



The archaeological study of neighborhoods and districts in ancient cities

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ABSTRACT

The spatial division of cities into residential zones is a universal feature of urban life from the earliest cities to the present. I propose a two-level classification of such zones that archaeologists can use to analyze preindustrial cities. Neighborhoods are small areas of intensive face-to-face social interaction, whereas districts are larger areas that serve as administrative units within cities. I review comparative historical data on neighborhoods and districts and outline archaeological methods for their identification and analysis. Illustrative cases are drawn from Mesopotamia and Mesoamerica, and I conclude with a review of the major top-down and bottom-up social forces that generate and shape neighborhoods and districts in preindustrial cities.

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Introduction

The spatial division of cities into districts or neighborhoods is one of the few universals of urban life from the earliest cities to the present. Neighborhoods are even found in some large village settlements, and they seem to appear quickly in “spontaneous” informal settlements (shantytowns). In the past, urban residents typically lived their lives within an area much smaller than the entire city. Although modern urban neighborhoods have been targets of considerable scholarly attention for decades (Hoyt, 1939; Sampson, 2003; Suttles, 1972), only recently have historians and archaeologists begun to appreciate the widespread occurrence and social importance of these social units in the past (Garrioch and Peel, 2006; Keith, 2003; Stone, 1987).

Neighborhoods are units with both social and spatial significance. Their importance in urban life and organization comes from their social roles and composition. Some of the major social features of neighborhoods are their status as communities with social ties among members (“neighbors”), and the diverse functional roles they play within a city. Archaeologists, like historians and other social scientists, are interested in the social characteristics of neighborhoods as communities and their roles within cities. Archaeological research, however, is distinctive in that it typically must begin with spatial organization and work toward social interpretations. If archaeologists can isolate spatial zones that could represent residential areas (as opposed to zones of public

architecture, for example), the next step is to investigate whether such zones might in fact be interpreted as neighborhoods. The simplest analytical procedure is to infer—on the basis of comparative data—that spatial clusters of residences were probably neighborhoods. A more complex and illuminating procedure is to use such spatial zones as a starting point to investigate whether they exhibit one or more traits that neighborhoods typically have.

In this paper, I present a conceptual framework for the archaeological analysis of residential zones and their social characteristics in ancient cities. On the basis of comparative data from modern and historical cities, I argue for the importance of two levels of residential zone: the neighborhood—a small area of frequent face-to-face interaction—and the district—a larger zone with administrative or social significance within the city. I review archaeological methods for the identification and analysis of these socio-spatial units, with examples from Mesopotamia and Mesoamerica. I conclude with a review of comparative data on some of the major social characteristics and processes of preindustrial neighborhoods and districts.

This paper is concerned with ancient and preindustrial cities, and most of my examples are drawn from these contexts. The conceptual literature on such cities (Sjoberg, 1960), however, is inadequate for rigorous comparative analysis, and I therefore rely on models and definitions derived largely from studies of modern urban neighborhoods by sociologists and planners. There are large bodies of literature in these and other fields on modern neighborhoods. While many of the contextual variables and specific social dynamics differ greatly between preindustrial cities and those of the contemporary western world, the basic facts of the existence

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and social importance of neighborhoods seem similar across most cities, ancient and modern.¹

I tend to favor a functional definition of “city” and “urban”: urban settlements are places that serve as the setting for institutions and practices that affect a larger, regional hinterland (Smith, 1989, 2008:chapter 1). This is a broader definition than the more common demographic definition of urban settlements that focuses on population size, density, and social complexity (Wirth, 1938). The functional definition permits the inclusion of extensive low-density settlements with monumental architecture—such as the Classic Maya or Khmer political capitals—within the category of urban (Fletcher, 2009). As I show below, these cities and towns also had neighborhoods, but they differ spatially from neighborhoods in high-density cities. But for the analysis of neighborhoods, the urban status of a community seems to be of less importance than the presence of a large number of people within the settlement. That is, large village settlements that lack urban functions may also show neighborhood organization, a pattern I discuss below for Neolithic sites in Anatolia and large pueblo sites of the US Southwest.

Spatial zones within cities

The archaeological study of urban neighborhoods almost by necessity begins with the isolation of spatial zones. As such, the archaeological analysis of neighborhoods is a subset of the study of urban spatial organization. Because it may be easy to isolate spatial zones in ancient cities but difficult to interpret them conclusively as neighborhoods, it is helpful to employ a conservative terminology that reflects the epistemological status of our units. I use the concept of “zone” to designate an identifiable spatial unit within a city or other large settlement. I begin with a consideration of spatial organization and zones before tackling neighborhood and related concepts.

A number of types of urban zone in preindustrial cities can be identified from their function and scale. Civic-ceremonial zones, districts, and neighborhoods are probably the most common types cross-culturally. Other kinds of zones in preindustrial cities include commercial zones (e.g., suqs in Islamic cities), agricultural zones, and other areas of low intensity use. The periurban zone, a transitional area at the edge of a city (Simon, 2008; Webster and Muller, 2004) is another type of zone with relevance for ancient cities (Goodman, 2007).

A **civic-ceremonial zone** is an area with concentrated public architecture. It typically consists of a number of public or monumental buildings and formal open spaces. A civic-ceremonial zone may or may not contain residences; if it does, the residential area is smaller than the area devoted to public buildings. An **urban epicenter** is a civic-ceremonial zone that served as the seat of administration, ritual, and display for a polity. In some urban traditions (e.g., Aztec city-state capitals, Smith, 2008), the epicenter is the sole civic-ceremonial zone in a city, whereas in others (e.g., many Classic period Maya cities, Andrews, 1975) the epicenter is the largest or most complex of a series of civic-ceremonial zones within a city.

Gideon Sjöberg's book *The Preindustrial City* (Sjöberg, 1960) was an extended argument against the universality of the social and spatial patterns of western industrial cities, particularly as described by the sociologists of the University of Chicago (e.g., Hawley and Duncan, 1957; Wirth, 1938). Although much debated and criticized (see the concise summary of this literature in Herbert and Thomas, 1997), Sjöberg did succeed in establishing a series of important differences between preindustrial and indus-

trial cities. He presented a simplified concentric spatial model with a central elite district (the urban epicenter), a large surrounding area of commoner residence, and a peripheral (peri-urban in today's nomenclature) zone of “outcaste” housing and farming. In the latter two zones, “subdivisions along ethnic and/or occupational lines are manifested in the preindustrial city in the numerous wards or quarters, well-defined neighborhoods with relatively homogeneous populations that develop special forms of social organization” (Sjöberg, 1960:100).

Sjöberg did not present a graphic representation of his spatial model, but Herbert and Thomas (1997:23) constructed the image shown here in Fig. 1. Perhaps because of the lack of this kind of graphical image in Sjöberg's works, archaeologists who first adopted comparative spatial models for ancient cities reached back to the pre-Sjöberg sociology literature on modern US cities. The three most commonly invoked models from this literature are the concentric model of Burgess (1923), Hoyt's (1939) sector model, and the multiple nuclei model presented by Harris and Ullman (1945); see Fig. 2.

If interpreted strictly in the terms of their original exposition, these models of Chicago and other contemporary cities would seem inappropriate for preindustrial cities. The differences between ancient and modern cities in transport and communication technology, political context, and in urban and political scale are too great for the direct application of such models. For this reason, Pollard (1977) and Marcus (1983) suggested that a more flexible interpretation makes these models useful analogues for ancient cities in Mesoamerica and elsewhere. For example, the central business district and slum housing of Burgess's concentric model are found in few if any preindustrial cities, but a generalized concentric model like Sjöberg's (Fig. 1) is widely applicable. Similarly, if the shopping centers and commercial hubs of Harris and Ullman's multiple nuclei model are replaced by small civic-ceremonial zones, the resulting model aptly describes many low-density agrarian cities such as those of the Classic Maya (Marcus, 1983) or ancient Khmer (Evans et al., 2007). I now turn to the specific issue of residential zones within cities.

Defining neighborhood and district

Many writers divide residential zones into two or more size categories (Table 1). These scholars include urban historians (Dickinson, 1961; Jacobs, 1961), sociologists (Kearns and Parkinson, 2001; Suttles, 1972), and planners (American Planning Association, 2006; Bell and Tyrwhitt, 1972). Although finer, multiple-level classifications may be appropriate for some

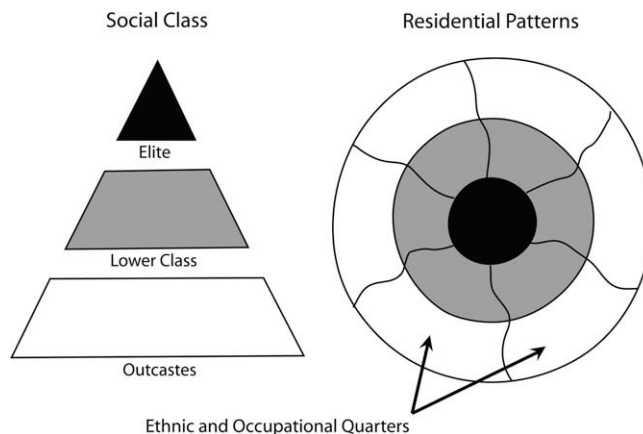


Fig. 1. Sjöberg's (1960:95–103) model of concentric zoning in preindustrial cities. Drawing by Miriam Cox, based on Herbert and Thomas (1997:24).

¹ The comparability of ancient and modern urban neighborhoods is one target of an ongoing transdisciplinary research project in which I am a participant (York et al., in preparation). A second theme of that project—urban open spaces—is not covered in the present paper.

