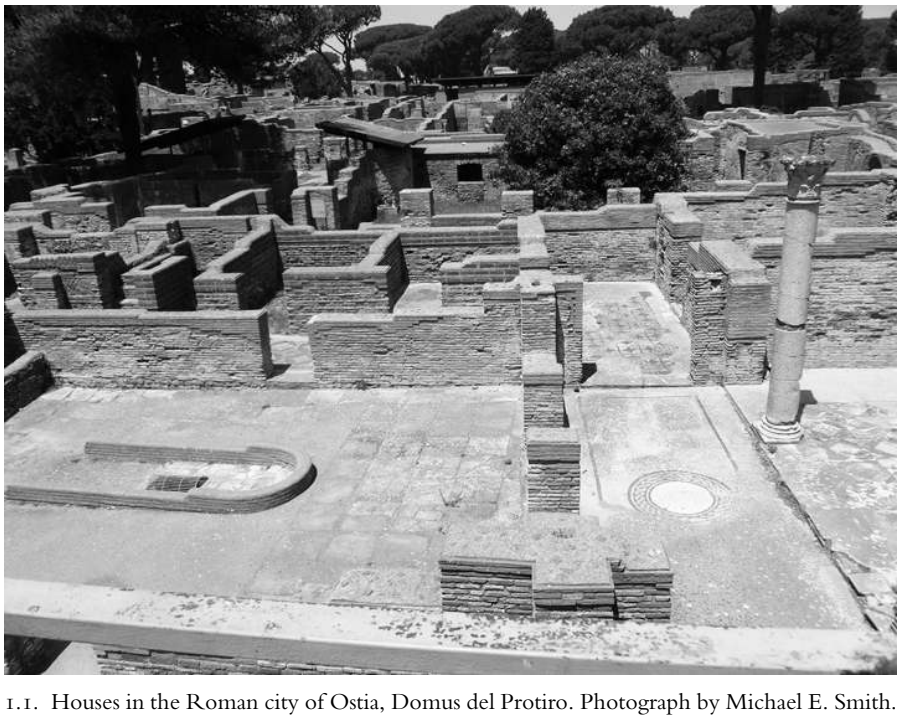
ONE

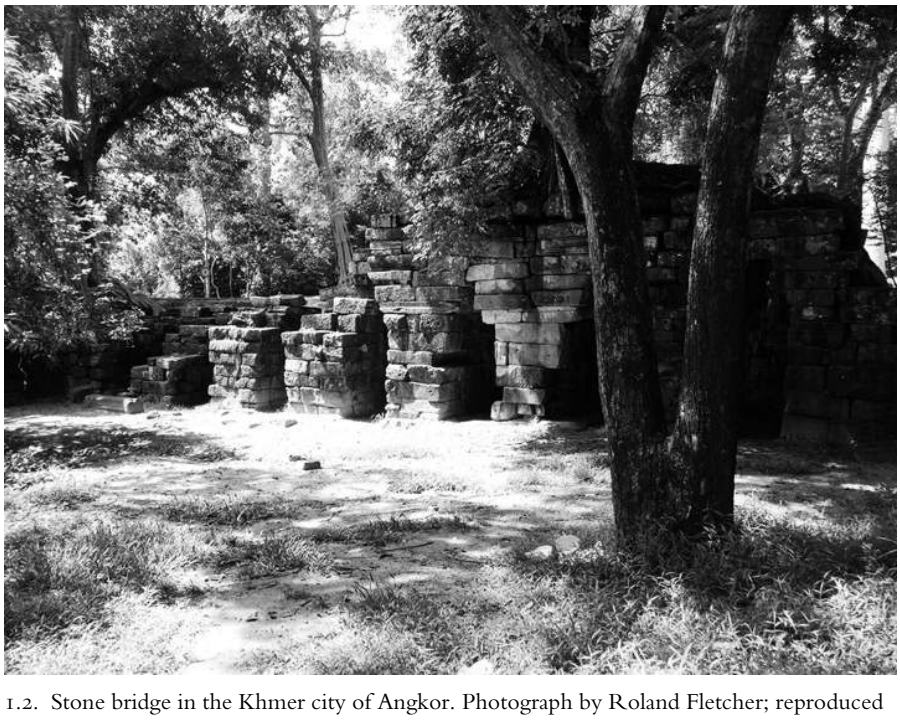
PREMODERN CITIES AND THE WIDE URBAN WORLD

