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The Archaeology of Urban Landscapes

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Abstract

Urban centers have inner and outer landscapes whose physical remains can be read as the materialization of social, political, economic, and ritual interactions. Inner landscapes are manifested in architecture and spatial organizations that configure relationships on the basis of economic status, ethnicity, occupation, age grade, and gender within the city. Outer landscapes are composed of the hinterlands on which urban centers depend for resources, including agricultural products and in-migrating laborers who seek economic and social opportunities. Urban-based elites reach deep into the countryside not only as a matter of political control, but also for investment of centralized resources into infrastructure such as canals, roads, and territorial borders. The monumental and household configurations of cities, expressed both at the heart of urban centers and in their countrysides, enable a distinct phenomenology of interaction mapped into daily experiences.

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INTRODUCTION

Cities began only 6,000 years ago but now represent the living conditions of more than half of the world's population. Compared with other developments such as toolmaking or the adoption of agriculture, which evolved over thousands or even tens of thousands of years, urbanism had a very rapid growth trajectory. Population centers often grew to urban size in the space of just a few generations but remained deeply embedded in and indebted to their surrounding regions for food, water, and raw materials. The resultant interdependence placed stresses on hinterlands but also provided new opportunities for rural dwellers who engaged with cities through both permanent and cyclical migrations.

A landscape perspective on urbanism addresses the mutually implicated ritual, political, economic, and social uses of urban centers and their surroundings in both the past and the present. A landscape approach also makes use of archaeology not merely defined as the study of antiquity but broadly conceptualized as the analysis of material culture and the human modification of spaces, a factor that makes an "archaeological" approach useful for understanding present-day configurations as well as ancient ones (cf. Reid et al. 1975, Holtorf & Fairclough 2013). A landscape perspective can be used to address the built environment of cities (cf. Rapoport 1982), the physical layout of hinterlands, and the ways in which these distinctly shaped spaces would have been experienced by their inhabitants.

The urban built environment is often crowded and busy, with horizontal and vertical viewsheds that incorporate evolving technological capacities and political impositions. For both wealthy and poor people, cities' inner landscapes structure daily and life-cycle experiences as individuals move from their dwellings through neighborhoods, public spaces, and special-purpose venues. Movement is constrained by physical passageways and barriers as well as by the invisible delimitations that shunt people into distinct locales on the basis of ethnicity, gender, age, and social status. Other types of constructions are widely accessible, such as monumental structures that present an instantly recognizable profile and iconography of belonging: the Pyramids of the Sun and Moon at Teotihuacan and the Great Ziggurat of Ur, no less than the Eiffel Tower or the Space Needle.

Urban landscapes are also materialized in the hinterlands from which people and raw materials moved into cities and to which waste and manufactured goods circulated outward. As Zeder (2012) has noted for ancestral human populations and as Mrozowski (2006) has observed for more recent periods, human–environmental relationships are mutually constituted. Cities, with their concentrated populations and increased per-capita level of consumption, represented loci of abundance that accelerated producer–consumer dynamics (M.L. Smith 2012). Some urban dwellers did engage in agricultural production (e.g., in early Mesopotamia, see Ur 2012, p. 553), and some cities had extensive, dispersed settlements interdigitated with fields (particularly in the tropics, see Stark & Ossa 2007, Fletcher et al. 2008, Chase et al. 2011, Hirth 2013). In most cases, however, cities relied on staple foods coming from specialized hinterland producers. Agricultural productivity was augmented through intensification (terraces, canals, and other forms of landesque capital; see e.g., Morrison 1994, Erickson & Walker 2009) or extensification by bringing food from distant locations utilizing road or water transport (e.g., Garnsey 1983, van der Veen 2011).

WHAT ARE ARCHAEOLOGICAL LANDSCAPES?

Landscape studies were first applied to the hunter-gatherer level of social organization, in which factors such as mobility, risk, competition, prey choice, and social dynamics were modeled against regional resource availability (e.g., Anschuetz et al. 2001, Bowser & Zedeño 2009). However, landscape studies hold considerable promise for the study of human–environmental dynamics in complex societies as well, enabling researchers to address questions of sustainability, agricultural

management, resource acquisition, waste disposal, and circular migration from the perspective of population centers' regional hinterlands (Young 2000, Rodning 2010). Labor-intensive ground surveys enabled the first studies of urban-rural relationships in Mesopotamia (Adams 1981, 2012), in the Valley of Mexico (Sanders et al. 1979), and along the Roman Mediterranean littoral (Mattingly 1992, Mattingly et al. 2001). Even in places where there has been relatively little hinterland survey activity (e.g., in China, where studies of early urbanism focus heavily on writing and elite tombs), mapping projects enable the analysis of cities relative to smaller population centers, agricultural plains, and water bodies (Flad & Chen 2013).