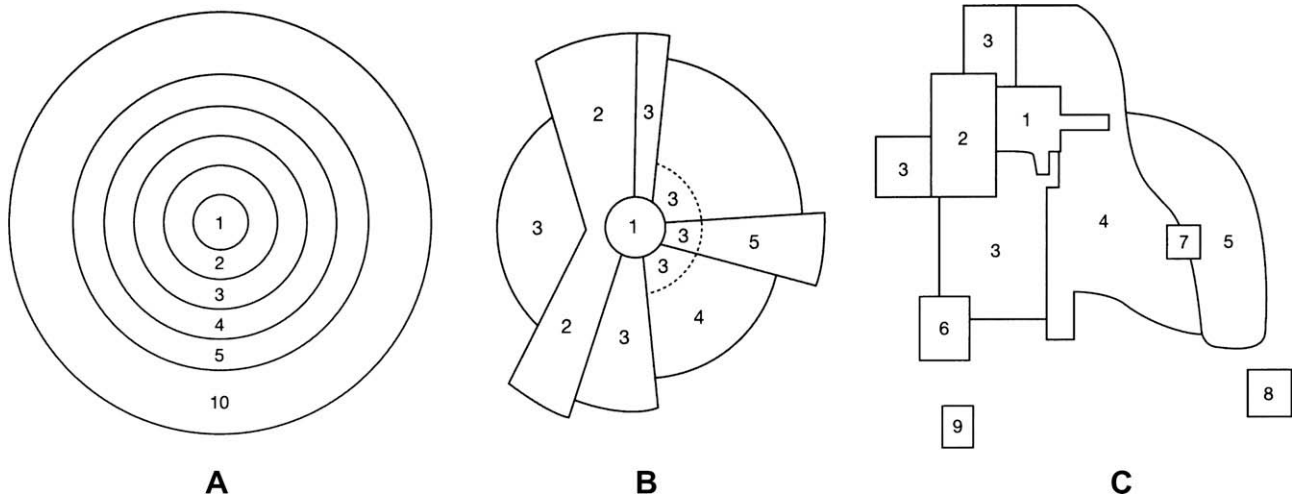


Fig. 2. Three models of spatial structure in industrial cities. Drawing by Mirian Cox, based on Herbert and Thomas (1997:199).

Table 1
Size classification of urban residential zones.

Size	This paper	Jacobs (1961)	Dickinson (1961)	Suttles (1972)	Kearns and Parkinson (2001)	Bell and Tyrwhitt 1972	APA (2006)
(Smallest)	Neighborhood	Neighborhood	Neighborhood	Face-block	Home area	Street group	Face-block
				Defended neighborhood	Locality	Pedestrian precinct	Residential neighborhood
						Neighborhood unit	Institutional neighborhood
(Largest)	District	District	Community area	Community of limited liability	Urban district region		

contemporary cities, I suggest that a two-part scheme—neighborhoods (small) and districts (large)—is most useful for ancient and preindustrial cities. This model concords with the suggestions of the urban historians (Table 1), and given the lower spatial and social resolutions of archaeological data, it is parsimonious to employ a two-size classification of residential zones. Other archaeologists who have proposed similar two-level classifications for residential districts include Stone (1987:3) and Cowgill (1997).

Some writers avoid specifying the particular types or levels of residential zoning, but retain an emphasis on the notion of a spatial hierarchy of such zones. Sociologist Robert Sampson, for example, suggests that, “A local community is best thought of not as a single entity, but rather as a hierarchy of progressively more inclusive residential groupings. In this sense, neighborhoods are ecological units nested in successively larger communities” (Sampson, 2003:973). A number of planners working within the “new urbanism” perspective, on the other hand, take a more rigid approach and argue that there is a single best type and scale of urban neighborhood (e.g., Furuseth, 1997); see Talen (1999) on the neighborhood concept within new urbanist thought.

Neighborhoods seem to be universal attributes of cities in all time periods. Lewis Mumford, for example, suggests that,

“Neighborhoods, in some primitive, inchoate fashion exist wherever human beings congregate, in permanent family dwellings; and many of the functions of the city tend to be distributed naturally—that is, without any theoretical preoccupation or political direction—into neighborhoods. (Mumford, 1954:258)

Mumford’s emphasis on the “natural” distribution of neighborhood functions draws attention to an important distinction between neighborhoods and districts: neighborhoods,

in most urban traditions, are social groups created by bottom-up local processes, or the basic activities of urban life. Districts, on the other hand, are more often created by top-down processes (Mumford’s “political direction”). The roles of bottom-up and top-down processes in creating neighborhoods and districts are explored more fully below.

Social concepts employed by archaeologists typically require two definitions—a social definition with comparative utility, and a material-culture definition that permits the identification of traces of the social concept in the archaeological record. In this section I provide social definitions for neighborhood and district that are intended to be applicable cross-culturally and through time, as well as amenable to analysis with archaeological data.

Neighborhoods

A neighborhood is a residential zone that has considerable face-to-face interaction and is distinctive on the basis of physical and/or social characteristics. This definition is a combination of two well-known published definitions by sociologists. The first is Ruth Glass’s definition of neighborhood: “a distinct territorial group, distinct by virtue of the specific physical characteristics of the area and the specific social characteristics of the inhabitants” (Glass, 1948:18). The second definition is Suttles’s (1972) two-part definition of a “face-block neighborhood”: (1) “a network of acquaintances who have been selected primarily because they are known from shared conditions of residence and the common usage of local facilities” (p.55); and (2) this network is “concentrated within a single face-block” (p.56). The technical definition of “face-block” in the planning literature is the following: “The neighborhood as a face-block is defined as the two sides of one

street between intersecting streets” (American Planning Association, 2006:409).

This definition of neighborhood is meant to be applicable to diverse geographical settings and time periods and amenable to analysis with historical and archaeological data (as well as contemporary social science data). Many definitions of neighborhood emphasize values of neighborliness and friendship that are important norms in modern western society but may or may not be important in preindustrial cities or in neighborhoods of concentrated poverty in industrialized nations today. Here are two examples of this tendency. (1) In a book on European historical cities, Dickinson (1961:528) defined neighborhood as “the smallest social group outside of the family, a group characterized by the feeling of “neighborliness” or friendship with one’s neighbors. It is an intimate face-to-face group of several hundred people.” (2) More recently, Carmon (2001:10488) states the following:

The term neighborhood is rooted in the verb neighbor. ‘To neighbor’ has a double meaning: (a) to live in vicinity, one or another; (b) to be friendly, to render mutual favors or assistance (Webster’s dictionary). This double meaning expresses the essence of the neighborhood: continuous physical proximity among people, together with some special attitudes, such as friendliness, and/or special behaviors, such as mutual assistance.

In a discussion of early Mesopotamian urban neighborhoods based primarily on historical documents, Keith (2003:58) claims that the following definition of neighborhood is applicable cross-culturally:

the neighborhood is considered a level of sociospatial patterning and is defined as the area within which local residents conducted most of their daily activities. Such an area may or may not correspond to “the neighborhood” as identified by either the local inhabitants or the ancient administrative bureaucracy.

Although this definition may have greater applicability to preindustrial cities than the definitions of Dickinson and Carmon, it is based too heavily on characteristics of ancient Mesopotamian cities. It is not at all clear whether neighborhoods (or districts; Keith does not distinguish these levels) in other urban traditions are places where “residents conducted most of their daily activities.” This characteristic should be a topic of investigation, not a definitional attribute of neighborhoods. In some preindustrial cities residents may have traveled outside their immediate residential vicinity to reach their place of work or to purchase goods at a marketplace, but this should not imply that neighborhoods were lacking simply because of the frequency of such trips.

Suttles’s concept of face-block (see above) is important for its emphasis on a feature that is only implicit in many definitions of neighborhood (e.g., those of Dickinson, Carmon, and Keith quoted above): face-to-face interaction among the residents of a neighborhood. This interaction, however, need not involve friendship (Dickinson and Carmon) or the conduct of the majority of typical daily activities (Keith). In fact, sociologists and planners have identified problems with traditional notions that neighborhood social ties typically consist of “dense, intimate social bonds” (Sampson, 2004a:108); see also Briggs (2008). This is clearly not the case in many poor, crime-ridden inner-city neighborhoods today. It is the fact of interaction rather than its content that is important in creating and maintaining a neighborhood as a social unit.

The role of face-to-face interaction is probably stronger in structuring neighborhoods in preindustrial cities than in many contemporary cities. One historical example with particularly rich documentation is 14th-century Marseille, where Smail

(2000) has analyzed data on place of residence, occupation, and other factors:

This evidence shows that among tradesmen and commoners, sociability was constructed around relations that were literally face to face; identity was built up from public spaces, that is to say the spaces in which people came into frequent contact with neighbors and colleagues (Smail, 2000:183).

The identification of neighborhood boundaries is often difficult because the various spatial and interactional patterns that characterize a neighborhood—such as social networks and interaction, or the distribution of social characteristics—may not have a single, clearly delimited boundary (Sampson, 2004b). Processes overlap in space, and the social world of a neighborhood is typically an open system with varying degrees of homogeneity and external connectivity. In her analysis of Middlesbrough, planner Glass (1948) found that the various localized social systems were nodal networks. In the words of architect Christopher Alexander, “the different units do not coincide. Yet neither are they disjoint. They overlap” (Alexander, 1972:414).

Districts

A district is a residential zone that has some kind of administrative or social identity within a city. In most cases, districts are larger than neighborhoods. There may be public architecture and spaces within a district, but housing predominates. Districts are typically composed of multiple neighborhoods. Two types of districts are common in cities: administrative districts and social districts. Administrative districts are large residential zones that serve as administrative units within cities. In some cases, administrative districts contain civic buildings used in administration, whereas in other cases there may be no clear architectural signal of district administration. Social districts are large residential zones, identifiable from patterns of interaction or social characteristics, which do not serve as administrative units.

Suttles (1972) uses the term “community of limited liability” for the district. In the words of Robert Chaskin:

The community of limited liability is a larger area, geographically defined but composed of several neighborhoods, and has an ‘official’ identity—that is, it is recognized internally by residents and organizations and externally by municipal government and other extra local institutions. Attachment to this unit is contingent, voluntary, and based on instrumental values tied to investment, function, and use as opposed to the affective ties that interpersonal neighbor relations that characterize the natural area, or urban village (Chaskin, 1997:528).

Planners today use the term “institutional neighborhood” for the district: “The institutional neighborhood is a larger unit that has some official status as a subarea of the city. The institutional neighborhood provides the opportunity to focus on organization and institutional collaboration” (American Planning Association, 2006:409). For modern cities, Jacobs (1961:117) observes,

Looking at city neighborhoods as organs of self-government, I can see evidence that only three kinds of neighborhoods are useful: (1) the city as a whole; (2) street neighborhoods; (3) districts of large, subcity size, composed of 100,000 people or more in the case of the largest cities.

Kearns and Parkinson (2001) discuss urban districts as landscapes of social and economic opportunities where important social forces include employment, leisure interests, and social networks.

For historical cities in Europe, Dickinson (1961:529) suggests that, “There is, beyond the neighborhood, a social-geographical

grouping which is based on some kind of association through the medium of common institutions; it is organized in some degree as a community, but no face-to-face relationship of all its members is involved.” He calls this unit the “community area.”

Neighborhoods without cities?