Walking through the ruins of a Roman city such as Ostia (Figure 1.1), you are greeted by clear signs of urbanism. Stone walls enclose living spaces that are entered from paved streets, houses are packed tightly together, and residential areas alternate with larger civic buildings such as temples, theaters, and markets. The living city of Ostia may be 2,000 years old, but its remains today are easily interpretable as a city, an urban settlement. But when one walks through the jungle in Angkor, Cambodia (Figure 1.2), it is difficult to identify the traces of urbanism. There are few streets and no surviving areas with standing house walls. In fact, one is hard-pressed to identify any houses at all or, for that matter, any buildings that are not temples. This hardly looks like an urban settlement. It is a jungle with piles of stone and a few temples. Yet Angkor in its day was the largest city (in area) ever to flourish in the ancient world, and its powerful kings ruled an extensive empire. Roman Ostia was a backwoods town in comparison to the glories of Angkor.

Effort is needed to construct a frame of reference that includes both Ostia and Angkor within the category of ancient city. The impressive variety of ancient urban forms makes this a difficult endeavor. Archaeologists often reify these concepts, attributing real existence to something – city or urban – that is a concept, not a brute fact of the real world. But even when archaeologists succeed in creating useful concepts of past urbanism, a yet greater effort is needed to bring ancient settlements and contemporary cities into the same frame of reference and draw meaningful conclusions. Many people assume ancient cities were either



1.1. Houses in the Roman city of Ostia, Domus del Protiro. Photograph by Michael E. Smith.



1.2. Stone bridge in the Khmer city of Angkor. Photograph by Roland Fletcher; reproduced with permission.

radically different from or identical to contemporary cities. Examining this idea rigorously requires archaeologists to step out of their background in anthropology or history and enter the world of contemporary social science, where most research on urbanism currently resides. I use the phrase *wide urban world* to describe this broad realm of cities and settlements, from deep history to the present.

I have been struggling my whole career to achieve these two goals – the creation of a framework to compare all kinds of ancient cities and the development of a means to link this knowledge with research on cities today. This book is a summing-up, an effort to bring together my thoughts and findings on comparative urbanism, in order to answer the questions, "What was life like in premodern cities?" and "What factors shaped urban life in the deep past?" The most important concept for understanding and explaining urban life in the past (and the present) is *energized crowding*. Energized crowding is a process that occurs when large numbers of face-to-face social interactions take place within a settlement. These interactions amplify the results of individual social interactions, resulting in a variety of social and economic changes and outcomes, both positive and negative. Energized crowding is the central concept in this book, and I explore it in detail in Chapters 2 and 3. The phrase originated with architectural historian Spiro Kostof (1991:37).

Cities are important. They concentrate economic and political activities, they influence larger landscapes and societies, and they provide an arena for the creation of institutions and processes that affect whole societies. While cities are centers of creativity and economic productivity, they are also settings for social problems, from pollution to crime and poverty. With increasingly rapid urbanization around the world today, a scientific understanding of cities and urbanism is a critical need (Bettencourt 2021; Ramaswami et al. 2018; Zhou et al. 2021). Some scholars try to achieve urban understanding by searching for power laws, fractals, and other quantitative patterns among cities today (Batty 2013; West 2017). Others focus on the economics, politics, or social processes of contemporary urbanism (Desmond 2016; Glaeser 2011; Kotkin 2006; Sampson 2012). All of these scholars have important things to say, and their work illuminates contemporary urban patterns. But their work lacks a crucial component: a deep historical perspective. When urban scholars do mention early cities, they often get the facts wrong or show a limited or misleading perspective (e.g., Bruegmann 2005; Kotkin 2006).

