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The Social Production of Space in Third-Millennium Cities of Upper Mesopotamia

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This chapter analyzes the production and construction of space in third-millennium cities of Upper Mesopotamia. I argue that space is constructed at multiple levels, including city or state government, institutions, developers, and households. Past planning episodes structure future life in the city, but are also modified to meet the needs of later residents. Within this process, I identify several characteristics of Mesopotamian city space, including a high level of nucleation, multiple centers within the city, defensible spaces such as culs-de-sac, conservative use of space, and linkage of key features into a system of armature. These features demonstrate how the social needs of residents are expressed in the fabric of the city. In these features, we see urban planning that is not strictly top-down or bottom-up, nor solely planned or organic.

In this chapter, I explore several aspects of urban space in third-millennium Upper Mesopotamian cities. These cities developed between 2700–2200 BC when a second wave of urbanism spread cities and city-states across Upper Mesopotamia (Figure 2.1) (for a fuller discussion of the city-state system, see Nishimura, Chapter 3 in this volume).¹ The size of these states is variable, but based on some of the better-known examples, they may have had core territories² of approximately 1,000 km² and extended political territories up to 5,000 or 10,000 km². The largest urban centers were 35–125 ha and hosted 10,000–25,000 people.³ The primary subsistence base of these polities was dry-farmed barley supplemented by milk or meat from sheep, goats, cattle, and pigs. Production of textiles and metals, along with trade, were also important parts of the economy (Stein 2004). Urban administration consisted of palace and temple households, as well as city councils comprised of elders or other representatives of various groups within the city. The degree of power sharing among these groups is unclear and may have varied over

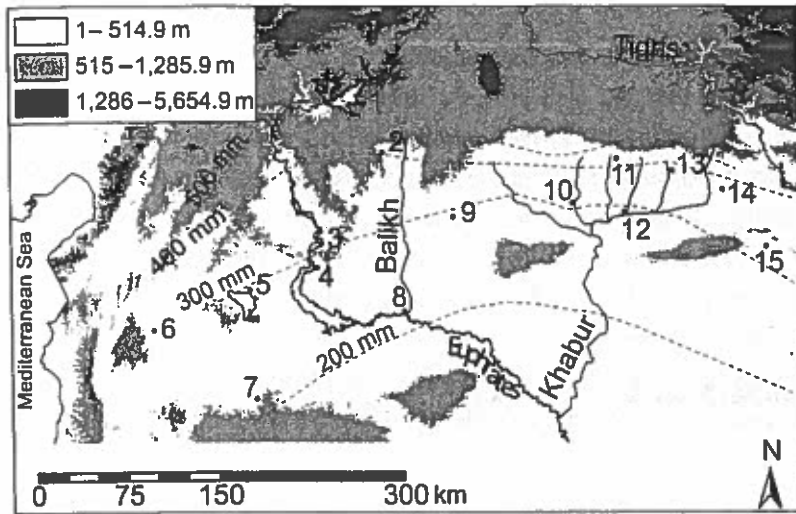


Figure 2.1 Topography, rainfall isohyets, and selected third-millennium sites in Upper Mesopotamia. 1-Titriş, 2-Kazane, 3-Banat, 4-Sweyhat, 5-Umm el-Marra, 6-Ebla, 7-Al-Rawda, 8-Bi'a, 9-Chuera, 10-Beydar, 11-Mozan, 12-Brak, 13-Leilan, 14-Hamoukar, 15-Taya. (Modified from Creekmore 2010; for a fuller list of cities, see Nishimura, Chapter 3 in this volume, Figure 3.1).

time (Cooper 2006b:63–66; Durand 1989; Fleming 2004). An analysis of urban space provides insight into how these groups negotiated the complex process of making cities.

I examine several features or factors in the generation and use of city space, including city shape, accessibility, nucleation, multiple centers, conservative development, defensible space, parceled lots, and armature, or the linkage of important monuments across a city (MacDonald 1986:5). My goal is to broaden our understanding of how these cities form and the roles of different social groups in making cities. Accordingly, I review specific cities that serve as examples of each feature or factor and infer the motivations behind the creation and use of different kinds of city space. I argue that the process of urbanization is best understood through a life-history approach that considers the social production and construction of space. As defined by Setha Low and employed by many scholars, the *social production* of space includes the processes that generate the tangible portions of city-space, such as buildings, streets and other physical features whereas the *social construction* of space is human behavior that transforms space into historically contingent place through the actions of people in their everyday lives, often over long periods of time (Anderson and Gale 1992:4; Gillespie 2000; Hodder 2007:22; Low 2000:127–128; Tringham 2003:94–95; Pred 1984:279; Rodman 1992; Verhoeven 1999:20). These concepts describe the urban process that forms the life history of a city, and acknowledge that cities are not static or fully formed, but always in motion, changing over time

through dynamic human activities (Soja 2000:9). By examining the production and construction of urban space, we can identify vectors of growth and decline and the structuring impact of past spatial decisions on future residents. This approach views cities as "lived spaces" from which we can compose stories or histories (Soja 1989:14, 2000:11; de Certeau 1998:142). Over time, local planning episodes, combined with mid-level and centralized planning, create a collage of urban spaces.

URBANIZATION AND URBAN SPACE

The plans of ancient cities show how the population, institutions, and industries were distributed within them. From the spatial relationship between these and other urban features we can infer aspects of socioeconomic and political organization. The urban plan also provides clues to how urbanization took place, the role of the central authority, major institutions and "everyday" residents in this process, and how the city changed over time. In this context, "plan" refers to the physical relationship between structures, streets, and features – such as open areas – within the city. An orthogonal urban plan is generally considered the hallmark of a planned city whereas anything less than orthogonal is deemed "organic," that is, natural, emergent, irregular, and unplanned (Castagnoli 1971:124; Smith 2007:5).

In general, evidence for orthogonal planning is assumed to reflect decision making and funding at the highest level of city governance. In contrast, "organic" or unplanned urban growth is deemed to reflect the spontaneous activities of multiple households and institutions in the city. Adam Smith (2003:225) argues that this view of urban planning implies that western notions of rectilinear planning are the ideal when, in fact, "curvilinear" planning may simply reflect a different aesthetic, or a case when a king or ruler does not want to control certain aspects of the urban plan. One could add that topography structures the urban plan since uneven, variable terrain is less susceptible to rectilinear construction than flat, open land (see Fitzsimons, Chapter 7 in this volume). In practice, cities are rarely, if ever, purely planned or organic. Instead, cities contain both planned and unplanned space; even highly planned space, such as at Pompeii, may be remodeled or redeveloped by a city's inhabitants according to their specific and changing needs (Laurence 1994:19).

To close the gap between planned and organic descriptions of cities, Michael Smith draws on the work of Simon Ellis (1995) and Harold Carter (1983), among others, to devise a scheme to analyze levels of urban planning in ancient cities. Smith divides urban planning into two main components: coordination among buildings and standardization among cities. Coordination often involves formal arrangements of structures, such as around a plaza, or with respect to other features such as a temple, palace, street, or city wall (Smith 2007:9–12). Standardization occurs when we see a similar suite of features and relationships among them at several cities in a region, which suggests that they were built with a common idea about how to construct a city (Smith 2007:25–27) (see Buell, Chapter 8 in this volume, for a more complete discussion of Smith's model). Smith's analytical approach encourages scholars to look for planning principles rather than a single, unified plan and makes it possible to find evidence for planning in otherwise "organic" cities. This chapter attempts to do just that, although I do not adhere strictly to Smith's definitions of coordination or standardization.

City Size and the Cities Discussed Here

Cities discussed in this chapter range in size from 20 to more than 100 hectares. The relatively larger cities were presumably more populous, wealthier, hosted more institutions, administered more territory, and wielded greater regional power than their smaller neighbors, which may have played subservient political roles within the state. This observation does not diminish the potential political, economic, or ritual importance of even very small cities that may have been the seat of a respected family, produced a desired commodity, or hosted a revered shrine. Although the size differences among these cities can be striking, their basic structure and the spatial principles found within them are very similar. Many of these spatial principles probably predate cities and are rooted in agrarian villages in which nucleated households are the dominant features. Yet, Elizabeth Stone's remote-sensing research in Lower Mesopotamia has identified monumental architecture at the smallest of sites (less than 0.5 hectares), indicating that the built environment of small sites included more than simple houses (Stone 2007:231). Stone elaborates:

...just as the population of Mesopotamian cities seems to have been very agrarian, with well over 50 percent of the population

making their living through agriculture, so too does the rural sector look very urban. Indeed I will close with the suggestion that Mesopotamian households, and the neighborhoods or villages that they form, were the real building blocks of society, but it was the ability of the urban centers to provide both a larger political arena and an efficient resource base that led to their popularity. (Stone 2007:231)

It may be simplistic to state that Mesopotamian cities, Upper and Lower, were simply villages writ large, but it is clear that the spatial principles we see in cities are not exclusive to large urban environments. These shared principles make it possible to compare cities of vastly different sizes because their urban character does not depend solely on the size of their population or their footprint (see Yoffee, Chapter 12 in this volume for a fuller discussion of "different cities" and the problem of city size).

