoners were landed peasants, landless peasants, and slaves. Luxury artisans (toltecatl) and long-distance merchants (pochtecatl) made up a small intermediate group (Berdan 1982: 46).

The archaeological evidence certainly confirms that Aztec society was highly stratified, but studies of Aztec houses in a variety of urban and rural contexts show more variation in commoner houses than would be predicted by an overly simple idea of a two- or three-class system. The smaller end of the continuum is seen at Capilco and Cuexcomate, rural villages outside the Basin of Mexico, in Morelos (Table 2). At these sites Smith (1992: 295, 311) found that house areas varied between 13 and 54 m^2. But at Yautepec, an urban center in Morelos, Smith (Smith *et al.* 1999) found a wider range of house sizes, up to a palace of 6175 m^2. Evans (1988) excavated a sample of eight houses at Cihuatecpan, a town in the northern Basin of Mexico, and the median size was 179 m^2 (Table 1). At the city of Ixtapaluca Viejo, in the southern Basin of Mexico, Blanton found 109 houses that were sufficiently preserved to be measured, and of these, 65 had areas of more than 100 m^2 (Blanton 1972: 257).

These data on Aztec house sizes show a wide range of variation and a continuous, left-skewed distribution. But they also suggest another pattern that requires more attention and study. That is, larger towns and cities seem to have had a broad range of house sizes, including a few palaces, appreciable numbers of mid-sized dwellings, as well as smaller houses, while at least some rural villages had uniformly small houses.

How do the data from Coixtlahuaca stand in comparison with these other cases from Oaxaca, the Aztecs, and the Maya? In the spatial aspect of wealth distribution Coixtlahuaca's Late Postclassic capital Inguiteria does not seem to have had the centripetal pattern of Late Classic Maya centers such as Aguateca, where wealth tended to decline with distance from the center. Some Oaxacan sites of the Classic period, including Monte Albán, had that centripetal tendency but at others (*e.g.,* Jalieza) it was not so obvious or there were multiple foci of wealth.

In its artifact distribution Inguiteria seems impressive for its 'broad middle' – in this respect it recalls the house sizes at Late Classic Monte Albán and the Aztec towns and cities such as Ix-

tapalapa Viejo or Cihuatecpan. Inguiteria was probably a wealthier place than El Palmillo, yet its wealth distribution (as measured by relatively common artifacts) tended toward the egalitarian rather than the highly stratified. We do not have a good sample of houses from Inguiteria but our fragmentary information is consistent with the pattern of many middle-size dwellings found in all parts of the city, all the way to its edges.

DISCUSSION AND CONCLUSIONS

In spite of the numerous examples we mention, comparative analysis of social stratification in ancient Mesoamerica is limited by the unrepresentativeness of samples. We have data from individual sites (cities, villages) but thus far no one has put together a sample representative of a whole regional society. Of course, if one is only using archaeological examples to illustrate social categories already presumed, then sample size and bias are not so problematic. But if one wishes to generate a picture of social stratification from the archaeological record itself, then indeed it must be said that the information is still fragmentary.

What can be said provisionally from this fragmentary information? Regardless of their approach, Mesoamerican archaeologists take it as given that Classic and Postclassic societies were stratified – no one accepts Morgan's classification of the Aztecs and their neighbors in the tribal stage of Middle Barbarism (Gibson 1947). Still, the degree and form of differentiation varied considerably, as some places and times may have been more egalitarian or more stratified than others. Mesoamerican societies were complex, but were not necessarily rigid, centralized hierarchies (cf. Bondarenko *et al.* 2002).

In spatial terms we can say that some richer households are found in close proximity to main civic-ceremonial buildings, but others are not; richer houses occur in both rural and urban contexts. A similar conclusion can be made about poorer households. They too can be found near and far from civic-ceremonial buildings and in both rural and urban contexts. There are indications in the Maya area, Oaxaca, and in Aztec central Mexico that larger towns and cities had the greatest range of wealth differentiation and also had the broadest, most developed middle part of the range. In all, the geography of wealth was a mosaic, not a simple model of center – rich, periphery – poor.

The wealth distributions cited here generally (not always) exhibit three patterns. They are left-skewed, as is common in stratified societies. They are continuous, that is, goods are distributed among households, not in discrete clumps or groups (although with small samples one may prematurely conclude otherwise). They have a broad range of variation both above and below the median. At some times and places that range of variation could be rather restricted and more uniform, even in highly populated cities. These cases are interesting because they juxtapose wealth leveling against wealth stratification in the same civilizational area.

Why was wealth distributed like incomes in the modern world (left-skewed), continuously rather than discretely, over a broad range of variation, and in a spatial mosaic? Since these are archaeological data one set of factors that would contribute to a continuous distribution would be that we are probably sampling units that are not absolutely contemporaneous. A midden or house ruin is the result of an accumulation of many different states of a domestic unit; it is also a subtraction from a household's possessions because the things worth saving were kept and other things were later salvaged or retrieved (see LaMotta and Schiffer 1999; Smith 1987). Likewise, sociologically, chance factors and the domestic cycle result in social differences at any one time inside peasant communities that structurally over the long run are essentially egalitarian (Netting 1993).