Neighborhoods, as defined here, are not limited to urban settlements. Large villages, whether part of an urban settlement system or not, may have definable residential zones characterized by considerable face-to-face interaction and physical or social distinctiveness. Indeed, such units have been proposed for at least two archaeological examples of non-urban, non-state, settlement systems. Düring and Marciniak (2006), for example, identify spatial divisions within several Neolithic Anatolian villages, including Catalhöyük,² which they call neighborhoods:

One feature so far unique to the central Anatolian Neolithic is the phenomenon of the clustered neighborhood settlements (Özbasaran, 2000:135). In these settlements individual buildings are typically constructed directly adjacent to one another in neighbourhood clusters of approximately 30–40 buildings. These will normally be separated from one another by streets, alleys and midden areas, and additional midden areas may be located within the neighbourhood clusters.” (p.170).

If one makes the reasonable assumption that high levels of social interaction took place within these zones, their physical demarcation allows them to be classified as neighborhoods as defined here.

Another example is provided by large Pueblo III-period pueblo sites in the US Southwest (Adler, 1996). Many of these sites are divided spatially into two or more residential zones consisting of room blocks or clusters of rooms and blocks. Southwestern archaeologists generally use the term “moiety” in cases where there are two major zones at a site. Traditional interpretations (e.g., Lowell, 1996) stress the role of these units in promoting social integration at large sites. More recently Fowles (2005) has interpreted such units at Pot Creek Pueblo in another manner: “moieties were initially established there as a means of formalizing the social relationships between a local population and a recently arrived group of immigrants” (Fowles, 2005:25). These Southwestern divisions (moieties) fit my definition of neighborhood, and both social interpretations are entirely consistent with the roles of neighborhoods in well documented urban settings. These non-state cases, on the other hand, do not exhibit spatial units corresponding to districts.

The fact that neighborhoods tend to arise quickly in large, rapidly-settled residential zones is another indication of their ubiquity in large human settlements. Many contemporary spontaneous settlements (also known as squatter's settlements or informal settlements) develop neighborhoods as they grow (Fisher, 1984). The best documented of these settlements is an area in Lusaka, Zambia, known as George, where Schlyter and Schlyter (1979) mapped houses and social interactions over a period of a decade. They found that residents quickly established “neighborly” relationships with those living nearby, leading to house clusters that served as small neighborhood units within the larger settlement (Schlyter and Schlyter, 1979:50–53, 89–91). Even the temporary, artificial settlement of “Black Rock City,” the setting for the annual Burning Man Festival (Chen, 2009), developed neighborhoods as the festival grew larger over the years. In the words of festival organizer Rod Garrett:

We are redefining our zoning to break the city down into smaller, more humanly scaled neighbourhoods. This becomes increasingly necessary as our population continues to grow while still using the old camp centric model. Populations, in their desire for that human scale, are driven to choose divisive ways to break the population into smaller units, resulting in grouping through the exclusion of others. By visually suggesting smaller areas, we can create divisions of a size the mind can wrap itself around. (Zancan, 2006:2).

In the terms discussed below, this is an example of a top-down (centrally planned) approach to neighborhood development, albeit in the context of an event with strongly communitarian and anti-hierarchical values.

Neighborhoods and districts: five historical examples

The spatial and social configurations of neighborhoods and districts in individual cities can vary considerably. Four relatively well documented historical examples—late medieval Marseille, 20th-century Bhaktapur, Sui-Tang period Chang'an, and the 19th-century Yoruba city Ilesha—and one poorly documented case—Addis Ababa in the late 19th-century—illustrate some of this variation. In these and other cases, historical documents typically provide much fuller information on administrative districts than on neighborhoods. There are fewer districts and they were usually administrative units of concern to the state, which led to their inclusion in administrative documents far more often than neighborhoods. Administrative districts are much easier to map than neighborhoods, both because the latter tend to be amorphous and because historical documents have less information about them.

Marseille (France, 14th-century, Fig. 3)

Smail (2000) has analyzed a set of remarkably rich notarial records from late medieval Marseille. Among the themes of his research are the nature of spatial zones in the city and their names and perceptions by urban residents and by civic officials. Smail relates these features to demographic characteristics of individuals such as wealth and occupation. Marseille was divided into three broad political jurisdictions. (1) The “lower city” was the oldest area, and it was further divided into six administrative zones called *sixtain*; (2) the “upper city” was divided into four units called *quartier*; and (3) the *Prévôté* was a small district immediately surrounding the cathedral and under its control. In the terminology employed in this paper, the *sixtains* and *quartiers* were the **administrative districts** of medieval Marseille.

Smail's documents provide a limited amount of information on the nature of the *sixtain*. Inside the city walls, these were administrative districts and outside the walls the *sixtain* corresponded to a suburb (a settlement cluster outside of, but near, a town). Each *sixtain* had a representative on the town council (Smail, 2000:52–53). Each contained one or more churches, but there was no formal or official relationship between church and district (outside of the *Prévôté*). In Marseille, people showed little identification with their *sixtain*, in contrast to Florence (Kent and Kent, 1982) and a number of other documented medieval and renaissance cities in Europe.

Neighborhoods in early Marseille were points of reference for the population of the city. Many neighborhoods took their names from craft groups and retail areas. They ranged in size from a single street and its houses to large multi-block areas. Smail (2000:150) notes that, “more than merely elements of linguistic cartography, vicinities [neighborhoods] were units of sociability and social identity.” Neighborhood residents kept track of vital facts (birth,

² Although some non-archaeological writers have claimed that Catalhöyük was an urban settlement (Reader, 2005:16–24; Soja, 2000:27–36), Hodder (2006:95–99) shows that its small size and lack of urban functions do not permit such a classification.

death, property title) before the state took over this task. Due to the nature of the surviving documents studied by Smail, the documented neighborhoods do not cover the entire city. His map (Fig. 3) thus shows only a portion of the neighborhoods of Marseille.

In Marseille crafts were often concentrated in neighborhoods, some exclusively and others less so. Many neighborhoods were named for crafts, leading Smail (2000:171) to conclude that “craft group quarters [neighborhoods] were a conspicuous feature of Marseille’s social topography.” He notes that “close to 70% of all craftsmen whose residences are known lived in the quarter associated with their craft” (Smail, 2000:201).

Bhaktapur (Nepal, 20th-century, Fig. 4)

The Hindu Newar city of Bhaktapur in Nepal maintained many features of traditional Hindu cities into the 20th-century, and as such it has been the target of considerable research (e.g., Gutschow, 1993; Gutschow and Kölver, 1975; Levy, 1990). Most writers use the term ward to refer to the unit I call a *district*. The local term for these is *twa:*, which Levy (1990:774) defines as “a village-like spatial segment of a Newar town or city.” Traditionally, Bhaktapur was divided into 24 such districts, which were part of the *panchayat* system of governing councils. Each *twa:* sent a representative to the town council (Levy, 1990:61). Most were centered on a public square that was used for both commerce and agricultural activities such as drying rice (Gutschow and Kölver, 1975:26).

The *twa:* had an important role in public ritual in Bhaktapur. Each *twa:* had a temple or shrine to the deity Ganesa (Gutschow and Kölver, 1975:26; Levy, 1990:220). Levy suggests that this deity has an important relationship to urban space and the *twa:* in a way that the major gods Visnu and Siva do not. The *twa:* and its Ganesa shrines also play a major role in funeral processions (Gutschow, 1993). People identified with their *twa:* and often used it to identify their place of residence (Levy, 1990:183). The average size of the 24 *twa:* is 27 households, with a population of 1600 (Fig. 4).

Levy (1990:55) notes that “in various parts of the city there are clearly differentiated *neighborhoods*.” Levy uses the term quarter and Gutschow and Kölver (1975) use neighborhood for this unit. Although the names of many neighborhoods are reported (such as potter’s quarter or dyer’s quarter), these and other authors provide little information about them. The situation is confusing, because the term *twa:* is used in Bhaktapur for both districts and neighborhoods (Levy, 1990:182). Gutschow et al. (1987:45, 46, 85) provide maps of districts and neighborhoods in Bhaktapur (from which Fig. 4 was produced).

Chang’an (China, Sui and Tang periods, A.D. 581–907, Fig. 5)

Chang’an was the capital of a large empire during the Sui and Tang periods. The founding and layout of the city were carefully planned using orthogonal principles to harmonize with cosmological models and to express the political power of its rulers (Heng, 1999; Wheatley, 1971; Xiong, 2000:39). With somewhere around



Fig. 3. 14th-century Marseille (France) showing districts and neighborhoods. Not all of the neighborhoods are shown. Drawing by Miriam Cox, based on maps in Smail (2000:46–47, 172–73).

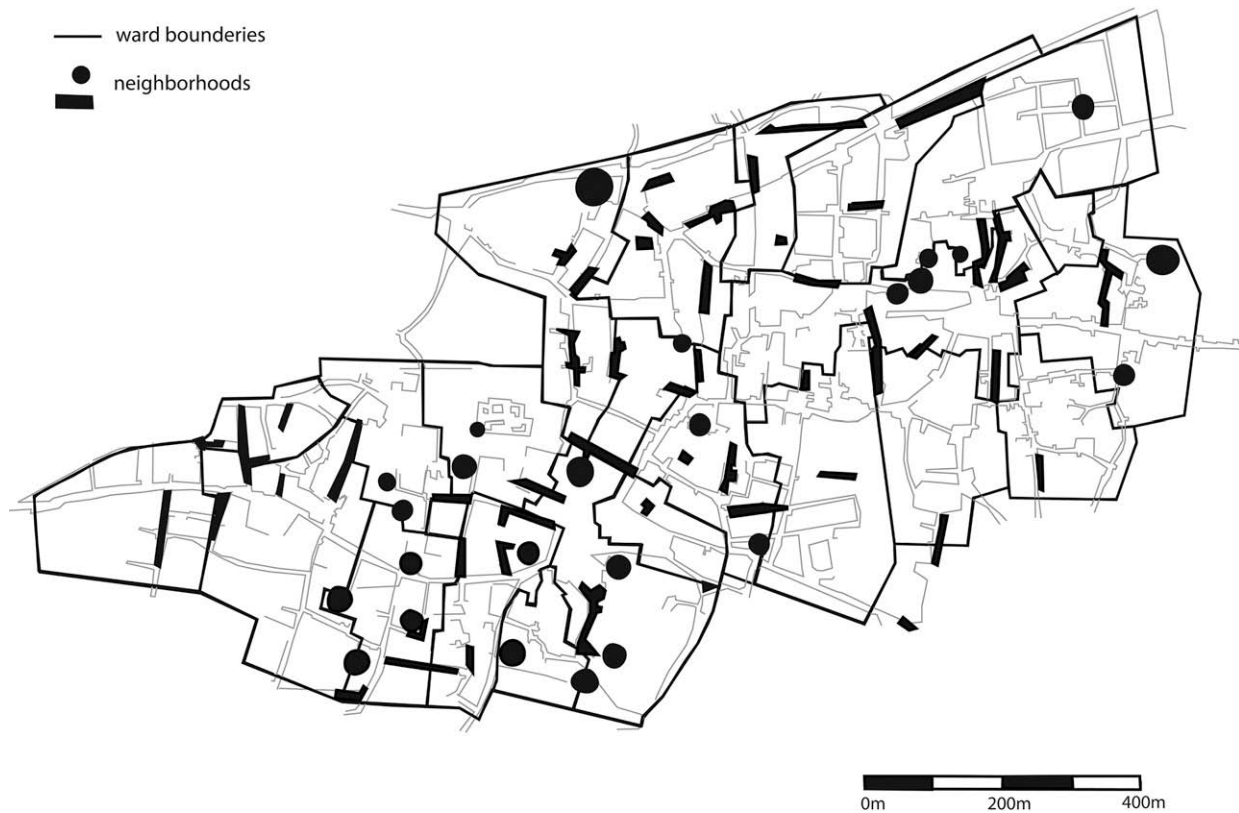


Fig. 4. 20th-century Bhaktapur (Nepal) showing districts and neighborhoods. Drawing by Miriam Cox, based on maps in Gutschow et al. (1987:85).