In my analysis, I examine the structure of several Upper Mesopotamian cities of the third millennium. Although I reference features in many cities, I give several special attention to Beydar, Chuera, Kazane, Al-Rawda, and Titriş because we know more about their built environments. Instead of identifying types of city plans, such as those defined by Heinz (1997), I prefer to identify principles of the production and construction of space in these cities, including multiple centers (in nucleated settlements), conservative notions of space, defensible space, housing parcels, and armature. Some of these features contain coordination or standardization that is relatively highly planned, according to Michael Smith's (2007) scheme, while others derive from supra-household, mid-level efforts, and others still from the smaller scale, so-called organic efforts of residents. Yet, the latter demonstrate patterned behaviors from city to city that indicate which aspects of city space appealed to residents, and point to cultural norms regarding the structure and appearance of the built environment. Accordingly, these aspects are often executed at a supra-household level. The main difficulties in examining these factors are that we usually lack the full plan of an ancient city, data from different cities are not equivalent, and it is difficult to know if the disconnected parts of the city that we uncover in our excavations are contemporary. Despite these problems, through a careful examination of several cities, we can gain a better understanding of their urban structure. At the close of my analysis, I discuss briefly the

UPPER MESOPOTAMIAN URBAN PLANNING

According to the aforementioned notions of urban planning, Upper Mesopotamian cities are not highly planned in that they lack strict orthogonal or rectilinear layouts. Instead, these cities often form semi-orthogonal plans when adjacent structures are built with the same orientation as their neighbors, or additions to existing structures are added in orthogonal segments, often for reasons of convenience and efficiency rather than urban planning (Smith 2007:13). Yet, several sites discussed here exhibit semi-orthogonal architectural elements that clearly developed from supra-household planning. The most obvious centralized planning in these cities is found in infrastructure, including streets, city walls, sector walls, and water works. Decentralized, or mid- and low-level planning, is most evident in residential areas that were built and rebuilt according to varying codes of spatial production.

There are six major categories of urban features in Upper Mesopotamian cities:

- 1) infrastructure, including circuit walls and dividing walls between sectors or neighborhoods (in a few cases), city gates, streets, water and sewer systems;
- 2) institutional structures, including palaces, temples, and associated storage, living, and support facilities;
- 3) residential neighborhoods;
- 4) industry or craft-production facilities;
- 5) open areas; and
- 6) burial installations. This category is highly variable, including burials beneath house floors, special (sometimes mass) burials in tombs or monuments, and a variety of types of burial in intramural or extramural cemeteries.

Due to the high cost of infrastructure, features such as city walls and streets often become fixed and shape the direction and form of later development and the movement of people through the city (Herman and Ausubel 1988:13; Hillier 2008:226). Thus, urban plans may be shaped early in the developmental process with later development acting within the boundaries set by roads, city walls, and

waterworks. Accordingly, realignment or rebuilding of these features requires major organization of labor and funds. Although institutional, residential and craft production facilities are subject to remodeling and rebuilding by their inhabitants, shared walls among neighboring buildings in built-up cities require supra-household organization to accomplish significant reorientation of structures. This may explain in part why, despite opportunities for flexibility in the use or definition of spaces between elements of infrastructure, these areas generally maintained their primary use or function.

Spatially, palaces tend to be located on the citadel or upper city (at Leilan [Ristvet et al. 2004; de Lillis-Forrest et al. 2007], Ebla [Matthiae 1981], Mozan [Buccellati and Kelly-Buccellati 2001], Beydar [Lebeau and Suleiman 2009], and Chuera [Meyer 2006]), although Beydar has palaces both upon its mini-acropolis and below in the upper city, and administrative buildings – including possible palaces – have been excavated in the lower and outer town at Kazane (Creekmore 2008, 2010). Magnetometry data show some larger, possibly administrative or elite buildings in the outer town at Titriş and Chuera (Meyer 2006; see also Nishimura Chapter 3, this volume). Temples are found in a variety of locations, including on citadels, in the center of the city (at Beydar [Lebeau 2006a], Chuera [Meyer 2006], Mozan [Buccellati and Kelly-Buccellati 2001], and Sweyhat [Danti and Zettler 2007]), in solitary walled compounds (at Al-Rawda [Castel and Peltenburg 2007]),⁴ or as small individual structures tucked away in neighborhoods (at Chuera, possibly also Kazane⁵). Industrial activities sometimes cluster (at Banat [McClellan 1999; Porter 1995, 2002]), but in other cases are scattered throughout domestic areas (as at Sweyhat [Danti and Zettler 2007]) or located in isolated workshops (for example, in the Titriş suburbs; see Nishimura, Chapter 3 in this volume). Houses form contiguous clusters within blocks defined by wide main streets and narrow lanes. Burials occur both within tombs beneath house floors (at Kazane and Titriş) and in extramural cemeteries (at Titriş, Chuera, Sweyhat, and Al-Rawda). With the possible exception of Titriş, for which magnetometry data indicate somewhat large, open, unpaved areas toward the periphery (see Nishimura, Chapter 3 in this volume), open space is limited in these cities, and is usually paved, or grey space, as opposed to unpaved, green space consisting of gardens, parks, and the like (see Stark, Chapter 11 in this volume, for a complete discussion of types of open space). When present, open space occurs in narrow spaces between buildings, in

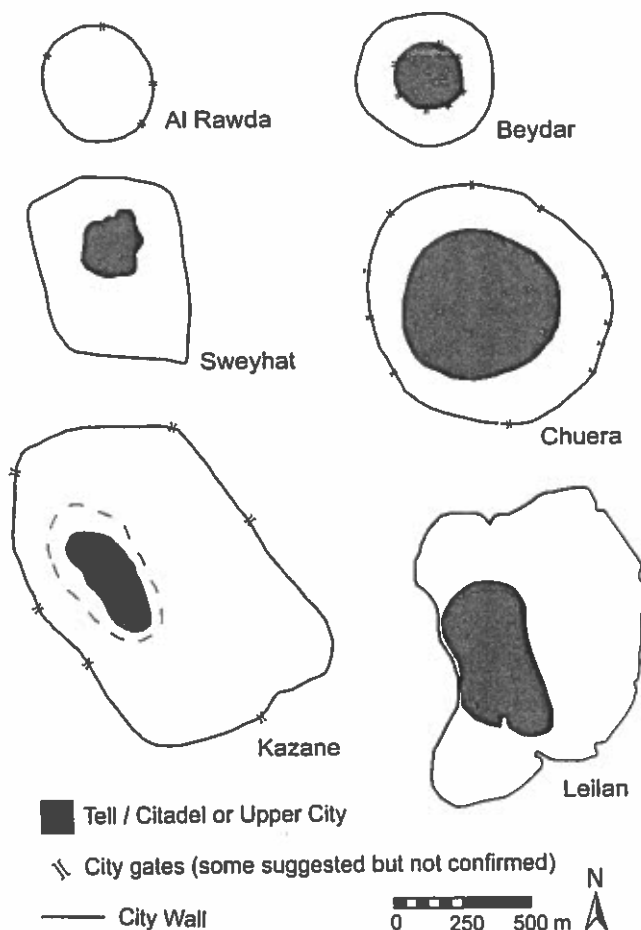
courtyards or public plazas, in culs-de-sac, and sometimes on the periphery, just within the city wall.

CITY SHAPES

Upper Mesopotamian cities have two general shapes defined by their city walls and the location of the pre-urban settlement tell (Figure 2.2). The first shape is oblong cities – such as Sweyhat, Leilan, Titriş, and Kazane – in which the tell (mound of earlier period ruins) is located off-center and its elevated terrain, sometimes greater than twenty meters high, formed a convenient citadel for the city. In some cases, this location may have a practical purpose in providing a quick exit for officials or soldiers leaving the city to escape or confront an enemy. This location may also make it easier to transport valuable goods to the citadel. Stone (1995:243) notes that very tall temple platforms in Lower Mesopotamian cities are located outside the center of the city, perhaps setting a precedent or at least a parallel for the high versus low spatial division in Upper Mesopotamian cities between the upper city on the citadel and expansive lower towns. Although this high versus low division may serve an ideological purpose, it may just as well result from convenience or land tenure (see “Land Tenure” section later in this chapter), and the many stratigraphic layers within citadels testify to the long life history of these places (see Nishimura, Chapter 3 in this volume, for another perspective on citadel mounds, lower towns, and city shapes).