At the beginning of the paper we distinguished two contrasting approaches to the study of social stratification in ancient societies, one emphasizing essential culturally or theoretically defined status groups and the other emphasizing the distributions that are found in the record that past people possessed and discarded. These approaches are not irretrievably opposed, for they may address separate aspects of the same whole social reality. Many economic anthropologists studying wealth stratification in modern societies use analytical approaches that consider both quantifiable material wealth or income and socially defined statuses, such as Bordieu's (1986) concept of cultural, social, and economic capital, Ellis's (2000) livelihoods analysis, and Sen's (1983; see also Robeyns 2005) capability approach. Research frameworks that consider both culturally defined status groups and the distribution of wealth offer alternatives to overly simplistic and potentially limiting substantivist/formalist divisions in economic anthropology.

In a recent review of scholarship on ancient state economies, Smith (2004) calls for more empirical and comparative research and urges archaeologists to recognize the variation in these economies and move beyond unproductive primitivist *vs.* modernist debates. We aim to contribute to this kind of work with our examination of the distribution of wealth indicators at Coixtlahuaca and across Mesoamerica, and we suggest that our approach is not strictly incompatible with direct historical approaches. In our view, ancient Mesoamerican artifacts and construction materials and expertise for houses were consumer goods often obtained by market exchange. Thus, wealth was not accumulated by the same means by which one obtained other social statuses, such as membership in a kin group, holding an office, advancing through the ranks as a soldier, having a particular legal status (noble, commoner, slave), or being of certain gender or age. Wealth could be broadly and continuously distributed at the same time that access to these other statuses may have been categorical and restricted.

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Table 1

Serving bowl production steps by site sector

Site	Sector	Mean	SD	CV
C. Encantado	1	2.9	0.52	0.18
	2	2.9	0.41	0.14
	3	2.5	0.52	0.21
	4	2.8	0.52	0.19
El Vergel	1	2.7	0.45	0.17
	2	2.6	0.50	0.19
	3	2.7	0.45	0.17
	4	2.7	0.58	0.21
C. Cantera	1	2.4	1.41	0.59
	2	2.2	1.63	0.74
	3	2.2	1.46	0.66
	4	1.8	1.15	0.64
C. Yucuayuxi	1	2.0	1.17	0.59
	2	1.2	1.14	0.95
	3	0.4	0.85	2.13
	4	0.9	1.30	1.44

Source: Heredia 2005.

Table 2

Examples of Mesoamerican house sizes

Case	N	Min.[a]	Max.	Mean	Median	SD	CV	Source
Tikal houses	30	24	96	54.7	50	22.09	0.40	Puleston 1973
Palenque region houses	192	8	441	46.1	29	60.26	1.31	Liendo Stuardo 2002
Sayil house platforms	57	218	3200	815.7	637	542.04	0.66	Carmean 1991
Cobá house platforms	23	63	1136	335.0	242	295.19	0.88	Folan *et al*. 1983
Cobá solares	23	20	5884	1116.3	781	1310	1.17	Folan *et al.* 1983
Mayapán structures	30	15	351	120.5	92	77	0.64	Folan *et al.* 1983
Mayapán solares	30	104	2528	845.6	708	552	0.65	Folan *et al.* 1983
Rural Morelos houses	39	13	54	24.5	23	8.59	0.35	Smith 1992
Yautepec houses[b]	8	16	425	86.3	38	138.50	1.60	Smith *et al.* 1999
Cihuatecpan houses	8	48	600	179.1	139	175.14	0.98	Evans 1988
Monte Albán houses	13	98	750	313.2	248	208.76	0.67	González Licón 2003

Note: [a] all measurements in square meters;
[b] excludes palace of 6175 m^2.

Table 3

Goods from excavated terraces at El Palmillo

Item	Terrace						Total	Mean	SD	CV
	1163	1147–8	925	507	335	St.35				
obsidian	405	194	447	570	591	450	2657	442.83	142.51	0.32
bone tools	22	23	42	45	42	70	244	40.67	17.57	0.43
shell ornaments	11	10	10	18	28	15	92	15.33	6.98	0.45
scrapers	27	22	43	47	18	83	240	40.00	24.02	0.60
objects in offerings	16	16	24	14	50	32	152	25.33	13.84	0.55
animal bones	995	1294	1957	3095	6178	5437	18956	3159.33	2186.95	0.69
house complex size	173	117	96	107	297	389	1179	196.50	120.12	0.61
stone ornaments	3	2	9	14	11	14	53	8.83	5.27	0.60
offerings	9	9	9	10	29	9	75	12.50	8.09	0.65
spindle whorls	12	9	6	20	32	43	122	20.33	14.51	0.71
largest house size	92	89	67	96	297	217	858	143.00	92.41	0.65
largest patio size	20	20	21	28	72	46	207	34.50	20.90	0.61

Table 3 continued

Item	Terrace						Total	Mean	SD	CV
	1163	1147–8	925	507	335	St.35				
bone ornaments	4	0	11	10	21	8	54	9.00	7.16	0.80
worked bone	2	1	10	8	20	16	57	9.50	7.53	0.79
greenstone	1	0	4	4	10	3	22	3.67	3.50	0.96
% burnished vessels	1.3	1	1.6	2	6.7	10.4	23	3.83	3.85	1.00
drinking vessels	5	17	17	29	89	121	278	46.33	47.17	1.02
% pitted vessels	0.01	0.02	0.03	0.2	0.29	0.63	1.18	0.20	0.24	1.23
large serving vessels	88	116	78	194	359	1363	2198	366.33	499.27	1.36
dental modification	0	0	0	0	6	0	6	1.00	2.45	2.45

Source: Feinman *et al*. 2008.