Archaeology provides crucial pieces of the mosaic that constitutes world patterns of urbanism. Archaeological data can now illuminate many aspects of the urban past. The findings of archaeologists, in turn, can be compared to contemporary cities to improve our understanding of cities and society today and into the future. But how is this possible? How can we know whether it makes sense to view ancient settlements as "urban"? Part of the answer lies in the realm of theories and concepts, and part lies in the findings of archaeology.

THESES ON PREMODERN CITIES

I begin with the concept of *settlement*, which has been defined by archaeologist Kwang-Chih Chang as "the physical locale or cluster of locales where the members of a community lived, ensured their subsistence, and pursued their social functions in a delineable time period" (Chang 1968:3). The focus is on the *place* where a group of people – from a few individuals to several million – lived or dwelt. Settlements last for anywhere from one day to thousands of years. The temporary campsites of mobile hunter-gatherers are settlements, as are cities. Settlements are not only the locations where people live; they are also places that concentrate activities and institutions – social, economic, political, religious – on the landscape. The primary subject matter of this book is the settlements I call *premodern cities*. By *premodern*, I mean settlements dating to the medieval period or earlier in Europe and the Mediterranean, and prior to European conquest and domination in other parts of the world. My basic definition of *city* or *urban* is a settlement where population and activities are concentrated in space (Pumain and Rozenblat 2018). I will leave this definition vague for now and return to it later in the chapter.

My use of premodern cities is quite similar to what Gideon Sjoberg (1960) calls *preindustrial cities*, but I eschew that term for two reasons. First, Sjoberg assumes the existence of a single homogeneous type of preindustrial city and describes its properties in general terms. I see more variability than Sjoberg, and I view the homogeneity or heterogeneity of my primary category as an empirical matter. Second, Sjoberg's picture of preindustrial cities draws overwhelmingly from a small set of cases (e.g., primarily historical studies of medieval European, Ottoman, Indian, and Chinese cities) that form a poor sample of the entire scope of premodern cities. Scholars after Sjoberg, moreover, have used the term *preindustrial* to refer to what historians call *early modern* – that is, postmedieval, pre–Industrial Revolution (e.g., Abbott 1974).

The following paragraphs present five theses, or fundamental principles, that describe the major outlines of my theoretical and comparative approach to premodern cities.

(1) Definitions are tools; one's definition of *city* or *urban* depends on one's goals and questions.

Scholars of cities today spend little time agonizing over how one defines the terms *city* and *urban*. In fact, they typically use the term *definition* to refer to operationalization: the measures that capture the phenomena scholars want to study. Premodern cities exhibit far more variability than modern cities in their size, form, functions, and activities; in addition, their political and economic contexts are more varied. For example, virtually all cities today exist within nation-states. But premodern cities could be part of a chiefdom, a city-state, an

empire, or a weak state (Chapter 4). Cities today are embedded in a globalized, capitalist world system, whereas premodern cities could be part of a command economy, a small-scale commercial economy, or a far-flung globalized early commercial economy (Chapter 5). Because of this variability, the ways premodern cities may be defined also vary greatly. In the words of Luís Bettencourt (2021:50), "Any definition of a city requires an underlying scientific theory of what a city is and what it does." Consequently, there is no "best" definition of *city* or *urban*. This principle is often neglected by scholars of ancient cities, who may agonize over the "correct" definition of *urban*, or how to document and study the essence of cities and urbanism, which leads to my next principle.

(2) Do not reify the concepts of city or urban.

Cities and urbanism – particularly in the premodern domain – are not real things. Settlements, on the other hand, *are* real. They exist in this world. Archaeologists excavate their remains, and it is usually obvious whether a given site was a place where people resided. *City* and *urban* are categories or concepts that we apply to some settlements, when it suits our goals. If we have different goals, we may use different definitions. In the language of philosopher John Searle (1995), settlements are brute facts, while cities are institutional facts. One of Searle's examples is money. The fact that a piece of paper in my wallet has value and can be exchanged for goods and services is an institutional fact. It depends on the existence of institutions and beliefs that allow particular kinds of pieces of paper to be used to purchase things. But the physical properties of this same dollar bill – its ability to be folded or rolled up, or burned, or marked with a pen – are brute facts. They do not depend on an institutional framework or common beliefs within a community of people. There are no "brute facts" of "citiness" or "urbanity" as intrinsic attributes of a settlement, something waiting to be discovered; these are institutional facts that only make sense from a given perspective, with a given definition. The consequence of this principle is the following:

(3) The settlement should be the primary unit of analysis, not the city. We should acknowledge that some "urban" attributes and practices apply to nonurban settlements.