one million inhabitants (Xiong, 2000:200), this huge metropolis was the largest city in the world at its height. The city was divided into 109 **districts** called *fang* (modern authors tend to use the term ward for these units). These were large rectangular areas—with a mean size of 51 ha (as calculated from Xiong, 2000:209)—surrounded by high walls.

An ancient stone map of Chan'an (Fig. 5) shows a number of fangs in the city. The typical fang was entered by four gates on two avenues that divided the district into four quarters. The Tang

period was characterized by strong administrative control of urban life and economy, and movement in and out of districts was regulated. Gates were closed at night and a curfew strictly enforced. There were police officers in charge of the gates and movements of people (Heng, 1999:23–28). The city administration maintained several levels of official in charge of each fang.

Toward the end of the Tang period, the “ward system” began to break down. A surge in commercial activity was associated with a decline in administrative regulation of urban populations. “Walled

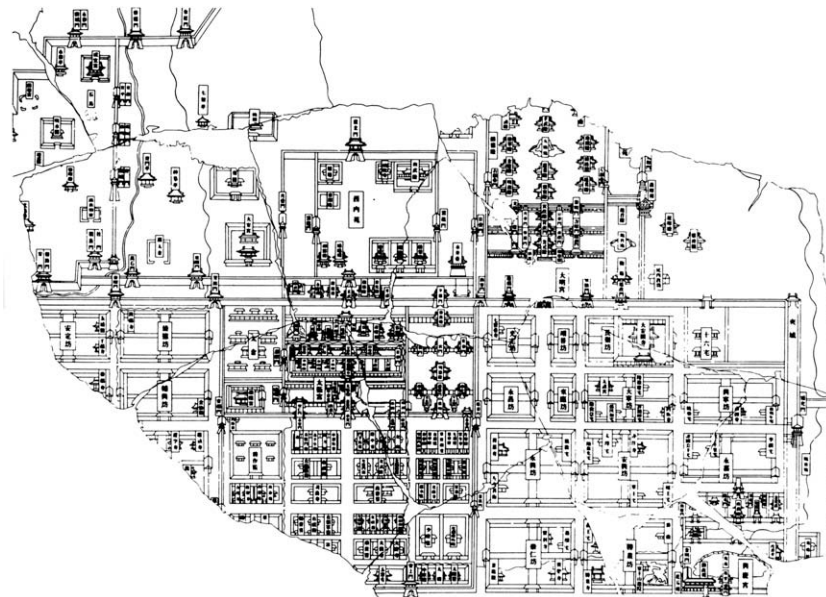


Fig. 5. Portion of Tang period Chang'an (China) from a stone map of A.D. 1080. The rectangular walled areas, called *fang*, were administrative districts; these averaged around 50 ha. in size. Modified after Steinhardt (1990:95, 103).

boundaries, critical to the ward system, lost their significance since the bustling market street became a connector. Shops and houses, instead of walls, were strung together along the street or canal front.” (Heng, 1999:80). Imperial capitals like Kaifeng in the following Song period (A.D. 960–1279) maintained an orthogonal layout and walled districts, but without curfews and closed gates (Heng, 1999:117–182; Kracke, 1975). The fang continued in use as an administrative unit, but with fewer restrictions on the lives of inhabitants than in Tang times.

Neighborhoods are difficult to identify at Chang'an. Documents speak of subdivisions of the fang, and one or more of these units may correspond to the neighborhood as a face-to-face social group. A *li* was an administrative unit consisting of 100 households, under the direction of a headman who administered households, land, taxes, and corvée. A *li* was divided into five *bao*, each with a headman, and a *bao* was divided into five *lin*, each consisting of four households (Heng, 1999:26). The spatial contours of these sub-fang units is not at all clear. If the households comprising a *li* were localized (in one of the fang quarters, for example), then as an administrative unit a *li* can be considered a second level of district. But the *li* also seems the most likely unit to correspond to a neighborhood. So Chang'an may present an unusual case where both the district and the neighborhood had important administrative functions. This only seems possible in a city with strong and pervasive administrative control of its population.

Ilesha (Nigeria, late 19th–early 20th-century; Fig. 6)

Ilesha was the capital of the Ijesha kingdom, a mid-sized Yoruba city-state (Peel, 1983, 2000). The walled city of some 30,000–40,000 inhabitants was laid out around the palace of the king, from which roads radiated out into the countryside. The city was divided into approximately forty named units called *adugbo*, which is usually translated as “quarters.” This case is interesting comparatively because this single unit combined the features and functions of the

neighborhood and the district (the following discussion is based on Peel, 1983:33–36).

In their role as **districts**, the *adugbo* were the primary administrative units of the city. Each had a local head or chief who presided over a council of lesser chiefs. These officials were responsible for maintaining local order, serving as judges, and keeping streets clean and repaired. Prior to European conquest the *adugbo* was a basic unit of military mobilization. These were administrative districts formed by top-down processes from the start. The king made the decision to found a new *adugbo* and invited leading chiefs to settle part of their households in the new quarter, whose boundary was marked off with ropes. The act of founding a quarter was marked by a special sacrifice.

The *adugbo* of Ilesha also served as **neighborhoods** for the urban population. Much interaction took place within the *adugbo*, and these were more important than lineages and kinship in structuring the urban population. Peel notes that, “The quarter, rather than the lineage, was the major unit through which a man was ‘placed’ in Ilesha, the link between the household and the community at large. Its mutualities and services, its role as a unit of mobilization and control, were grounded in co-residence in a defined locality.” (Peel, 1983:35–36). These units were also integrated through ritual; each *adugbo* had a sacred central place on a crossroads, marked by a particular tree, at which sacrifices were made at key times. The map (Fig. 6) shows the location of the named *adugbo*s within Ilesha. Other maps in Peel (1983:33) show that each unit had a chief's residence and/or other civic buildings. The apparent coincidence of districts and neighborhoods at Ilesha is an interesting feature whose origin and significance is not clear.

Addis Ababa (Ethiopia, 1890s; Fig. 7)

For several centuries Ethiopian capitals were moved frequently to new sites, giving them an impermanent quality (Horvath, 1969; Pankhurst, 1979). Addis Ababa was first settled in 1887 as one of

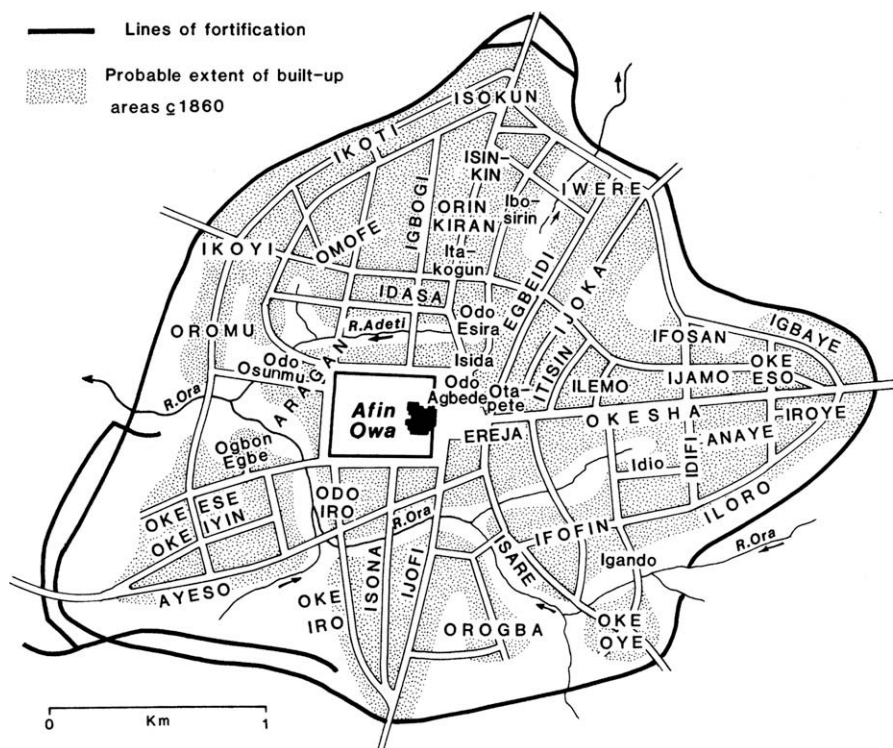


Fig. 6. Ilesha, a Yoruba town in the 19th-century, showing neighborhoods (“quarters”). Modified after Peel (1983:32).

these temporary capitals, but the growing influence and power of European nations in the region led king Menelik II to make it a permanent city. In the years before about 1900, the city still exhibited many indigenous elements of form and organization (Johnson, 1974; Pankhurst, 1985), and I use Addis Ababa here as an example of a low-density city. “Low-density city” is a loose category that describes settlements with urban functions—whether political, religious, or economic—whose population densities are lower than many preindustrial cities. At the time Addis Ababa was mapped in 1897 (Fig. 7), it had a population of around 100,000 living in an area of about 50 square km (Pankhurst, 1985:214), with a density of ca. 20 persons per hectare. Well-studied ancient low-density cities include Angkor (Evans et al., 2007) and the Classic Maya cities (Andrews, 1975; Ciudad Ruiz et al., 2001); Fletcher (2009) provides a comparative analysis of these and other low-density cities in a variety of ancient societies.³

European visitors to Addis Ababa before 1900 were struck by the dispersed and rural-looking nature of the settlement. For example, Percy Powell-Cotton wrote, “Dotted about the plain were clusters of huts, many stockaded enclosures—large and small—and several camps, but all very much scattered and more resembling a collection of villages and farmsteads than the capital of a great empire” (Pankhurst, 1985:213). These clusters of houses, many of which are shown on the 1897 map of the city (Fig. 7), almost certainly served as the **neighborhoods** of early Addis Ababa. The lack of documentation of the social composition of the city prevents firm conclusions, but accounts by travelers and diplomats contain scattered references to some of the social and spatial dynamics characteristic of urban neighborhoods. For example, immigrants arrived and settled near their compatriots (Garretson, 2000:67), and the compounds of important officials were surrounded by the houses of their clients (Gleichen, 1971:157). In Darita, a contemporaneous town with better social documentation, artisans, merchants, and religious groups were all settled by “quarter” (Ahmad, 1989).