The second Upper Mesopotamian city shape is round – such as Chuera, Beydar, Bati, and Al Rawda – in which the pre-urban tell, if present, is located in the center of the site and is generally larger, forming a full-fledged upper city rather than a steep-sided citadel with limited flat space. Dubbed *Kranzhügeln* by early German archaeologists,⁶ many of these cities are found in the relatively marginal (low rainfall) steppe between the Balikh and Khabur Rivers, and in the vicinity of the low mountain Jebel ‘Abd al-‘Aziz in northeastern Syria (Meyer 2006; Moortgat-Correns 1972). In some cases, the lower city was walled but not inhabited (as at Beydar) or does not exist (as at Al-Rawda, which has some extramural settlement, but not a striking high-low difference in elevation or a walled settlement beyond the core). Because these cities are located in a dry environment, some scholars suggest that they were built and inhabited by people with a shared culture, such as pastoral nomads who thrived through

Figure 2.2 Outlines of selected cities. Scale is approximate. Al-Rawda after Gondet and Castel 2004; Beydar after Lebeau 2006a; Swayhat after Danti and Zettler 2007; Chuera after Meyer 2006:Abb. 2; Kazane after Creekmore 2008:figure 9.3; Leilan after Weiss 1990:Abb. 1. For plan of Titriş, see Nishimura, Chapter 3 in this volume, Figure 3.2.



trade with other states in the region (Kouchoukos 1998; Lyonnet 1998; McClellan and Porter 1995:63). The excavators of Chuera and Al-Rawda claim that these cities were intentionally established in a round shape, rather than developing from the gradual expansion of a pre-existing village (Castel and Peltenburg 2007:604; Pruss 2000:1432). The variation in the life history of these cities calls into question the usefulness of the *Kranzhügel* category; I will return to this question later in this chapter.

CITY ACCESSIBILITY

In the few cases where a significant portion of the town plan of ancient cities is exposed by magnetometry or excavations, we may begin to extend theories of architectural structuralism to entire settlements. I favor a soft structuralism in which structure is highly

PRODUCTION
OF SPACE IN
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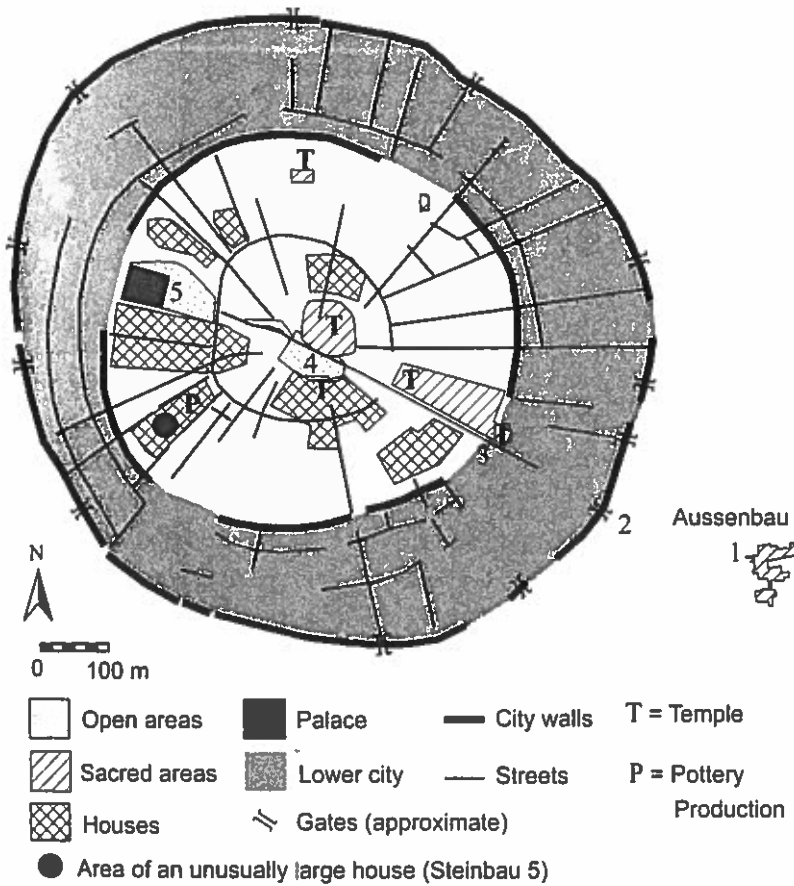
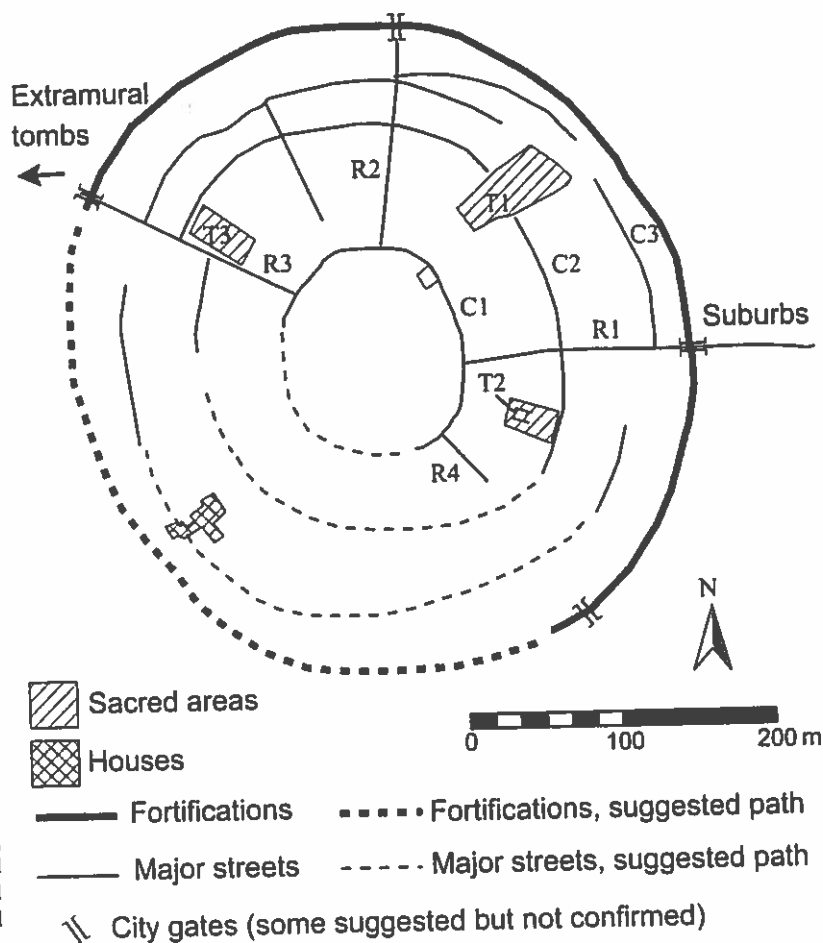


Figure 2.3 Tell Chuera, schematic plan of infrastructure and the primary use of various areas. Numbers 1–5 mark potential armature: 1) Aussenbau, 2) City gate, 3) Entry to upper city and temple complex, 4) Plaza, 5) Palace. Redrawn and modified from Meyer 2006:Abb. 2; Pruss 2000:figure 1; and Goethe Universität, Institut für Archäologische Wissenschaften 2007. Some information was also derived from Tell Chuera reports.

influential, but does not determine behavior (see Trigger 2003:654). In doing so we can construct spatial maps, such as those described by Bill Hillier and Julienne Hanson (1984:90–142), to identify similarities and differences in spatial patterning within and between cities. These spatial patterns show how people organized and moved through space in the city (see, for example, Scott Branting's [2010] computer modeling of pedestrian traffic in an Anatolian city for which the entire street network has been reconstructed with remote sensing techniques). In round cities with known street patterns, such as Tell Chuera or Al-Rawda, main streets form ring roads and spokes that define fairly regular wedge-shaped city blocks (Figures 2.3 and 2.4). This structure is more "symmetric" and "distributed," which suggests a "tendency towards the *diffusion of spatial control*" (Hillier and Hanson 1984:97 [italics in original]). Such readily discernible segments of space may make it easy to grasp the structure of a city, and provide greater access to outsiders (Lawrence

Figure 2.4 Al-Rawda, schematic plan showing city wall, temples (T1,2,3), major streets (R1,2,3; C1,2,3), excavated housing, and suburbs. Derived from Castel and Peltenburg 2007:figure 5; Castel et al. 2005:figures 2a and 3; and Gondet and Castel 2004:figure 8.



and Low 1990:471; Lynch 1964:67–70). Wheel or deformed wheel-shaped street networks funnel outsiders along certain routes, mark the boundaries of residential areas, and preserve residential privacy (Hillier 2008:10).

No matter where you go in round cities, you are never too far from a major spoke or loop road that will convey you rapidly to other parts of the city, including the very center. Gates and topography notwithstanding, lines of sight and passage on radial roads often run directly to the city center, and ring roads make it possible to reach many sectors of the city quickly while bypassing side streets or potentially congested areas. Over time, some main roads are blocked by expanding buildings, forcing pedestrians to detour through less-direct secondary streets. Without deep excavations in these spaces, it is not clear whether these obstructions are primary, marking planned defensible space (see the section on defensible

space in this chapter) or secondary, marking conflicting claims to space (Low 1996:876) in which various groups block the street adjacent to their houses or workshops in order to produce defensible space. An example of the latter may be found at Al-Rawda, where streets or architecture are asymmetrical or interrupt the general pattern. The excavators of this site argue that these features result from changes to a formerly integrated master plan (Castel and Peltenburg 2007).