If settlements are "brute facts," then it makes sense to use them as a basic unit of analysis. When our research shows that a given settlement was large and complex, or served as a hub in a regional economy, then we may want to classify it as an urban settlement; in Searle's framework, this is an institutional judgment. The fact that some key features of cities also characterize smaller, nonurban settlements is a further warning about the dangers of reifying the concept of urban. Settlement scaling research shows that key quantitative

outcomes of social interactions in settlements characterize both urban and nonurban settlement systems (Ortman and Coffey 2017); see Chapter 3. Similarly, comparative work on neighborhoods shows that this urban social-spatial unit is also found in nonurban settlements (Smith et al. 2015; Tuzin 2001); see Chapter 7. These findings suggest that we can proceed with analyzing settlements without agonizing over definitions or worries about whether or not they are urban.[1]

(4) Cities and urban life are structured by the interplay between two sets of processes: centralized, or top-down, processes originate with kings, elites, and central institutions, whereas generative, or bottom-up, processes arise from the grassroots actions of individuals and households, actions that are not under the control or direction of institutions or authorities.

Urban life and organization are made up of a constant interplay of these two kinds of processes of change. My usage is based on common approaches in the social sciences outside archaeology.[2] I distinguish two types of generative processes: *Grassroots activity* refers to the intentional efforts of people to organize and coordinate their activities in pursuit of a goal (Chapter 7). *Spontaneous organization* describes actions of daily life, including social interactions, that create some kind of order or outcome that was neither planned nor created by authorities (Chapters 3 and 7). My prime example of this is energized crowding.

While both top-down and bottom-up factors are typically in play, some realms are closer to the institutional or upper domain of society, while others lie closer to the generative realm. For example, most premodern urbanites paid taxes, and taxation is primarily an activity of the state, a top-down institution. While the generative actions of individuals and groups may affect tax collection, these are typically of less importance than the top-down demands at play. Political protest, on the other hand, is primarily a generative process; nevertheless, top-down forces may affect the nature and outcomes of protests. My discussion of urban life proper is divided along these lines: Chapter 6 focuses on institutions or top-down processes, and Chapter 7 is about generative processes. This division flows from my basic definition of cities as settlements where population and activities are concentrated.

(5) Social interactions within cities and other settlements create *energized crowding*, which is one of the fundamental forces of change in urban life.

[1] Perhaps ironically, this caveat has not stopped archaeologists – including me – from arguing about definitions of city and urban; see the later discussion.

[2] I wish to distinguish my usage of "top-down" and "bottom-up" from a particular archaeological usage in which "top-down" refers to studies of kings and elites, while "bottom-up" denotes studies of households. My usage, in contrast, is based on drivers of change and causal mechanisms (Chapters 3, 6, and 7).

As in the case of thesis 4, this principle also flows from my basic definition of cities. The importance of face-to-face social interaction, in the form of energized crowding, in generating social outcomes is a fundamental component of many theoretical approaches in the social sciences (Brower 2011; Glaeser 2011; Ostrom 1990; Storper and Venables 2004). This perspective has been developed into a set of formal theories with quantitative predictions, known as *settlement scaling theory* (Bettencourt et al. 2007; Pumain et al. 2006; West 2017). I have participated in one branch of this approach, which views cities as "social reactors" (Bettencourt 2013). We have extended research from contemporary cities into the deep past, revealing continuities in the role of settlement size between ancient and modern settlement systems (Chapter 3). In this book, I explore the nature and implications of social interactions for premodern cities.[3]