The most likely candidates for **district** organization at Addis Ababa are the territories of important officials. Menelik II granted urban land to officials, and some of these grants were quite large. Johnson (1974:128–130) suggests that these grants were in part responsible for the dispersed nature of urban settlement within the city. Gleichen (1971) identified the names of many of these officials and the locations of their compounds on his map of 1897, and Johnson analyzed these data. He identified nine “major leaders” and fourteen “minor leaders” whose estates were scattered throughout the city (Johnson, 1974:88). Although we know next to nothing about the administration of these zones, it seems likely that they functioned in a manner similar to urban districts in other preindustrial cities.

Social districts

In the case studies discussed above, the larger zones are examples of administrative districts. Residential districts without administrative functions seem to be less common, although the bias of documentary records discussed above could very well mask important social districts in preindustrial cities. Robertson (2001, 2005) has identified spatial units at Teotihuacan that he calls social districts, by which he means groups of adjacent neighborhoods

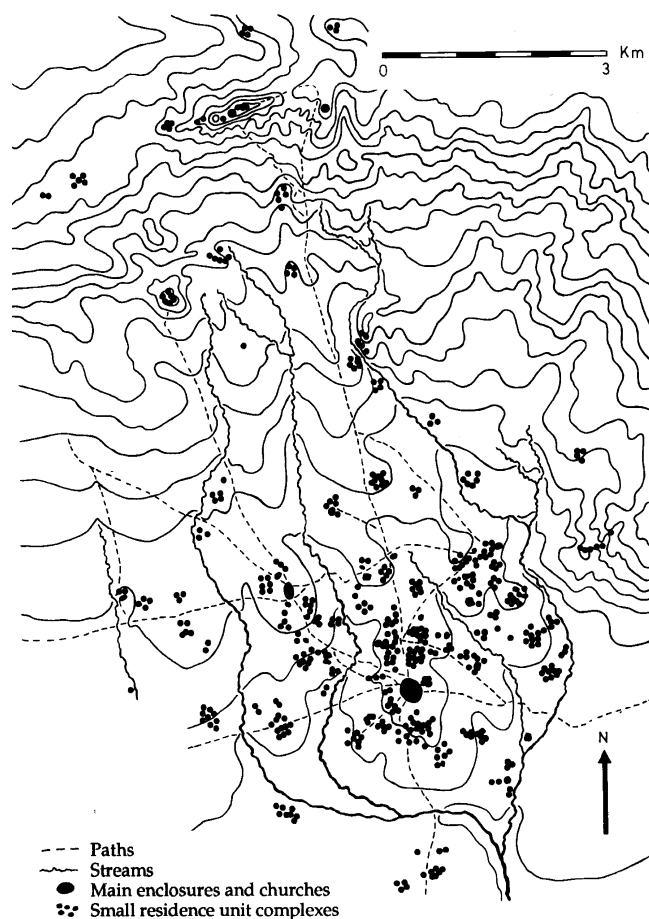


Fig. 7. Addis Ababa, capital of the empire of Menelik II, in 1897 showing the clustered housing typical of low-density cities. Modified after Fletcher (1991:409), based on the 1897 map of Gleichen (1971:endpiece).

with similar social characteristics. For Robertson, a social district is, “a spatial unit that I think has tangible sociological meaning (i.e., a residential zone characterized by neighborhoods with similar social compositions) but which is too large to be reasonably called a neighborhood itself” (Ian Robertson, personal communication, 2008). This corresponds closely to the concept of social district as defined here. Robertson’s analysis of Teotihuacan is discussed more fully below.

The archaeological identification of neighborhoods and districts

Archaeologists typically use a two-step procedure to infer the presence of neighborhoods and districts. First, archaeological remains of residences are examined spatially to search for the existence of spatial zones. If zones can be isolated, the second step is to infer that they correspond to functional zones such as neighborhoods or districts. The simplest form of the second step relies entirely on the spatial data: spatial patterns resembling neighborhoods or districts are interpreted in those terms based on the process of analogy. A more complex version of the second step is to apply non-spatial data (e.g., artifact distributions) to strengthen the inference and to investigate the nature of the identified zones.

Urban spatial zones can be identified from material remains in three principal ways:

1. areas bounded by physical features (natural and/or human-constructed);

³ The concept of low-density city requires more attention from archaeologists and other scholars of urbanism. Those who adhere to the demographic definition of cities typically deny urban status to this kind of settlement (e.g., Sanders and Webster, 1988). Issues of classification are less important, however, than the analysis of varying forms of ancient settlement and their social and environmental interactions. The greatest headway in the comparative and theoretical study of low-density cities has been made by Fletcher (1995, 2009). Recent fieldwork at ancient low-density cities of the Maya and other groups should permit new advances in this area.

2. areas of social distinctiveness;
3. spatial clusters of buildings or spaces.

In addition, a common archaeological procedure is to discuss neighborhoods without actually isolating them on the ground:

4. assuming the existence of neighborhoods or districts.

In practice, archaeologists often use a combination of these methods to identify and study social zones in ancient cities. I first review historical and ethnographic data on these methods, and then I mention some cases in which archaeologists have used these methods for the study of ancient urban neighborhoods and districts.

Areas bounded by physical barriers

Two types of physical barriers can serve to delimit neighborhoods and districts within cities: constructed components of the urban built environment—such as walls, avenues, or canals—and attributes of natural physiography such as rivers or ravines. The latter category will be discussed in the following section on spatial clusters. Physical barriers are common in Chinese imperial capitals and Islamic cities in the Ottoman and recent periods. As noted above, in Tang Chang'an it appears that districts were walled administrative units, with movement and activities controlled by gates and guards.

Neighborhoods in many Islamic cities were also clearly delimited by features of the built environment. Unlike the Chinese case, however, these divisions were established and maintained by neighborhood residents, not civic authorities. The irregular plan of Islamic neighborhoods (Fig. 8) is one of their most notable features. Neighborhoods were closed off with gates and doors built by residents for purposes of security. In the modern world, deliberate neighborhood bounding by features of the built environment is most common in the “gated communities” built as planned neighborhood units (Grant and Mittelstadt, 2004); these are classified as “artificial neighborhoods” in the classification of Suttles (1972). Walled residential compounds were a common urban feature in the ancient world (Marcus, 2009), and in many cases these may have corresponded to social neighborhoods. Whether a bounded area at an archaeological site is interpreted as a neighborhood or a district will depend on the size of the unit and the

presence of civic architecture or features suggesting administrative functions.

Areas of spatial or social distinctiveness

In many historical and modern cities, neighborhoods are not clearly separated from one another spatially; that is, they are not physically separated by barriers or open spaces. The residents of neighborhoods, however, often share one or more social attributes such as race, ethnicity, class, religion, occupation, or political affiliation (e.g., Garrioch and Peel, 2006; Greenshields, 1980). These social parameters of neighborhoods are discussed in more detail below; here they are considered for their role in generating social similarities among neighborhood residents. These similarities may translate into shared patterns of material culture, whether in the form of housing, foodways or material possessions. Archaeologists can use this characteristic, as outlined above in the example of Ilesha, to identify spatial zones corresponding to neighborhoods and districts.

In this approach to zone definition, it is not necessary that the areas exhibit homogeneity in either the social or material realm. Instead, the requirement is that the social composition of areas translates into identifiable material culture patterns. In many cases, such patterns will be complex and perhaps methodologically difficult to isolate (see the example of Teotihuacan, discussed below). As in the case of physically bounded areas, the interpretation of a residential zone as a neighborhood versus a district will depend on the size and architectural composition of the zone.

Spatial clusters of buildings

In a formal spatial sense, the use of spatial clusters of residences to identify zones is equivalent to the use of physical barriers: in both cases zones are isolated as spatially identifiable yet separated residential areas within a city. Based on the assumption that spatial distance is inversely correlated with social interaction, it is not unreasonable to infer that discrete spatial clusters of houses were the setting for a degree of social interaction and differentiation consistent with the presence of urban neighborhoods. The spatial clustering approach is singled out here because of its relevance for the study of neighborhoods and districts in low-density cities such as Addis Ababa (see above) or the Classic Maya cities (Arnauld, 2008).

Aztec cities in central Mexico furnish a case in which house clusters can be confidently identified as neighborhoods, which

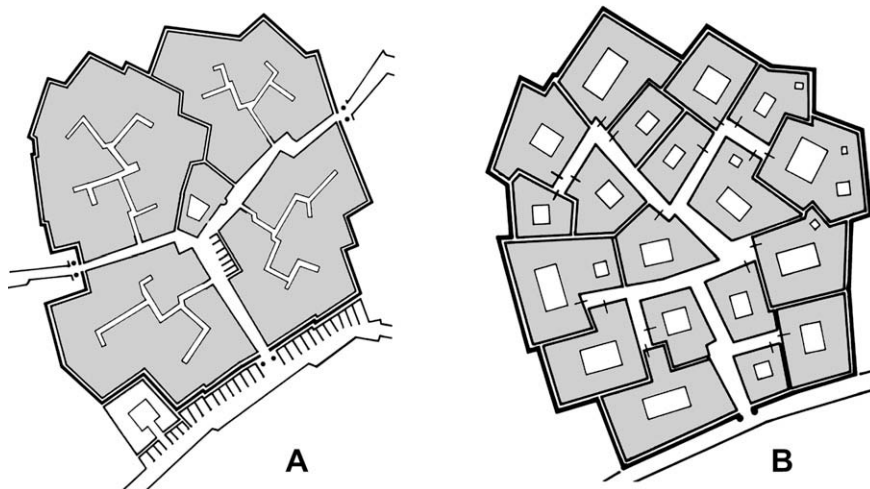


Fig. 8. Schematic representation of neighborhoods in modern Fez (Morocco). A: neighborhoods and streets; B: composition of a neighborhood. Modified after Bianca (2000:39).

were in turn grouped into districts. The site of Cuexcomate (Fig. 9) was a small town whose houses were arranged in several clusters (Smith, 1992). The numbers of houses in these clusters, and their general spatial arrangement, correspond closely to the small calpolli, a social unit described in detailed census documents from immediately after the Spanish conquest (Friedman, 2009; Smith, 1993). In this part of central Mexico, small calpolli were in turn grouped into larger units also called calpolli in the documents. These large calpolli were centered on the household of a powerful noble to whom the commoner residents owed labor service, rent, and other payments. Again, the size of the entire site of Cuexcomate (ca. 150 households), and its spatial and social composition, match closely the large calpolli of the documents.