In contrast with the accessibility of round cities, streets in oblong cities tend to meander along a semi-straight course, as at Titriş, or at best form a semi-orthogonal structure in which cross streets create rectilinear city blocks. These streets have less-direct lines of sight than perfectly straight streets and may impede transit for visitors. We might expect irregular streets to be emergent (i.e., unplanned), but excavations at Titriş demonstrate that at least some of its streets were cut into sterile soil and built before adjacent houses, indicating that their pattern was planned and coordinated (Matney 2002:26–27), with their route influenced by topography (see Nishimura, Chapter 3 in this volume). Similar planning of streets is noted at the oblong cities of Kazane and Leilan, albeit with small exposures that do not clarify the entire path of the street (Creekmore 2008:167–168, 2010:78; Weiss 1990:201–203, abb. 3, 7–9).

NUCLEATION

Upper Mesopotamian cities were highly nucleated, built-up settlements with wall-to-wall architecture and little open space. Extramural areas contained fields, pasture, burial grounds, and small villages. Given that the growth of these cities was rarely restricted on all sides by natural features, how do we explain this nucleation? The universal presence of city walls, sometimes matched with a glacis and ditch or moat (as at Titriş, Mozan, Al-Rawda, Beydar, and Chuera) suggests that protection from theft or conflict was one motivation for nucleation. Yet, even if violence were the exception rather than the rule, nucleation makes infrastructure less expensive to build and maintain by reducing the length of city walls, streets, and drainage systems. Another impetus for nucleation is land tenure, which may have limited sprawling settlement on communal or crown land. Finally, city walls have important symbolic value, were often constructed in the earliest period of the city, and may have fostered

nucleation by encouraging compaction within the walls. In the following discussion, I explore these explanations for nucleation.

Defense

The existence of substantial defensive structures at large cities, small towns, and even small villages (e.g., Cooper 2006b:70) indicates strongly that violence was a real threat. In addition, city walls are symbols of power and they project power by making it possible for a city to send its army or militia out to confront or threaten others, leaving smaller forces behind to defend the homeland (Pauketat 2007:122, 131). Violence was clearly a part of life in these societies, especially in the later third millennium (Sallaberger 2007:422–423). The Ebla texts include accounts of conflict between Mari and Ebla, a forced treaty between Ebla and Abarsal, tribute gifts sent to Ebla from threatened cities, and weapons exchanged with allies (Archi and Biga 2003; Merola 2008; Sollberger 1980). Archaeological evidence for violence at these cities is not as plentiful as lists of tribute from subject polities, but excavations reveal destruction layers at several sites, weapons in burials, and victory iconography from Mari and Ebla (Akkermans and Schwartz 2003:269). Other examples of violence or suggestive of violence include a mass burial, changes in regional settlement patterns, and local urban structure (abandoned villages and suburbs), a shift from extramural to intramural burials, and construction of new defenses at Titriş (Algaze et al. 2001:68–70), and possibly the burning of the sacred structures of *Steinbauten* I–II at Chuera (Klein and Orthmann 1995:75; Orthmann 1995a, plans 6, 13, 1995b:32; Moortgat 1962:35; Pruss 1998).

Symbolism

Aside from their role in defense, city walls also have important symbolic value that is recorded in texts, images, and their physical manifestation (Ristvet 2007:184). Upper Mesopotamian city walls defined the city, marking a clear perimeter with gates mediating entry and exit. A barrel cylinder from Mashkan-shapir, a second-millennium city in Lower Mesopotamia, celebrates the building of the city wall as a defining act in establishing the city (Steinkeller 2004:135–146). Third-millennium texts from Beydar list

state workers – in this case, shepherds – under gate names, indicating that in at least some cases, gate names represented quarters or neighborhoods (Sallaberger 2004:18–19). In many examples, city walls were built early in the life of the city, as at Kazane, Mozan, Chuera, Beydar, Leilan, Al-Rawda, and others. These may be instances of conspicuous consumption and expressions of power, as described by Trigger (1990:127), although the labor and resources required to build a city wall that benefits all residents may involve more negotiation among corporate groups than the centralization of power described by Trigger (see for example the range of professions involved in building a city wall, as described in Ristvet 2007). Thus, the city wall may have first marked officially the establishment of a city, and later constricted growth and intensified nucleation as residents packed into the area behind the walls in order to be part of the city. In general, extramural settlement is rare, but it is documented at Al-Rawda and Titriş.

Land Tenure

Although defense, symbolism, or economizing construction can be considered sensible reasons to nucleate, another possible factor is land tenure. Tony Wilkinson combines archaeological survey, analysis of period textual sources, and analogy with recent historical practice in the region to argue that Bronze Age villages probably had a communal land-tenure system. In this system, use rights shifted regularly and land did not belong to a single family (Wilkinson 2010:59). This type of land tenure explains in part the ever-increasing height of tells, which were repeatedly occupied because building outside the village on communal land was discouraged. If this system was maintained during the urbanization process, then tightly packing into a nucleated city would limit the amount of former field or pasture land that would have to be taken over by the city during the development of a lower town around the tell. Although powerful city rulers may have claimed ownership over all the land in a given region (Wilkinson 2010:57), at least initially one would expect former land tenure practices to present a roadblock to the development of low-density settlement with copious open space between residential areas. A complicating factor affecting the use of land around cities is squatters, or those constructing housing, gardens, and other features in unused open space without necessarily possessing use or tenure

rights. These activities may be temporary, but if tolerated, their product may become a permanent part of the city (see Neuwirth 2005 for modern examples).

Wilkinson notes that texts record villages, their land, and their inhabitants changing hands as a single entity owned by the state or private families (Wilkinson 2010:58; see also Steinkeller 1993:125–126). This practice could leave local land-use or land-tenure patterns intact, despite the knowledge that an overlord was the official owner. The case of city land ownership is more complicated. Although private home ownership within cities is attested by texts from the second millennium (Stone 1987; Van De Mierop 1999), the division of extramural land is less clear. Highly generalized summaries of textual evidence for land exchanges across the third to second millennia throughout Mesopotamia suggest that traditional systems of communal ownership were eroded as a few landowners amassed vast holdings while the size of the average family's plot shrank (Zaccagnini 1999:339). In other cases, ruling institutions laid claim to all land and redistributed it to citizens according to their social rank (Dahl 2002). Inherited property may be absent from most texts, which chronicle sales, leaving open the possibility of larger, privately owned plots not listed in texts (Zaccagnini 1999:339). Texts from Beydar suggest that a handful of state officials controlled most of the land and male labor in its region (Sallaberger and Ur 2004:57–58; Widell 2003:723). However, this evidence is selective, and Jason Ur argues that the center controlled only part of village land (Sallaberger and Ur 2004:57, footnote 13). In any case, long-lived pathways between fields endure in some areas as "hollow ways" on the landscape, indicating continuity in the structure of fields adjacent to cities (Casana 2013; Ur 2003).

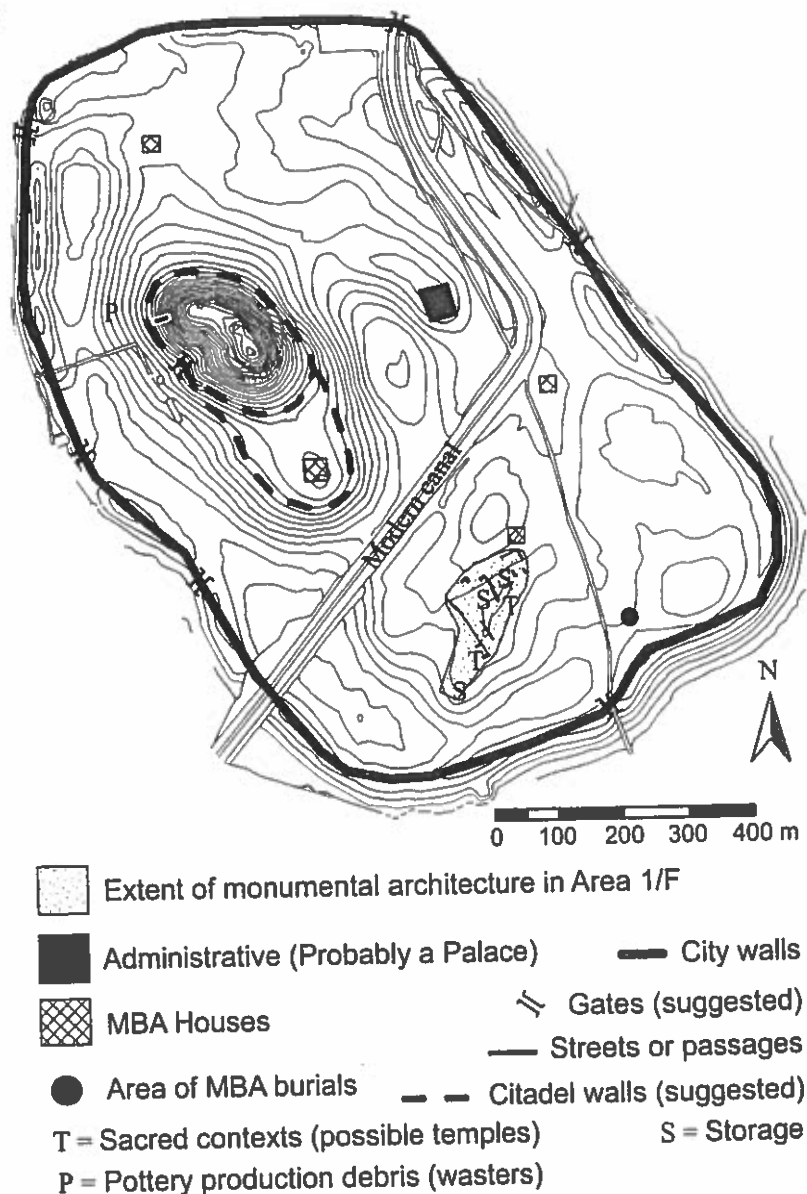
In sum, nucleation in Upper Mesopotamian cities may derive from a combined need for security and efficient infrastructure, which generated constrictive, highly symbolic walls. Nucleation is also compatible with traditional notions of land tenure that discourage dispersed housing, and building structures side-by-side along narrow streets is consistent with principles of defensible space (see defensible space section later in this chapter). It is difficult to determine with certainty which of these factors was primary. I favor an interpretation based on a pre-urban preference for close-knit living in clustered neighborhoods, combined with shared land tenure in which the defensive value, if not the symbolic value, of circuit walls varied over time with the degree of conflict.