One response to these complexities – particularly as implied by theses 2 and 3 – would be to discard the concepts of urban and city altogether. The relevant domain of interest, in fact, is the settlement, and the ways we describe and analyze settlements vary with our goals. But given the importance of cities and urbanism in the modern world, I think it best to retain these concepts for the premodern domain as well. Most of the discussion in this book pertains to cities, towns, and urbanism (defined as follows), and I will try to clarify when the discussion also includes small or nonurban settlements. Similarly, most of the discussion applies to the premodern domain (as defined previously), but I also discuss settlements of the modern era where necessary. In particular, my discussion of voluntary camps (Chapter 3) and practical machine sites (Chapter 4) focuses heavily on modern examples; these settlements are natural experiments that allow specific urban dynamics to be observed clearly. I will discuss how contemporary cities and settlements relate to those of the distant past later in this chapter.

An additional consideration that colors how some archaeologists write about ancient cities is what I call the *urban prestige effect*. As a legacy of rigid and universalist schemes of cultural evolution popular from the 1950s through the 1970s (Service 1975; White 1959), many archaeologists assign a high value, with a high level of prestige, to the categories of cities and urbanism. This signals an unfortunate emotional association with the objects of their study (settlements). Urban sites are seen as "better" than nonurban settlements, resulting in attempts to categorize nonurban settlements as cities. Nonurban villages are not infrequently declared urban by one scholar or another, whether ancient sites like Çatalhöyük (see Case Study 2) or modern Amazonian villages (Heckenberger et al. 2008). It is almost guaranteed that complex early

[3] The research and publications of the Social Reactors Project are presented at www.colorado.edu/socialreactors/.

settlements – such as the Trypillia "mega-sites" – will be viewed as urban (Chapman and Gaydarska 2016a; Diachenko and Menotti 2017), regardless of the nature of the evidence; see Chapter 2. This urban prestige effect only muddies the waters of premodern settlement analysis, contributing little to our understanding of the settlements in question or to comparative urban studies.

THE DIMENSIONS OF URBANISM

The issue of defining cities has been a difficult problem for archaeologists, one I discuss at length later in this chapter. As a background to that discussion, I introduce the concept of *dimensions* to organize major attributes of settlements and cities. Dimensions are bundles of related variables. In my framework, three dimensions stand out as most important: size, urban life, and urban functions. Important cross-cutting dimensions include form, meaning, and growth. The importance one gives to particular dimensions over others influences one's theoretical approach, including one's definition of cities and urban.

The Primary Dimensions: Cities as Big, Important, and Complicated Places

(1) Big Places – Size. In a causal sense, the size of a city – its population, area, and density – is the most important of the dimensions of urbanism. Size has a major influence on the other primary dimensions, urban life and functions. Although cities today are vastly larger than those in the distant past, the role that population size plays within a given settlement system is quite similar in the present and the past, something revealed by settlement scaling research. Chapter 3 is about the size of premodern cities.

(2) Important Places – Urban Functions. An urban function is an activity or institution located within a settlement that affects life and society beyond the borders of the settlement. The presence of urban functions makes a city an important place within its region. Villages lack urban functions, whereas a political capital – by ruling a polity – has urban functions, at least in the political realm. Urban functions were first articulated by central place theory, a model of the spatial locations and sizes of market centers (discussed later). Urban functions are useful in studying regional and macro-regional social patterns because they deal with the ways a central settlement articulates with its hinterland. In this usage, if an urban shop only serves people in its neighborhood, then its activities do not constitute urban functions. But, if people travel from other settlements to use the shop, then those transactions signal economic urban functions. I discuss political and economic urban functions in Chapters 4 and 5.