Aerial photographs, satellite imagery, and other forms of remote sensing complement field efforts and expand their scope. In Mesopotamia and elsewhere, declassified CORONA images dating to the 1950s enable archaeologists to identify land modifications and smaller settlements around ancient cities; an additional benefit is that such images preserve features obscured by recent population growth (Ur 2003, 2006). LiDAR can be used in areas of thick vegetation to detect archaeological remains, as demonstrated around Caracol, Belize (Chase et al. 2011), and Angkor, Cambodia (Evans et al. 2013). Remote sensing has also transformed the study of urban centers themselves; although early-twentieth-century excavations cleared out large areas of ancient cities (for example, at Taxila and Mohenjo-Daro in Pakistan; Pompeii and Ostia in Italy; and Tikal in Guatemala), ethical and logistical constraints today favor small and targeted excavations contextualized by noninvasive mapping methods such as magnetic gradiometry (e.g., Creekmore 2010), ground-penetrating radar (e.g., Safi et al. 2012), and electrical resistivity (e.g., Mohamed-Ali et al. 2012).

Theory building has evolved in tandem with new field methods. The first ground-based surveys led to the proposition that site sizes could be used as a proxy for political importance (Wright & Johnson 1975, p. 267; see also Wright 1986). Another frequently utilized interpretive framework is that of core-periphery relationships, following Immanuel Wallerstein (1974), in which cities are viewed as extracting resources such as raw materials and labor from the surrounding hinterland. More recently, critics of both the site-size hierarchy concept (e.g., Coningham et al. 2007) and the core-periphery concept (e.g., Stein 2002) have emphasized that size and centrality are not the only criteria by which intersite relationships can be evaluated.

Synthetic analyses of regional survey and site-specific excavations reveal lattice-like relationships among settlements in which there may not be a clear central place and in which there are lateral connections among towns and villages in addition to ties sustained with a proximate urban center (e.g., Hirth 2013). Researchers have also emphasized that contemporaneous cities may have very different functions in a landscape (religious versus political or economic; see Flad & Chen 2013, p. 13) and that competing cities achieved regional dominance through a "cycling" of authority (Marcus 2003; A.T. Smith 2003; Webster et al. 2007, p. 50; Gallon 2013, pp. 304–6). Finally, cities do not always engage with their hinterlands through a rubric of growth: Contemporary cities that have shrunk their footprint (e.g., Detroit, Baltimore, East St. Louis) provide a model of dissolution for ancient cities.

LANDSCAPES AND THE PHENOMENOLOGY OF THE URBAN EXPERIENCE

Archaeological landscape studies have traditionally focused on economic interactions, but more recent assessments incorporate attention to ideology, symbolism, and meaning (Snead 2008, Johnson 2012) that likewise can be productively applied to urban environments. Landscapes are cultural as well as physical entities, in which individuals engage in deliberate place making and identity formation while accessing resources differentially by gender, age, and social status (e.g.,

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Abu-Lughod 1969, David & Kramer 2001, Sanders et al. 2002, van de Pol & Kuijpers 2005). The concept of phenomenology, which focuses on the physical locales of human consciousness (Johnson 2012, p. 272) and the interpretation of human experience from the first-person point of view (Carman 2012, p. viii), has received considerable attention in the scholarly literature as a way to track and analyze premodern experiences (e.g., Tilley & Bennett 2004, Van Dyke 2008; and summary in Johnson 2012). Phenomenology acknowledges the role of emotion and other ephemera of agency as legitimate components of human behavior, an analysis that may be especially relevant to the study of early urbanism, given modern ethnographic accounts in which migrants' attraction to urban centers is conveyed through phrases such as "bright lights, big city" (e.g., Wilson 1992).