As discussed at greater length elsewhere (Friedman, 2009; Smith, *in preparation*), the small and large calpolli served as neighborhoods and districts in Aztec cities and towns. In addition to the spatial congruence of these units and house clusters at Cuexcomate, documents from other areas of Aztec central Mexico indicate that the small calpolli were face-to-face social groups with common obligations in terms of taxation and other services to nobles and the state. The large calpolli was also a unit of taxation, and in addition to residences it typically had one or more noble residences, a temple, plaza, and other civic buildings (the large buildings in the center of Cuexcomate include a temple, two elite residences, and at least one special-purpose buildings; see Fig. 9).

Although the population density of Cuexcomate—ca. 50 persons per ha—was quite a bit higher than Addis Ababa, there was still considerable open space within this and other Aztec urban settlements (Smith, 2008); this contrasts greatly with the Aztec imperial capital Tenochtitlan, whose population density was over 150 persons per ha. The notion of house clusters as urban neighborhoods is one of the contributions archaeology can make to documenting the range of urban forms that have existed since the Urban Revolution.

Assuming the existence of neighborhoods

A number of archaeological discussions of “neighborhoods” in ancient cities do not involve the material identification of neighborhoods or districts as discussed above, but rather rely upon a series of assumptions that generate interpretations of social conditions in different residential zones. The first assumption is that the city in question must have been organized into

neighborhoods or districts. Building on this base, a second assumption is that houses or contexts excavated in different parts of the city most likely belonged to different residential zones. A third assumption is that such residential zones were socially homogeneous, and thus social conditions as identified at the excavated contexts can stand for the social conditions of entire zones; this assumption permits comparisons among neighborhoods or districts. Examples of studies using this approach include Stone (1987), González Licón (2009), Cabrera Castro and Gómez Chávez (2008), and Healan (2009).

This is a far less reliable procedure for analyzing ancient urban residential zones than the three methods discussed above. The three assumptions of this method become less plausible along the chain of inference; while it may be eminently reasonable to assume that a large and densely populated city was organized into neighborhoods, it is much more difficult to be confident that differences between individual excavated structures can stand for differences between neighborhoods. Nevertheless, given the logistical difficulties in sampling urban archaeological sites with excavation, this procedure may be the only way to analyze neighborhoods and districts in many ancient cities.

If archaeologists are unwilling to assume neighborhood homogeneity, how can they improve the strength of inferences from individual excavated houses to entire neighborhoods when the latter have not been independently delineated? First, the amount and quality of available residential data are important factors. In Nippur, for example, the two excavated areas compared by Stone (1987, 1996) are each represented by a group of adjacent houses, and those areas have identifiable social differences as measured by both archaeological and textual data. As a result, the assumption that she is comparing neighborhoods seems reasonable. Second, it may be possible to identify neighborhoods provisionally on the basis of surface traces, giving excavated houses within those zones a higher level of representativeness. This has been the procedure for some of the proposed residential zones at Teotihuacan, where the social conditions of excavated houses line up well with expectations based on prior analyses of surface artifacts (e.g., Widmer and Storey, 1991).

Archaeological examples

In this section I review a selection of case studies to illustrate how archaeologists have used the methods outlined above—often

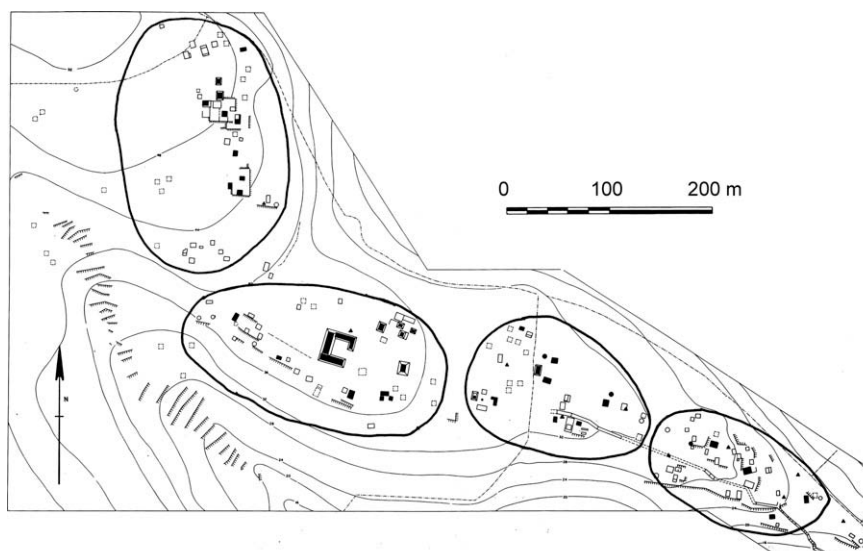


Fig. 9. House clusters at Cuexcomate, an Aztec Town. The clusters represent small calpolli (neighborhoods) and the entire site a large calpolli (district). Map by the author.

in combination—to study ancient neighborhoods and districts. I focus on Mesopotamia and Mesoamerica, the ancient urban traditions in which the topic of neighborhoods has seen more attention than in most other regions. This review is not meant to be exhaustive, but rather illustrative in nature.

Mesopotamia

As a region with early extensive excavations of urban residential zones, it is not surprising that Mesopotamian cities have seen more attention to their neighborhoods and districts than cities in most other areas. Leonard Woolley's plans of residential zones in the Old Babylonian levels of Ur (Fig. 10) have been much discussed in terms of urban neighborhoods (Keith, 2003; Van De Mieroop, 1992). Stone's (1987, 1996) analysis of neighborhoods at Nippur (mentioned above) is one of the most complete analyses. Two areas of crowded urban housing—called TA and TB—were completely excavated and mapped, and cuneiform documents provide information on their inhabitants and some of their legal dealings. Each zone seems centered on a central institution: a prominent family that lived in TA and a temple or palace whose workers lived in TB. Subtle differences in architecture and social factors lead Stone to conclude that, "The differences which distinguish TA from TB are precisely those which defined neighborhoods in Islamic cities" (Stone, 1987:126).

Keith (1999) analyzed archaeological and documentary data from Ur, Nippur, and a number of other cities from the Old Babylonian period; these data are synthesized in Keith (2003). She concludes that the presence of neighborhoods can be inferred at most of these cities. Each neighborhood had a variety of services and facilities (chapels, bakeries, shops, taverns, and craft workshops) so that residents could take care of most of their needs locally. Occupations were evidently not clustered in these neighborhoods, however. Marc Van de Mieroop (1992) takes a more cautious approach, pointing out the difficulties of clearly identifying neighborhoods or districts at Ur (Fig. 10). Given the abundance of extensively excavated residential areas in the ancient cities of southern Mesopotamia (e.g., Hill, 1967; Rainville, 2001; Stone, 2009; Stone and Zimansky, 2004), this region has tremendous potential for research on neighborhoods and districts.

Mesoamerica

In Mesoamerica, research on urban residential zones has developed out of a long tradition of household-level research, and neighborhood analysis is now becoming an active area of research (e.g., Friedman, 2009; Manzanilla and Arnould, in preparation; Manzanilla and Chapdelaine, 2009; Robertson, 2001). Whereas most of the work in Mesopotamia has been focused at the level of the neighborhood, the district has received much of the attention in Mesoamerica. Unfortunately, the near-universal use of the inappropriate Spanish term "barrio" for both neighborhoods and districts hampers comparative analysis.⁴ In this section I present several examples of Mesoamerican research on neighborhoods and districts.

Neighborhoods at Classic Maya cities have received little attention from archaeologists, perhaps because of the lingering

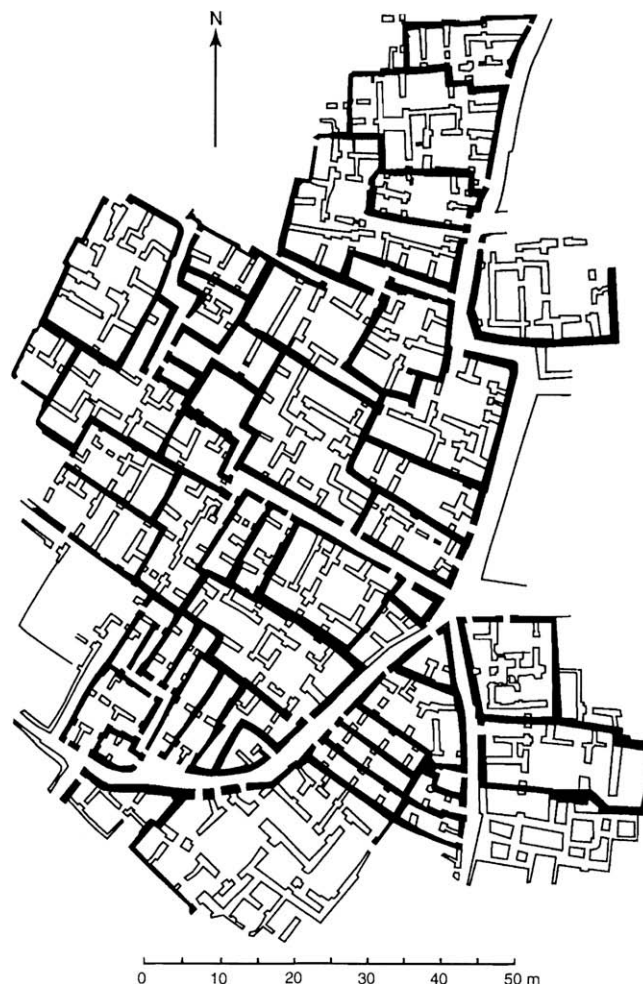


Fig. 10. Old Babylonian residential zone at Ur. Modified after Keith (2003:67).

adherence to the now-outdated view that Classic Maya centers were not "real" cities. Cynthia Robin (2003) is one of the first archaeologists to propose that neighborhoods existed at Maya cities, and that they could be identified and studied by archaeologists. Mayanists have long analyzed settlement patterns in terms of five hierarchical levels: the house, patio group, cluster, minor center, and major center (Ashmore, 1981a; Bullard, 1960). The relevant levels for present purposes are the cluster and the minor center. Clusters consist of a number of houses and patio groups located near one another. Fig. 11 shows an impressionistically-defined cluster in one of the transects at Tikal mapped by Dennis Puleston (1983). On the basis of general analogy with historical cities such as Addis Ababa, and specific comparisons with Aztec settlement data, Classic Maya house clusters can be interpreted as urban neighborhoods (Friedman, 2009). This approach has been suggested by Charlotte Arnould (2008:13–14). Maya clusters have yet to be subjected to a systematic and comprehensive analysis.