(3) Complicated Places – Urban Life and Society. This is the broadest domain of urbanism, the realm of social complexity and variation. While aspects of urban life and society are included in Chapters 3–5, Chapters 6 and 7 focus intensively on urban life. The first is concerned with institutions and top-down processes that affect urban life, including social class, wealth inequality, and the role of government in providing services. Chapter 7 then focuses on generative processes in cities – those processes where individuals and households create social patterns and changes through grassroots actions, independent of the role of the state or central institutions. My discussion is organized by households, neighborhoods, occupations, ethnic diversity, and patterns of poverty and prosperity. One way of summarizing the variety of traits that make up this dimension is to note that they are markers of social complexity. Any settlement has houses, but urban settlements tend to have both large and small houses corresponding to wealth or class differences. Any settlement has economic consumption activities, but cities tend also to have markets or shops, specialists, workshops, and other economic institutions above the household level. In short, cities were the settings for social complexity in most premodern societies, as they still are today.

Cross-Cutting Dimensions: Form, Meaning, and Growth

Three additional dimensions of urbanism – urban form, urban meaning, and urban growth – are also important components of premodern urban settlements. They have less causal importance in urban dynamics, however, than the three primary dimensions discussed previously. That is, they have a smaller influence over other aspects of cities and urban life.

(1) Urban Form. This dimension includes architecture and the layout and planning of cities. Although I discuss some aspects of urban form in this book – monumentality, planning, and housing – urban form is not given a major emphasis; instead, it is treated in relation to the primary dimensions above. A comparative study of the forms, architecture, spatial layout, and planning of premodern cities is badly needed, but there is no space to address urban form comprehensively here; for a start, see Smith (2007).

(2) Urban Meaning. If one looks at the literature on premodern cities, one might get the impression that "meaning" is the most important dimension of urban analysis (Bowser and Zedeño 2009; Parker Pearson and Richards 1994; Rykwert 1988). Apart from the theoretical deficiency of such a stance (Blanton 1995; Smith 2011b), the definition of the term "meaning" employed in that literature almost ensures that archaeologists cannot recover it with confidence from past settlements (Rapoport 1990a; Smith 2007). I discuss this issue in Chapter 4, with respect to Amos Rapoport's concept of levels of meaning in the built environment.

(3) Urban Growth and Decline. Whereas archaeologists can often document the growth and decline of ancient urban settlements, there has been little theoretical or conceptual work on this topic for premodern cities. Recent publications on the persistence of early settlements – how long they lasted – are starting to address the topic systematically (Smith et al. 2021b). Urban economists have long been obsessed with urban growth (Glaeser 2011; O'Sullivan 2011). While much of the work in urban economics is difficult or impossible to apply to premodern cities (where institutions such as money, firms, industrial production, and wage labor may not have existed), specific forays of urban economists into the past have generated some useful results (e.g., de Long and Shleifer 1993; Glaeser 2021).

DEFINING CITIES AND URBANISM

George Cowgill, a leading scholar of comparative early urbanism (and my undergraduate advisor) has noted:

> It is notoriously difficult to agree on a cross-culturally applicable definition of 'the' city, but we cannot do without definitions altogether . . . . No single criterion, such as sheer size or use of writing, is adequate, and it seems best to use a somewhat fuzzy core concept rather than to try to establish criteria that will clearly demarcate all cities from all noncities. (Cowgill 2004:526)

There are innumerable definitions of *city* and *urbanism* in the literature of urban studies. Most of these are not useful for premodern times, for reasons articulated by urban anthropologist Anthony Leeds some time ago:

> Most current discussion of 'urbanism' and 'urbanization' can be shown to be ethno- and tempro-centric and based on a historically particular class of urban phenomena and urban forms of integration . . . Generalizations are then made about 'urbanism' and 'urban society' based essentially on the urban experience of the past few hundred years, apparently without the realization that all urban phenomena of the past four or five hundred years have been ineluctably affected by the expansion of the capitalist system, in short by the development of what Wallerstein calls the 'World System.' The generalizations are, then, in fact not about 'urbanization' in general but about a single form of 'urbanism' or 'urbanization,' its evolution, and its acculturational by-products. (Leeds 1979:227, 228)

Forty years later, the situation has only improved slightly. In this section, I concentrate on the two definitions most commonly used in archaeology (the sociological and functional definitions) as well as two new approaches that may prove useful (the archaeological attributes and the social interactions approaches). For a fuller discussion of urban definitions in archaeology, see