Urban spatial forms emanate from the dynamic interaction of top-down and bottom-up agents, both in the centermost zones of cities (e.g., Sassen 2004, Inomata & Coben 2006, Fisher & Creekmore 2014) and in their agricultural hinterlands (e.g., Janusek & Kolata 2004, Smith 2006a). A phenomenological approach builds from theories of agency and individualism but also allows for collective dynamics and change over time in ways that enable archaeologists to identify testable propositions. Archaeologists have increasingly focused on understanding both daily life and extraordinary events through their material signatures, including pedestrian movements (Branting 2004), foodways (Klarich 2010), the formation of neighborhoods (Laurence 1994, Keith 2003), the development of suburbs (Chase & Chase 2007), and the sensory experience of colonialism and conquest (Acuto et al. 2012).

The ancient urban experience resulted from the dynamic integration of inner and outer landscapes, as indicated by studies that incorporate both local and regional perspectives (excellent recent examples of which can be seen in Hirth 2013 for Mesoamerica and Steinkeller 2007 for Mesopotamia). As people came into the city, they changed their clothes, their material goods, and their speech patterns as they engaged in a wider variety of interactions (cf. Abu-Lughod 1969, Scheld 2007, Nguyen et al. 2012). Natural phenomena also became transformed and reconceptualized in the urban sphere. Water from the surrounding countryside was channeled as it flowed into cities, becoming a commodity as well as part of the urban aesthetic as seen in the aqueducts that led country water into Rome where it was containerized in fountains and baths (Corbier 1991, p. 222). Urban gardens similarly transformed plants from utilitarian entities to ornamental ones within carefully controlled spatial configurations (Kaldjian 2004, Stark 2014). Even domestic animals reared in the countryside took on new roles when they entered the city and were used as a form of social distinction through consumption (e.g., Zeder 1991) or ritual sacrifice (Hartman et al. 2013).

The resultant relationship between landscapes and the materialization of lived experience can be evaluated along four interrelated rubrics of ritual, political, economic, and social activities (cf. Ashmore & Sharer 2000, p. 189).

Ritual Landscapes

People invested landscapes with symbolic meaning starting in the earliest prehistoric times, when caves (e.g., Lascaux) and human constructions (e.g., Stonehenge) drew participants to often-remote locations. Ritual landscapes have been extensively discussed as places of memory making and solidarity in small-scale societies (Campbell 2006, Pollard 2008), but the study of urban ritual landscapes is relatively underdeveloped despite the insights offered on the essential role of religion by theoreticians such as Fustel de Coulanges (1864) for Greco-Roman cities and Wheatley (1971) for Chinese cities. Urban centers sometimes started with an incorporation of preexisting sacred places, as Brady & Ashmore (1999) have discussed for Maya centers and as Cowgill has suggested for Teotihuacan (2003, p. 47). In Mesopotamia, temples were among the earliest urban features,

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encompassing both a highly public realm of monumental visibility and a hidden, ritual precinct inaccessible to view (Stone 2013, p. 196). Architecturally distinct ritual areas shaped cultural practices in their vicinity long after the urban center grew, as was the case in Rome where the modest initial religious boundary dictated the location of burials well into the first millennium AD (Goodman 2007, p. 43).

For full-time urban residents, ritual spaces provide a quotidian spatial and social referent as well as anchors for secular activities such as markets. Urban ritual centers often serve as a focus of pilgrimage, drawing in a vast hinterland of participants, swelling urban populations, and providing a venue for economic transactions and information exchange as well as disease transmission (Ahmed et al. 2006, Hartman et al. 2013). Urban infrastructure in such locations must be elastic enough to support boom-and-bust population cycles. Ritual spaces often had specific, gendered meanings for both residents and visitors, being one of the few sanctioned spaces outside the home for both production and consumption. In Mesopotamia, "temple women" manufactured textiles (Stol 1995, p. 137), and Qing-period Beijing women utilized temple precincts not only for shopping but also for dining and watching theatrical performances (Brown 2009, p. 283). Like their urban counterparts, hinterland ritual landscapes were experienced differently by women and men; for example, Nenzi (2008) has documented how pilgrimage provided legitimate opportunities for urban elites, particularly women, to move around in the countryside.