The next higher level of settlement patterning at Maya sites is the "minor center." Minor centers are groups of one or more house clusters centered around a modest complex of civic architecture (Ashmore, 1981b; Bullard, 1960). In their layout and composition, Maya minor centers are equivalent to the Aztec large calpolli (Fig. 9). Some minor centers constitute individual settlements, whereas others are components of larger settlements (major centers, or cities in current terminology). Following the same logic as in the cluster-calpolli-neighborhood association for Aztec settlements, those minor centers that are parts of cities can be

⁴ The conquering Spaniards used the term "barrio" for both urban neighborhoods and rural villages. Because this usage corresponds to the indigenous concept of calpolli, it might be considered an apt term for ancient neighborhoods. Nevertheless, a much more common usage of the term "barrio" today refers to modern Mesoamerican peasant villages (Mulhare, 1996; Thomas, 1979). Several centuries of state and urban domination have made Mesoamerican peasant barrios quite different from Prehispanic urban neighborhoods (or rural villages, for that matter), and thus the use of the term "barrio" for Prehispanic units is imprecise at best, and inappropriate and misleading at worst. For discussion, see Smith (in preparation).

interpreted as urban administrative districts. The civic architecture at the heart of the minor center was probably the setting for administrative activities that integrated the district.

On the basis of a program of intensive surface collection and mapping at the Epiclassic period (AD 600–800) hilltop city of Xochicalco in central Mexico, Hirth (2000:234–239) identified fourteen residential zones that he calls “wards” and “ward subdivisions” (Fig. 12). These were identified on the basis of features of the natural and built environments that impeded movement within the city, such as ravines, ditches, defensive walls, walled causeways, and steep terrace walls. When Hirth plotted the distribution of civic architecture outside of the hilltop epicenter, he found that all but one of his fourteen zones contained one or more temples or civic structures (Fig. 12). These units correspond to districts as defined in this paper. In a recent paper, Hirth (2009) compared the distribution of obsidian tool workshops to his map of districts, and found a lack of spatial association between the two. This suggests to him that “(1) artisans did not collaborate in corporate craft activities outside the household, and (2) a craft guild did not exist at the barrio [ward or district] level.” (Hirth, 2009:58). In both of these works, Hirth compares the Xochicalco data to the Aztec calpolli as described in documentary sources.

Quantitative spatial research at Teotihuacan illustrates the use of sophisticated spatial analytical methods to isolate residential zones on the basis of surface artifact distributions. Millon (1973:40) initially suggested that the city was most likely divided into social neighborhoods, but it proved difficult to identify these on the ground. Distribution maps of various artifact types produced suggestive patterns but little clear evidence for the artifactual differentiation of spatial zones (Altschul, 1987; Cowgill et al., 1984). In order to move beyond these studies, Robertson (2001, 2005) employed a more complex procedure. He first employed cluster analysis of surface artifact types to isolate groups of artifact types with a functional relationship to one another. Spatial attributes were not included in this stage, and the resultant artifact-based clusters of surface collections (termed “A-clusters”) were widely scattered across the surface of Teotihuacan. Robertson next isolated a second set of clusters (termed “N-clusters”) by k-means clustering that tied the artifact data to spatial locations. The members of the N clusters showed similar mixtures of artifact collection types and exhibit a high degree of spatial autocorrelation. Robertson infers that these spatial units correspond to social districts. Robertson’s study should caution archaeologists that a simple

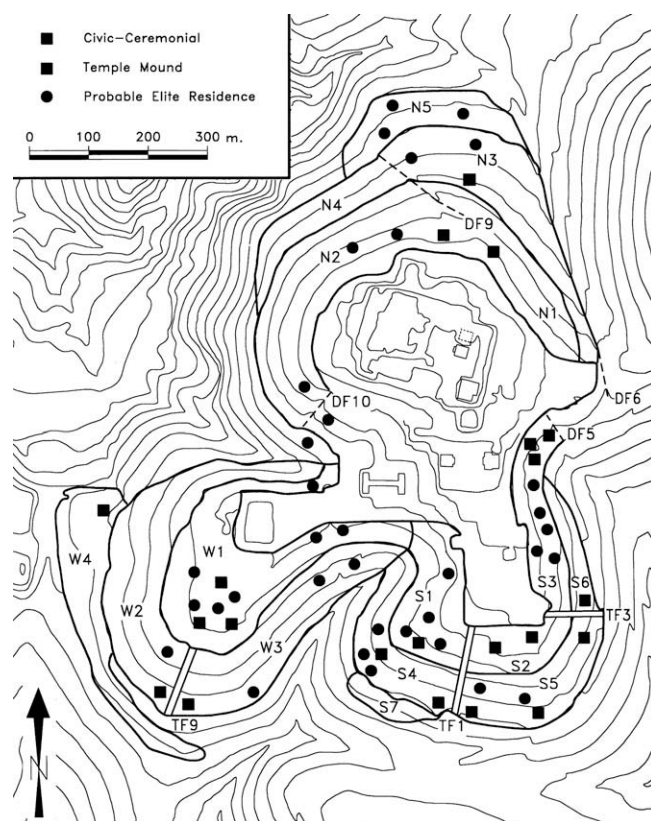


Fig. 12. Residential districts at Xochicalco. From Hirth (2000: 238).

inspection of distribution maps of individual artifact types may not be sufficient to identify meaningful spatial zones in ancient cities.

In a separate series of analyses, several archaeologists had previously identified foreign enclaves at Teotihuacan; these are perhaps the best documented urban neighborhoods in ancient Mesoamerica. The so-called “Oaxaca barrio” stands out at Teotihuacan on the basis of a variety of clear material markers of Oaxacan or Zapotec ethnicity (Rattray, 1993; Spence, 1992), and several other ethnic enclaves have been proposed for Teotihuacan as well (Rattray, 1989).

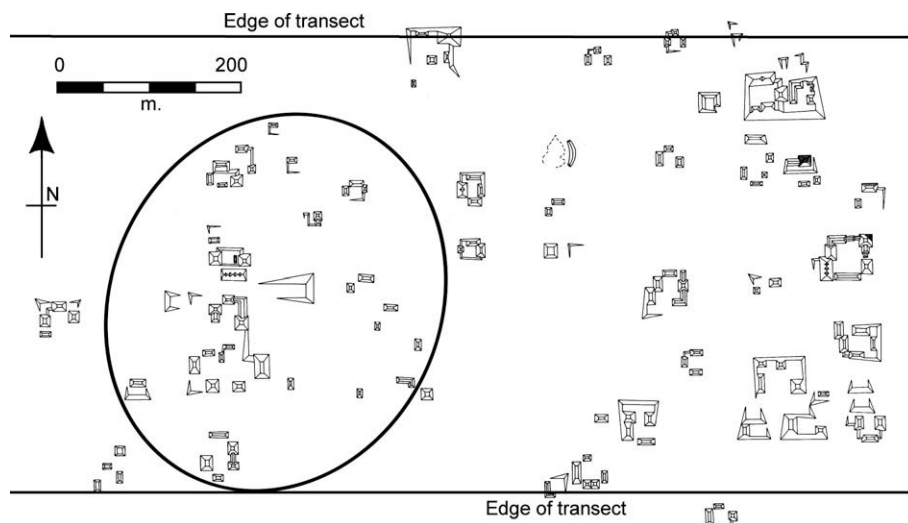


Fig. 11. Cluster of houses at the Classic Maya city of Tikal, Guatemala. Such clusters probably correspond to urban neighborhoods. Modified after Puleston (1983:Fig. 2h).

Social clustering by neighborhood and district

My focus up to this point has been on issues of definition and identification for urban neighborhoods and districts. Once archaeologists or historians have inferred the presence of these units in past cities, a number of important social topics can be explored. In this section I briefly outline the nature and extent of urban social clustering, and in the following section I examine the roles of top-down and bottom-up forces in generating the contours and changes in social zones.

The social composition of neighborhoods is one of their most interesting features in cross-cultural perspective. Sjöberg (1960:95–103) suggested that preindustrial neighborhoods frequently contained heavy or exclusive concentrations of single ethnic groups, social classes, religions, or occupations. Although uniform, homogeneous neighborhoods seem to be a rare occurrence, spatial clustering of social parameters by neighborhood is commonly observed in cities both ancient and modern (York et al., in preparation).

The segregation of urban populations by **ethnicity** is quite common cross-culturally. A major reason for this in preindustrial cities is that many urban populations are maintained by migration, and migrants tend to settle in areas where their kin or other associates live. Ethnologist Beals (1951) noted this tendency for modern cities over 50 years ago: “It is a fairly well established dictum of urban studies that people tend to settle among their own kind.” Ethnic neighborhoods in Near Eastern cities are discussed by Greenshields (1980), who emphasizes the dynamism and diversity of processes that create and maintain ethnic neighborhoods. Ethnic neighborhoods should not be seen as ancient primordial features maintained by tradition; rather they are the setting for diverse processes (discussed more fully below) that actively create and maintain their social distinctiveness. Ethnographic and historical studies suggest that ethnic zones or enclaves may be more common at the level of the neighborhood than the district.