Because many Upper Mesopotamian cities developed from pre-existing villages and were highly nucleated, it is easy to assume that these settlements grew from the center or tell to the periphery in an oil-stain-like spread in which new residents joined neighborhoods that expanded around a single administrative, elite nucleus, as expressed in Sjöberg's model of preindustrial cities (1960:323). Current data are not sufficient to determine if urban growth followed major streets defining sectors in a process akin to Homer Hoyt's sector model (1939), or leap-frogged open spaces as multiple centers were established in a fashion that recalls Chauncy Harris and Edward Ullman's multiple nuclei model (1945). The fortified cluster of a palace, temples, markets, and storage at the center of Beydar comes closest to Sjöberg's model, but the social structure or status of surrounding neighborhoods is not yet clear. Recent research has uncovered multiple administrative and elite centers in several cities, and all of these cities must have had other social centers measured in terms of neighborhoods, pedestrian traffic, a convergence of major roads, or the value of land (Hoyt 1939:18).

At Kazane, elite and institutional structures form at least three administrative centers in the city. These centers include the presumed (but not excavated) administrative citadel on the tell; a probable palace or other administrative building east of the tell, marked by a massive wall; and numerous monumental structures revealed by magnetometry and excavations in the southern portion of the city. These include large storage facilities, a large house, and another possible palace or massive administrative building (Figure 2.5) (Creekmore 2010; Wattenmaker 1997). At Titriş, a small exposure of mid-third millennium remains in the outer town revealed monumental architecture characteristic of elite housing or public buildings (Algaze and Pournelle 2003:107; Matney 2002:25; Matney and Algaze 1995:49). This may mark a second center, far from the citadel, that existed during the earliest period of the city. Although standard domestic structures were later built over these buildings, Nishimura (see Chapter 3 in this volume) identifies several larger buildings at key locations in the outer town during the later third millennium that may mark additional centers in the final period of the city.

At Al-Rawda, ring and radial roads demarcate sectors containing features that represent multiple ritual centers (Figure 2.4). On the basis of magnetometry data, two and possibly three ritual areas were

Figure 2.5 Kazane, schematic plan of Early Bronze Age infrastructure, administrative, sacred, and other areas. Middle Bronze Age housing and burials are also marked owing to possible continuity in the use of these spaces from the prior period. Note: the location of the citadel walls and city gates are suggestions, and are not based on any excavated evidence. Palace and Middle Bronze Age housing areas are shown larger than the actual exposures to enhance visibility. After Creekmore 2008:figure 9.3.



identified in the city, one of which was confirmed by excavations. Each consists of one or two small temples surrounded by open space enclosed by a wall (Gondet and Castel 2004:104, figures 8a and 8c; Castel et al. 2005:figure 6a; Castel and Peltenburg 2007:606, figures 7 and 8). Notably, the inner sanctuary of the temples in all three areas is oriented toward the center of the site, and a single ring road, C₂, intersects or passes all three compounds (Figure 2.4). The existence of multiple, spatially separated temples in a relatively small city may

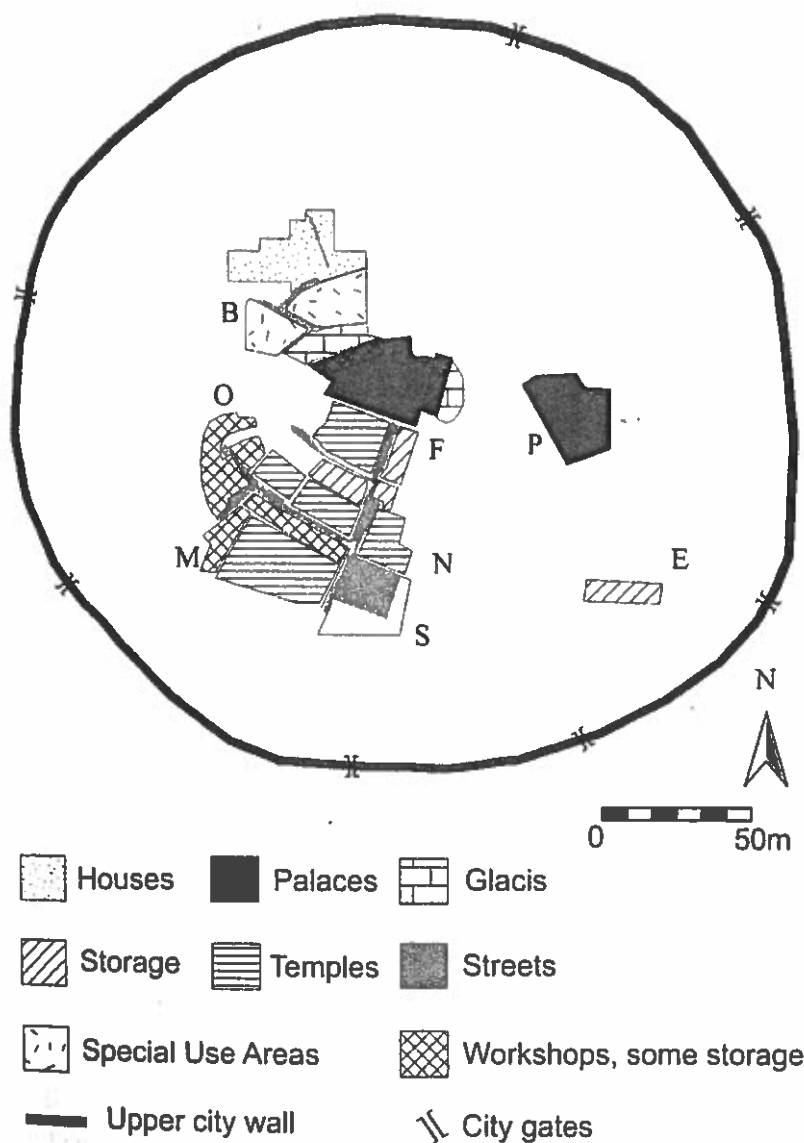


Figure 2.6 Beydar, upper city, schematic plan of infrastructure and the primary use of various areas, with excavation areas marked with letters. Use areas derived from Lebeau 2006a: plan 1; Lebeau and Suleiman 2008, 2009; and excavation reports. Gates placed after Bluard 1997: figure 1.

indicate the worship of multiple gods, the presence of different social or ethnic groups, and multiple nodes of religious power.

Chyera contains at least two major but separate administrative centers (Figure 2.3). These include the palace on the western edge of the upper city and the cluster of small but monumental temples and related structures on the eastern edge of the city. Small, isolated temples also exist within residential areas in the upper city. At Beydar, a second palace was recently discovered, just below but adjacent to the acropolis mound that contained a palace and multiple temples (Figure 2.6: Areas F and P) (Lebeau and Suleiman 2009).

Aside from ritual and administrative centers, multiple residential areas served as centers of social life. Street patterns, as discussed earlier, formed wedge-shaped or rectilinear blocks of housing areas subdivided by small lanes. Major intersections, culs-de-sac, and other less-visible features such as utilization of a particular neighborhood temple or shrine, could define neighborhoods or centers of social activity in the city. Thus, although a particular sector may have an elevated status owing to association with particular residents or proximity to certain features in the city, and some administrative or religious centers may have been higher in the pecking order of the city governance and devotion, these features were not relegated to a single business, religious, or housing district. Instead, they formed multiple centers of urban life.