Cities in religiously plural preindustrial societies typically exhibit spatial segregation by **religion**. This situation is particularly well documented for Jewish, Muslim, and Christian groups in Near Eastern cities (e.g., Marcus, 1989; Raymond, 2005; Stillman, 1995) and for clustered Jewish communities within European cities (Haverkamp, 1995; Reisz, 1991). The extreme example was (and is) Jerusalem (Kark and Oren-Nordheim, 2001). In areas with low levels of religious pluralism, this is not likely to be an important social parameter for neighborhood clustering.

Neighborhood specialization by **occupation** is quite variable across time and space. One urban tradition particularly noted for the spatial segregation by occupation is medieval Europe (Lilley, 2002; Nicholas, 1997). As noted above, in Marseille there was a clear concentration of crafts by neighborhood, although few neighborhoods were home to only a single craft, and few crafts were limited to a single neighborhood (Smail, 2000). A similar pattern seems to characterize other medieval towns (Slater, 1989), although some authors have claimed that concentrations of occupations within Medieval towns “rarely occurred” (Denecke, 1988:131). Papers in Béal and Goyon (2002) describe numerous cases of the spatial clustering of artisans in the ancient cities of the Old World.

Many preindustrial cities show a broad zonation of **wealth and status** that does not map easily onto districts or neighborhoods. Sjöberg’s concentric model (Fig. 1) provides a rough approximation for wealth distribution in many cities. For example, in Bhaktapur members of high-ranking castes live in a zone surrounding the palace, whereas lower-ranking caste members are distributed in a concentric band outside of this zone. These status zones, however, cut across the districts and neighborhoods of the city (Gutschow

and Kölver, 1975:34, 49). Not surprisingly, one case where wealth and status variation maps closely onto administrative districts is Chang’an (Xiong, 2000:217–234).

The degree of homogeneity in the above social parameters within neighborhoods and districts is a question that needs attention, both methodologically and empirically. Many scholars seem to hold an ideal model that involves homogeneous spatial zones within cities. When the situation turns out to be more complex (as described above for crafts in Marseille, for example), some authors conclude that there are no spatial patterns at all (e.g., Alston, 2002; Arnold and Ford, 1980). Yet if neighborhoods are socially diverse areas, then it is unrealistic to look for uniform distributions of material culture. We badly need more cases with quantitative data and better spatial analytical methods to investigate the degree of social clustering in past and present cities.

York et al. (in preparation) describe preliminary results from an on-going cross-cultural and cross-temporal analysis of urban neighborhoods and social clustering. Not surprisingly, they find a high level of variation in the extent and nature of social clustering within cities, including variation within particular urban traditions and regions. That is, there is no single pattern of clustering (or lack thereof) within categories such as Medieval European cities, Classic Maya cities, European colonial cities, or modern US cities. These authors identify a number of forces that generate and influence urban social clustering, and in the following sections I review some of these under the labels of “top-down” and “bottom-up” processes.

Bottom-up and top-down processes

Introduction

The case studies discussed above show clearly that a diversity of social processes are typically responsible for the creation and maintenance of individual neighborhoods and districts, and for changes in these parameters. The forces that generate change in social zones can be divided into two categories: bottom-up processes—the actions of individuals and households—and top-down processes—the actions of civic authorities. This distinction is important in the literature on urban planning, where it is sometimes phrased in terms of formal vs. informal processes or planning (Briassoulis, 1997; Uzzell, 1990), or master planning vs. generative processes (Hakim, 1986).

Although urban neighborhoods are always characterized by some mixture of top-down and bottom-up processes, their relative salience varies widely among cities (and through time), with important social implications for residents. Fortunately for archaeologists, the two types of process often have distinct spatial expressions in the built environment. In the following sections, I briefly review some of the more common examples of top-down and bottom-up processes that most strongly impact the forms and social dynamics of urban neighborhoods and districts in preindustrial cities. Saunier (1994) calls urban spatial zones created by the former kind of process *decoupages officiels* (official divisions), and those created by the latter kind of process *decoupages communs* (shared or common divisions); he uses the term *quartier* for both.

Bottom-up processes

It is generally agreed that the dynamics of local, face-to-face interaction are primary in shaping the growth and contours of urban neighborhoods. Jamal Akbar phrases it this way for early Islamic cities:

Putting all these pieces together we may conclude that all the decisions in these towns were made by the inhabitants, with no intervention from the central authority. Shared places such as forecourts, squares, streets, and culs-de-sac within the *khitta* [a new settlement area] were collectively owned and controlled. The town thereby became a series of adjacent properties controlled by its users, suggesting that the morphology of these towns came about as the result of the many small decisions made by the settlers themselves.” (Akbar, 1989:29)

But why did neighborhoods form as they did, and how are they maintained over time? A possible answer is given by Greenshields in his isolation of two forces that create and maintain ethnic neighborhoods:

1. Help given by established migrants in finding homes and jobs for immigrant relatives and friends near their own dwellings.
2. Maintenance of ethnic solidarity as a form of migrant adjustment to urban life (Greenshields, 1980:133).

Migration is a key force in the creation and maintenance of urban neighborhoods. Preindustrial cities had a poor balance between mortality and fertility, and could not maintain their populations without continual migration from the countryside (McNeill, 1976; Storey, 2006). In many documented cases, migrants tend to cluster in specific neighborhoods (e.g., Abu-Lughod, 1969; Sutton, 1983), as suggested above by Greenshields. The fact that urban migrants often maintain strong social ties to their rural village of origin (Lewis, 1952; Simic, 1973) contributes to the continuing maintenance of neighborhoods with distinctive social attributes.

Another relevant bottom-up process is a sense of community and personal identification with one's neighborhood. Comparative data suggest that the notion of neighborhood identity (or the related concept, “neighborhood attachment”) is a common, perhaps universal, attribute of neighborhoods cross-culturally. Neighborhood identity is reported in ethnographic studies of nonwestern cities (Mills, 2004), in documentary analyses of preindustrial cities (Marcus, 1989; Smail, 2000), and in sociological research on modern industrial cities (Greif, 2009). The topic of identification with one's district may be more variable. As noted above, Smail's data make it clear that the residents of Marseille showed little identification with their sixtain, in contrast to other medieval and renaissance towns, where such identification has been identified (Kent and Kent, 1982). Residents of Bhaktapur similarly show a sense of allegiance and identification with their *twa*: (this is the district level of *twa*: Levy, 1990).

In many urban neighborhoods, people design and build their own houses. When this pattern is combined with the founding and expansion of neighborhoods outside of the domain of central planners, the result is another example of bottom-up neighborhood processes that can be documented archaeologically (Figs. 8–10). In the contemporary world, this process is most visible in the informal, spontaneous settlements that surround many cities (Neuwirth, 2004; UNCHS/Habitat, 2003). According to some scholars (Hardoy, 1982; Kellett and Napier, 1995), such informal housing was also prevalent in ancient cities, a theme I explore elsewhere (Smith, *in press*). For present purposes, the important observation is that unplanned urban residential zones provide clear spatial evidence for the operation of bottom-up processes on the neighborhood level.

Top-down processes

Some planners have argued that social clustering in cities is always the result of state policies. Peter Marcuse, for example argues that “The state has been decisive in creating, maintaining,

or destroying partitions in all periods, but the state has been itself the decisive power in earlier periods” (Marcuse, 2002:31). His colleague, Ronald Van Kempen provides a similar perspective: “Cities are not ‘naturally’ divided: they are actively partitioned. There are those that do the partitioning, and those that are subject to it” (Van Kempen, 2002:50). This interpretation, however, ignores rather abundant evidence for bottom-up forces in generating social clustering and urban social divisions (see above).

By definition, administrative districts arise and are maintained through (top-down) processes of administration. Sometimes these forces are secular in nature (e.g., Marseille and Addis Ababa), and sometimes religion plays a major role together with secular administration (e.g., Chang'an, Bhaktapur, and Ilesha). The weight of top-down forces were particularly great in Chang'an, where the whole city was designed and built to a common cosmological-administrative plan. Once built, the hand of administration continued to rest heavily on urban residents with the system of closed and regulated districts. In other areas, cities like Marseille or Bhaktapur were founded and grew with much less political direction, and when administrative boundaries were drawn, they tended to follow the street layout of the city. As noted above, the presence of a consistent type of civic building or complex is often the best archaeological evidence for the presence of administrative districts in ancient cities.

Janet Abu-Lughod discusses how the relationship of Islamic neighborhoods to the outside world changes with the waxing and waning of external political power:

Historically, in Arabo-Islamic cities, the neighborhood has been in dialectical process with the external society. When central power was strong and when the city-wide hierarchical structure was working smoothly, agents of the central administration operated within the neighborhoods to provide information to the center and ensure conformance with central directives . . . Sometimes, the neighborhood was an administrative subset of the state.

More often, however, the quarter played the opposite role, that of a defended neighborhood, particularly when chaos reigned. One reads, in the historical accounts, of civil strife/invasions/street battles, the recurring phrase, “and people closed the gates to their *harat*” [neighborhood]. Alternatively, to gain control over the city, conquerors always had to destroy the gates to the *harat*, as Napoleon's forces did when they invaded Cairo. (Abu-Lughod, 1987:171)

Stability and change in neighborhoods and districts are always balanced between external, top-down, forces and internal, bottom-up dynamics. Just as the relative importance of these processes can vary over time within individual cities or urban traditions, so too can their balance vary synchronically among cities and urban traditions.

Conclusions

Neighborhoods and districts have always important components of cities, from Uruk to Brasilia, and their analysis can shed light on a wide range of urban issues, from demography to ethnicity to crime. The comparative literature on modern and historical urban residential zones provides a conceptual framework that can guide archaeological research. As more attention is given to neighborhoods and districts by archaeologists, our methods and interpretations will improve, leading to a richer understanding of the nature of past urban processes.

The arguments for an increased attention to ancient neighborhoods and districts go beyond archaeology and history,

however. These concepts play prominent roles in research on contemporary urban issues. For example, neighborhoods have measurable effects on crime, poverty, segregation, and other urban processes (Sampson et al., 2002). Neighborhoods also contribute to the creation, maintenance, and expression of cultural and social diversity within cities, and some scholars are now turning to pre-modern and nonwestern cities and their neighborhoods to help understand the modern, western situation (Briggs, 2004; Grillo, 2000; York, et al., in preparation). The concept of neighborhood-as-community, which plays a prominent role in current planning theory (Chaskin, 1998; Congress for the New Urbanism, 1996; Talen, 2006), is based in part on untested assumptions about the social composition and processes of premodern neighborhoods. An improved archaeological understanding of ancient urban neighborhoods has the potential not only to illuminate past urban processes, but also to contribute data and concepts to scholarship on comparative urbanism and the roles of cities in modern life.

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