CONSERVATIVE DEVELOPMENT

The production of space in Upper Mesopotamian cities was conservative; spatial principles established early in the life of the city were maintained over long periods of time. During the course of their life history, streets and city walls tended to be rebuilt in the same space, houses were built over houses, palaces over palaces, and temples over temples. Thus, it is rare to find examples of what Ernest Burgess (1925) called "organization" and "disorganization," in which the primary use of different parts of the city changed over time. These episodes usually occurred during major regional transitions, such as in the late third to early second millennium when many polities experienced a collapse, decline, hiatus, or reorganization of settlement (Cooper 2006a; Ur 2010). Even massive rebuilding efforts, such as after a fire that destroyed the sacred precinct at Chuera, tend to maintain the primary use or function of an area (Orthmann 1995b:32). Although this might be expected for sacred or political structures, the endurance of housing – and presumably neighborhoods, in most cities – is striking and indicates the probable importance of land ownership and inheritance within the city.⁷ An exception to this pattern may be found at Titiş, where the lower town shows continuity while the outer town contains significant changes from the mid- to late third millennium, reflecting either a shift from public to private architecture, or elite to non-elite housing (Algaze and Pournelle 2003:107; Matney 2002:25; Matney and Algaze 1995:49).

Explanations for conservative production of space vary. As previously noted, for reasons of cost, infrastructure tends to remain in place and shape later development (Herman and Ausubel 1988:13). City planners note that urban space can become relatively fixed and resist change despite changes in economics or society (Herbert and Thomas 1990:126). Manuel Castells argues that the production and construction of urban space is fraught with conflict in which dominant institutions resist changes to urban structure (Castells 1983:xviii). In this view, substantial change in urban planning requires top-down decisions or major grassroots efforts (Castells 1983:303–304). Although Castells' interpretation makes sense in the context of very powerful institutions, I argue that in cases of increased power-sharing, conservative city plans may derive from a desire among residents for comfort and continuity. Although desire may be impossible to analyze with archaeological data, studies of human behavior indicate that if one's immediate surroundings are orderly or familiar, then one feels empowered whereas disorder enhances feelings of powerlessness (Geis 1998:243). A sense of order or disorder derives as much from the construction of space as the production of space, but the structuring effect of the latter may have a significant effect on maintaining social order. Thus, contra Louis Wirth's assertions – based in part on the writings of Durkheim, Weber, and Simmel – that the anonymity of cities diminishes the importance of neighborhoods (Wirth 1938:11, 21); in Mesopotamian cities, as in some modern cities, the neighborhood was very important for building and maintaining social ties (Logan and Spitze 1994; Stone 1987:129). This social importance would have contributed to conservative production of space in neighborhoods, and enhanced *place attachment*, "the symbolic relationship formed by people giving culturally shared emotional/affective meanings to a particular space or piece of land that provides the basis for the individual's and group's understanding of and relation to the environment" (Low 1992:165). This meaning may be especially strong in cases where family tombs were located within houses, as at Titriş (Laneri 2007, 2010; see also Nishimura, Chapter 3 in this volume).

DEFENSIBLE SPACE

Defensible space is a key component of Upper Mesopotamian cities.
Defensible space is a conscious effort by residents and city planners

to define urban space by erecting barriers or markers that indicate ownership, enhance security, and discourage or manage passage (Newman 1973:3-4). Persons walking through the city 'read' these markers and understand what kind of space they are entering or passing (de Certeau 1998:98-99; Rapoport 1990). Defensible space plays an important role in defining neighborhoods in a city (Abu-Lughod 1987). Defensible spaces in Upper Mesopotamian cities include gates along the city wall or at entrances to palaces, temples and other administrative structures, street patterns and types (wide versus narrow) that define neighborhoods, culs-de-sac within residential and administrative contexts, and houses, which are designed to interrupt the line of sight from entrances to inner rooms.

City walls and gates are found in every Upper Mesopotamian city, and gated entrances for major structures are found in most. Within the city, wide main streets demarcate sectors and probably neighborhoods as well. Narrow, branching passageways discourage entry into the heart of residential blocks, generating defensible space (Costa and Noble 1986:165; Biewers 1997:77-80; both cited in Düring 2006:47). In some cases, neighborhoods may have been bounded by long party walls (e.g., at Leilan, see Ristvet 2005:figure 3.11). Many multiroom houses exhibit defensible space in that they were entered through a small vestibule that functioned as a gate (see Nishimura, Chapter 3 in this volume, for a more detailed discussion of house form and function). This room protected the privacy of inner rooms both by limiting the view from the street and by adding layers of doorways (Rainville 2005:149; also see Nishimura, Chapter 3 in this volume, Figure 3.4). Smaller houses, such as those with just one or two rooms, did not have the luxury of a vestibule. Another form of defensible space in these cities are culs-de-sac, found in residential areas at Chuera, Beydar, Titriş, and Taya (Figure 2.7) (Pfälzner 1997:Abbildung 11; Lebeau and Suleiman 2008:9, street east of "Tablet House" and south of House 6; Algaze et al. 2001:figure 2; Rainville 2005:figure 5.7b; Reade 1973:plates LIX, LX, LXI), and in elite or administrative areas at Beydar and Kazane (Lebeau and Suleiman 2003:plan 7 [approach to palace]; Creekmore 2008:figure 4.5). Cul-de-sac are also very likely present at Al-Rawda within dense housing blocks, although published plans do not permit their identification.

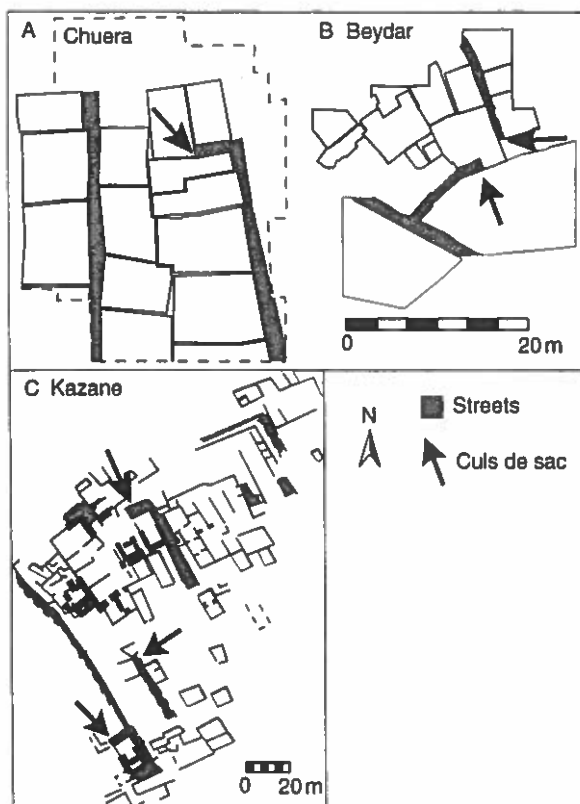


Figure 2.7 Examples of culs-de-sac in Upper Mesopotamian cities. A: Tell Chuera – Area K, excavated houses, period EJ IIIa (2600–2450 BC). Redrawn after Pfälzner 1997: Abb. 11. B: Beydar – Area B, excavated houses and special-use structures (large blocks to the south), period EJ IIIb phase 3c (2450–2300 BC). After Lebeau and Suleiman 2008:9. C: Kazane – Area 1 / F, magnetometry plan, and excavated structures (dark, thick lines), (ca. 2500–2300 BC). After Creekmore 2010:figure 4. Cul-de-sac are suggested but not confirmed by excavation.

In some cases, culs-de-sac were probably part of the original city plan; in other cases, they may represent the activities of residents creating defensible space by expanding their homes across narrow lanes, thereby blocking traffic and creating culs-de-sac. Aside from discouraging entry, culs-de-sac and alleys provide additional protected outdoor space for storage, tying up animals, and children's play. At Titris, at least one cul-de-sac occurs at the break between terraced segments of outer-town housing, in a space possibly cut off from the street and only accessible from adjacent houses (Matney 2002:27; Nishimura, see Chapter 3 in this volume, Figure 3.3, space between Houses 3, 4, and 7). Areas with such limited access may be more likely to function as gardens, garbage dumps, or meeting places for social and even illicit activities.

PARCELED HOUSES

Because the amount of walled, protected space within a city is limited, and extending city walls, streets, and other infrastructure is

expensive, it should not be surprising if central institutions – and residents themselves – attempt to control the distribution of space within the city. In the cities discussed in this chapter there is evidence for similar lot sizes in residential areas at Titriş, Chuera, and Leilan, and in the monumental buildings of Area 1 at Kazane (Matney 2002:27; Pfälzner 1997; Ristvet 2005:figure 3.11; Creekmore 2008, 2010). These similar lots are not seen in all periods, but when they appear, they demonstrate what Peter Pfälzner terms *Parzellenhäuser*, or parceled houses (Pfälzner 1997). The parceled houses identified by Pfälzner come in standard widths of 6, 7.5, 9, 12, or 15 meters, and have similar ground plans (Pfälzner 1997:figure 8). At Chuera and Bderi, these standard plots are limited to a specific time frame, 2600–2450 BC. After this period, non-parceled houses replace some parceled lots at Chuera and parceled lots disappear altogether at Bderi. Pfälzner argues that parceled lots are evidence for centralized city planning and their disappearance is owing to thinning of the city population and increasing ethnic diversity (Pfälzner 1997:251, 258).

Although the similar lot dimensions identified by Pfälzner seem to indicate an organized distribution of city land, they do not necessarily reflect top-down city planning. Instead, these lots indicate that the standard units for measuring land were agreed upon and upheld by the residents (Smith 2007:29). Rather than marking a top-down city plan, similarly sized lots are an efficient way of managing land. These lots facilitate construction of similarly sized houses and minimize space lost to leftover spaces that are too small or too large for a practical house. Regardless of lot size, residents could expand or shrink their houses by buying or selling rooms to or from adjacent structures, a practice noted in later periods in Lower Mesopotamia (Stone 2007:217; Van De Mieroop 1999:256). Thus, a homeowner could purchase two rooms from an adjacent house and incorporate them into his own house by cutting doorways into adjacent walls and blocking entrances from the new rooms to the now smaller neighboring house.

The most convincing case of house lots as evidence of formal planning comes from Titriş, where double walls bound plots of land with regular dimensions in the outer town (Matney 2002; see also Nishimura's discussion of the 2300 BC reconstruction, Chapter 3 in this volume). These plots are not equivalent to individual houses. Instead, multiple-walled plots are combined to form

PRODUCTION
OF SPACE IN
MESOPOTAMIAN
CITIES

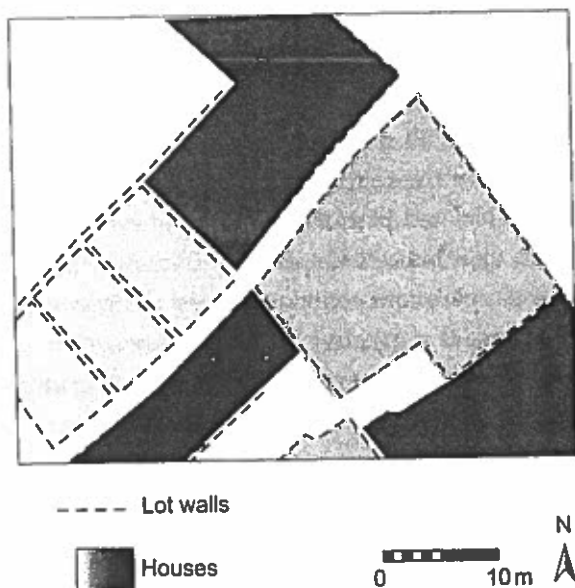


Figure 2.8 Titriş, building lots in the outer town (generated from Algaze et al. 2001:figure 2, and Matney 2002:26). Note doubled walls and possible cul-de-sac. Cf. Nishimura, Chapter 3 in this volume, Figures 3.3–3.4.

houses of various sizes, which together are founded on regular, walled terraces (Figure 2.8). In addition, in some cases, the walls within these plots share the same orientation across multiple plots, houses, and streets (Matney 2002:27). Thus, although the internal division of space within each house differs, the plots themselves and their main walls were laid according to supra-household spatial principles, perhaps by developers (Algaze et al. 2001:69; Matney 2002:27). In sum, although parceled lots do indicate some level of land management within the city, they do not necessarily indicate a formal plan designed at the supra-household level except when combined with shared architectural principles and features.

ARMATURE

Another concept that contributes to an understanding of space in third-millennium Upper Mesopotamian cities is armature. Defined for Roman cities by William MacDonald, armature consists of “main streets, squares, and essential public buildings linked together across cities and towns from gate to gate, with junctions and entranceways prominently articulated” (MacDonald 1986:5). MacDonald argues that armature develops independently from city planning and evolves as new parts are added and old parts extended (MacDonald 1986:30–31). In most Upper Mesopotamian cities, we lack enough of the urban plan to evaluate a key part of the definition

of armature – unimpeded passage across a city – but here I suggest a few possible examples of this feature.

At Mozan, a city in the Upper Khabur region, the approach to and placement of Temple BA may be an example of armature. This small temple was built in the mid-third millennium at the top of a long staircase on an isolated platform on the highest part of the upper city (Buccellati 1998; Buccellati and Kelly-Buccellati 1997, 2000, 2001). Although the temple's connection to the rest of the city is unknown, the grand staircase is suggestive of an armature system. In a similar fashion, a narrow street that climbs the mounded center of Beydar, passing temples en route to a cul-de-sac terminating at the palace, may also mark the end of an armature route (Figure 2.6) (Lebeau 2006a:120).

In contrast to the preceding partial examples, the more complete city plan available from Chuera may better illustrate a case of armature. At Chuera, a main street traverses the upper city from southeast to northwest (Figure 2.3). This street may begin (or end) outside the city to the east, in the area of a temple and extramural burials (the *Aussenbau*; "1" in Figure 2.3). From this ritual space one passes the outer city gate ("2" in Figure 2.3) and continues to the upper city. Although the upper city wall went out of use after the construction of the lower city wall (Meyer 2006:184), the beginning of an extended temple complex echoes the location of the former gate ("3" in Figure 2.3). In keeping with the armature concept, the main street next passes a temple complex marked by a stone platform, high stone terrace, and monumental gateway to this precinct. Beyond this temple area, the street continues west through a public plaza ("4" in Figure 2.3) and on to the palace and adjacent open area on the western side of the upper city ("5" in Figure 2.3). A grand entrance marks the palace, and perhaps other architectural features mark the intersections of the open areas. It is not clear if this main street continues past the palace into the lower town, but according to the armature concept, it could detour along a different axis that articulates with other public buildings or spaces before exiting the city at a major gate. One can imagine this armature developing from an initial core of the central plaza flanked by the palace and temple areas, and later expanding as the city grew to include the lower city gate and new structures in the extramural area.

Other examples of armature may include the articulation of the outer town city gate with public space at Titriş (Nishimura, Chapter 3 in this volume), the intersection of street C2 with Temples 1, 2, and 3 at Al-Rawda (Figure 2.4), and passages through or by monumental architecture in Area 1/F at Kazane (Figures 2.5 and 2.7). Although these possibilities cannot be verified without further excavations, and the static city plan provided by magnetograms (magnetometer data) fails to capture the life history of armature, it is worth considering this aspect of city space when looking for examples of coordination among buildings or linkages of seemingly disconnected aspects of city space.

THE IMPORTANCE OF LIFE HISTORIES

In this chapter, I focused on spatial and planning principles shared by many Upper Mesopotamian cities. Although I emphasized similarities, it is also important to consider differences between cities and how these cities formed and changed over time. Here I consider briefly the contrasting features and life histories of two of the archaeologically better-known round cities, Beydar and Chuera. This comparison reveals that, despite their similar shape, they have very different developmental pathways.

Chuera consists of a walled, 28 ha inner mound, and a walled, 37 ha lower town (Figure 2.3).⁸ In the earliest phases at Chuera, the focal point of the city was a public plaza flanked by residences, while the palace and temple-related facilities were concentrated at the edges of the upper city along easily accessible streets. Additional small temples were situated within residential areas. In this scheme, the public plaza was the focal point that unified the households of the residents, the palace, and the temple. Yet, a few hundred years after its construction, the central plaza began to fill with garbage from adjacent residential areas. This garbage eventually rose to more than 8 meters high, along with the houses themselves, which were rebuilt again and again (Orthmann 1995a). These developments demonstrate that the original purpose and meaning of this plaza changed significantly as the city evolved. This shift may have impacted the linkage of the armature discussed earlier, or at least removed the plaza from this system. The remarkable shift from open to closed space indicates that the use and meaning of this space was changing

or at least contested, and possibly created or derived from a sense of disorder among residents, as previously discussed.

Compared to Chuera, Beydar is a considerably smaller city covering 22.5 ha with 17 ha of settled area, including the top of the outer city wall and the 7 ha, 20 m high tell inside the inner city wall (Figure 6) (Lebeau 2006a:101; Ur and Wilkinson 2008:313). Between the inner and outer city walls, a moat adds further protection and a glacis accompanies the inner city wall (Lebeau 2006a, 2006b:3). In contrast to settlement at Chuera, which began in the upper city and later expanded to the lower town, at Beydar, the lower town and outer fortification were built at the very beginning of settlement but the lower town was not inhabited. In contrast to the plaza that formed the centerpiece of early settlement at Chuera, Beydar's core was dominated by a palace and five temples set upon a three-tiered terrace flanked by a glacis on two sides and accessed by a single street that narrows to provide choke or control points as it ascends toward the palace (Lebeau 2006a; Sténuît and Van der Stede 2003). Residential housing is found at the northern base of the palace glacis (Area B), while a second palace lies to the east below the central palace (Area P). From what is known of its life history, the central palace and temples remained the focal point of Beydar throughout the habitation of this city, even during the decline of its last years.

The fundamental difference in the focal point, viewshed, location, and accessibility of the palace, temples, and residences indicates very different developmental pathways for Beydar and Chuera. From its founding, Beydar looks like a small fort-city designed to protect the wealth of the palace and temple households, which probably had a close political alliance, whereas Chuera's founding plan gave prominence to residences and public space, and provided access to temples and the palace, which were spatially on a par with regular residences and located near or next to large open areas. The separation between the palace and major temple area at Chuera may indicate that these institutions were also more politically independent than at Beydar. Finally, if the second palace in Area P at Beydar proves to be surrounded by additional administrative buildings, then the space for housing at Beydar will shrink further, suggesting a lower population than we would expect from the site area alone.

Thus far I have argued that Upper Mesopotamian cities were planned and constructed by multiple groups in society who generated a collage of urban spaces. In most cases, the structure of the earliest phases of these cities is poorly known, lying beneath remains from later periods and making it difficult to state with certainty the extent to which later urban plans reflect an original spatial model. I noted that infrastructure shapes later development and construction of space is conservative in these cities. In two cases, Chuera and Al-Rawda, their researchers argue explicitly that significant parts, if not all of their city structure, were planned at the outset. If these cities were indeed planned on a large scale from their earliest period, then they may represent ideal cities in which the construction of space conforms to their builders' notions of a "good" city.

The excavators of Chuera argue that the site "was a town from its very beginning ... Its existence is the result of a deliberate town-planning process" (Pruss 2000:1432). This statement derives from the finding that the large plaza at the center of the site overlies mid-fourth millennium and earlier remains, but not material from the early third millennium that immediately preceded the growth of the city (Pruss 1998). Yet it does not consider that a small early third-millennium settlement could be located anywhere on the high mound, not just beneath the central plaza. Nonetheless, it does appear that the plaza, main street, and probably the basic parameters of housing and sacred areas were defined early in the life of the city. If further excavations demonstrate that the earliest foundations of each of these areas date to the same narrow period, then Chuera may indeed represent a town plan enacted by a central government, but this does not rule out participation by residents.

The excavators of Al-Rawda argue that specialists under the direction of the central authorities built the major infrastructure in the city – including the main streets, city gates, city wall, and central sector – in one single, concerted effort (Castel and Peltenburg 2007:604; Gondet and Castel 2004:108). They further argue that the plan of Al-Rawda could not have developed without a model, and they cite Tell Chuera, more than 200 kilometers to the northeast, and Tell Sheirat, 32 kilometers south of Al-Rawda, as examples of round cities that may have inspired the builders of Al-Rawda. It

is possible that the architects, builders, and workers at Al-Rawda visited other round cities before or during the construction of their own settlement. In his study of the texts from Ebla, Archi notes that attached craft specialists, or those working explicitly for a government or institution, traveled between cities to work for other rulers. For example, smiths or carpenters traveled between Ebla and other nearby cities – even as far as Mari and Kish – presumably to complete special projects for which their skills were needed (Archi 1988:28). This exchange of specialists undoubtedly spread ideas about technology and style, and may have influenced city planning.

To my knowledge, no one has argued that any of the non-round (oblong) cities were built all at once according to a single master plan. The closest example to this kind of planning may be the rebuilding of portions of Titriş, as described earlier. Yet, oblong cities also demonstrate ideals of city space through the repeated use of major streets to funnel traffic between major nodes, narrow lanes and culs-de-sac to restrict or inhibit access to housing, the construction of clustered structures, and the establishment of multiple centers.

DISCUSSION

This chapter identifies several important factors in the production and construction of space in Upper Mesopotamian cities. I argue that these highly nucleated settlements had multiple administrative and social centers that formed during urbanization. The production of space in these cities was conservative, often maintaining the use or function of an area even during extensive rebuilding or renovation. A key planning principle was the production of defensible space, whether by original design or subsequent modification. I suggest that the concept of armature may be applicable to these cities, and may unify otherwise scattered elements of a city's structure. Although winding streets and semi-orthogonal architecture give an appearance of an organic growth pattern, streets and, in some cases, whole neighborhoods show supra-household planning, both through designation of lot size and coordinated construction. Finally, I argue that careful attention to the life history of these cities is the best way to reveal similarities and differences in their development and the interplay between activities that structure space and the structuring effects of space.

Taken together, these observations show that the production of space in Upper Mesopotamian cities took place in multiple overlapping social spheres, including the city government that focused on infrastructure, mid-level planners or developers (Algaze et al. 2001: 69; Matney 2002) who built some residential areas in conjunction with neighborhood organizations and leaders, and residents who modified space according to their needs. Viewed in this manner, the production of space in Upper Mesopotamian cities suggests a sociopolitical order consisting of power sharing rather than top-down domination or purely disorganized, organic development. The spatial result of the sociopolitical order suggested here is a varying degree of city planning, as described by Michael Smith's scale (2007). Thus, these cities have examples of coordination among buildings in institutions, public space, and neighborhoods; supra-household planning of neighborhoods, streets, and infrastructure; and some standardization in the kinds of spaces preferred by city residents. In some cases, coordination may be expressed very loosely or in a nonlinear fashion, as in armature, requiring large horizontal exposures of sites before patterns can be identified.

Although this analysis focuses on examples from third-millennium Upper Mesopotamia, many of the spatial principles discussed here are seen in earlier, pre-urban periods and in subsequent urban periods throughout much of Upper and Lower Mesopotamia (Henrickson 1981; Keith 1999, 2003; Stone 1995, 2007; Ur 2012). The maintenance of notions of social space across the millennia throughout Mesopotamia may testify to the continuance of social structures such as tribes and lineages during the shift to cities and states (Cooper 2006b:61). The emphasis on kinship and consensual decision making in these social structures resists domination by urban authorities. The complex and often new social roles formed in cities served to integrate a diverse society, but also resisted yielding autonomy to city government (Yoffee 1979:21, 1995:289, 2005:62, 214). In this context, urban authorities may have had to work hard to build a loyal population. Stone (2007:228) argues that second-millennium Lower Mesopotamian cities competed with one another for prestige, and may have installed or refurbished infrastructure to attract residents.

Despite textual evidence for powerful rulers at different places and times, and the assertion by some that third-millennium Upper

Mesopotamian cities were oligarchies ruled coercively by the palace and a few elite households (Sallaberger and Ur 2004; Steinkeller 1993:124; Weiss et al. 2002), many scholars of these polities view the city as a bastion of heterarchy (Crumley 1995) and corporate political strategies (Blanton, Feinman, and Kowalewski 1996) in which everyday residents and individual households played a central role in urbanization and the production and governance of urban space (Creekmore 2008; Fleming 2004; Stone 2007; Ur 2004). This assertion does not deny the existence of social stratification or even possibly segregation among city residents in some cases. Instead, I argue that the making of cities is a shared, conflicting process that incorporates the needs of multiple social groups within society. In the production of space in the city, we see the give and take between Adam Smith's (2003) "regime" or John Mollenkopf's (1992) "ruling coalition," made up of the ruling families and associated factions, and the "grassroots," or "everyday" people. At the same time, a careful consideration of a city's life history reveals that cities with similar basic structure may have very different developmental pathways. Future attention to the principles of the production and construction of space discussed here, in conjunction with a life history approach and the range of theoretical angles summarized by Michael Smith (2011) may help us unpack the complexity of urbanization and recognize the agency of different sociopolitical groups in society.

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NOTES

- 1 An earlier wave of urbanism is known from recent research at Tell Brak (Emberling 2003; Emberling and McDonald 2003; Matthews 2003; Oates 2005; Oates et al. 2007; Ur, Karsgaard, and Oates 2007) and Hamoukar (Gibson et al. 2002) in northeastern Syria, and Arslantepe (Frangipane 2002) in eastern Anatolia. This work revealed evidence for large, urban settlements at these sites in the fourth millennium, prior to the appearance of Uruk colonies from Lower Mesopotamia. These finds indicate that urbanism developed in both Upper and Lower Mesopotamia simultaneously in the fourth millennium, rather than beginning in the south and spreading north.
- 2 These territory estimates are based on Jason Ur's figure for Nager/Tell Brak (Ur 2004:273).
- 3 Population estimates are based on ethnographic cases and generally assume 100 to 200 persons per ha (Adams 1981:69; Kramer 1980, 1982a, 1982b; Van Beek 1982) but consider Postgate (1994) for a wider range.
- 4 Located about 75 km east of Hama in Southern Syria, Al-Rawda is outside the primary region of this study, but I discuss it here because a cesium magnetometer survey revealed most of its plan (Castel et al. 2004, 2005; Gondet and Castel 2004).
- 5 Kazane's building Unit 8 may be a temple, but this is not confirmed (Creekmore 2010).
- 6 *Kranzhügel* is German for "wreath mound."
- 7 Michael Smith (2010) is correct that the presence of neighborhoods in Upper Mesopotamian cities is often assumed, rather than proven, because contiguous housing blocks make it difficult to identify social boundaries. Yet, neighborhoods are not necessarily defined by housing blocks, but by shifting social connections based in part on dwelling proximity (Creekmore 2008; Keith 2003; Rainville 2005:144; Stone 1987). Thus, even hard lines, such as the street patterns discussed here, may not define neighborhoods.
- 8 The size of Chuera is reported to be 65, 80, and 90 ha. From the published maps (Meyer 2006: Abb.2; Pruss 2000:figure 1), it measures closer to 65 ha, and it seems that the larger figures were derived from the diameter without accounting for the actual shape (Meyer 2006:180; Orthmann 1997:491; Pruss 2000:1431). Alternatively, the larger figures may include unreported extramural settlement considerably larger than the excavated area of the *Aussenbau* and *Stelenstraße* in area L.

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