Cities grew within regional hinterlands that were already crisscrossed by migrations, some of which may have been prompted by pilgrimage to preexisting sites of ritual importance. Rural residents sometimes constructed ritual structures that mirrored their urban counterparts (see Steinkeller 2007, p. 191) or carried back paraphernalia such as figurines and censers from trips to the city (see Hirth 2013, pp. 133, 139). Religious traditions also reached the hinterlands via "place contagion" (Martin & Kryst 1998) when urban-initiated practices became embedded in the countryside not only through the direct importation of architectural styles and objects but also through the incorporation of religious iconography into agricultural infrastructure (see Shaw 2013 for Buddhist India; Morrison 2000 [1995] for medieval India). The dynamic tension of urban-rural ritual practice may, however, have led to philosophical conflict and contested spaces. In the Buddhist tradition, for example, monks and nuns were advised to eschew urban life by constructing monasteries out in the countryside, although the urban areas remained essential sources of revenue and patronage.

Political Landscapes

Urban-based political leaders' relationships to the distant countryside were likely to have been complex at the best of times: Hinterlands are by definition distant; their management requires administrators who might misappropriate their jurisdictions to compete for authority; and hinterland boundaries are often porous and contested. By contrast, cities as compact population centers presented more tractable possibilities of resource management and display. Inner urban landscapes enabled the physical personage of the ruler to be visually augmented by monumental constructions—fortification walls, central plazas, inscriptions, religious structures—that emphasized authority and served as a testament to leaders' organizational capacities as well as a materialization of more abstract concepts such as territoriality (e.g., Moore 2005; Kim et al. 2010; Ardren & Lowry 2011, pp. 439–40; Gallon 2013; Kim 2013). Even the Romans, with their well-integrated Mediterranean bureaucracy, relied on a "town-and-territory" model of spatial organization in which population centers were the focus of elite investment (Corbier 1991, p. 212).

Ancient authorities also utilized visual references to punishment and threats in their spatial investments. Taking inspiration from Foucault's observations of the way in which power is

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expressed in urban social spaces, Swenson (2003, pp. 257, 274) has argued that the ball courts and temples prominently found within Mesoamerican and Andean cities constituted "elite arenas of ritual violence." Similarly, stelae from the first-millennium BC Assyrian sites of Tel Barsnip and Samal show war captives, a direct message to urban inhabitants about the fate of uncooperative territories (Porter 2001, p. 381). But depictions of power need not have been visible to be effective: The deposition of sacrificial bodies in places such as the Pyramid of the Feathered Serpent at Teotihuacan (Sugiyama 2005) and the Royal Graves at Ur (Dickson 2006) would have resulted in long-lived memories about the relationship between architecture, political authority, and ritual.

Political leaders selectively utilized hinterlands as places for aggrandizement, warfare, alliance building, and resource acquisition (Golden 2003). Such investments were usually point-specific rather than all-encompassing: Jurisdiction was expressed through simple territorial markers (Harmanşah 2007), military encampments (A.T. Smith 2003), ritual structures (Acuto et al. 2012), and storage facilities and roads (Jenkins 2001). In some cases, rulers engaged in more comprehensive reorganizations of hinterlands by creating new capitals or moving people from one place to another, as evidenced in Mesopotamia (Joffe 1998, Harmanşah 2012), the Andes (Acuto et al. 2012), and South Asia (M.L. Smith 2006b). More often, rulers used existing networks among population centers and augmented the historical links already enjoyed by those places, taking advantage of the knowledge generated in the commercial realm as encompassed in the phrase, "The flag follows trade" (Webb 1975, p. 155). An excellent example of this process is provided by the Indian Ocean region starting in the fifteenth century AD, when merchants from Portugal, the Netherlands, and Britain sequentially connected coastal cities with increasing amounts of imperial imprimatur which eventually brought disparate realms under a single political regime; in the process, some urban centers traded hands frequently and served as highly visible proxies for territorial control.

Cities in networks of interaction often had greater longevity than did the states in which they were encompassed, however, and spectacular textual accounts of urban capture may overemphasize the role of regional political entities. Cities engaged in networks of trade and ritual connectivity that were often only tangentially dependent on the presence of a strong political authority, as seen in the trans-Saharan networks of trade starting in the eighth century AD, the Silk Route *entrepôts* of Central and Eastern Asia, and the Hanseatic League. Although political stability provided peaceful conditions for exchange, banditry could exist even in strong states; in some cases nongovernmental institutions took over the function of providing logistical support as did Buddhism along the Silk Route and as did Islam in the Sahara and along portions of the Indian Ocean.

Economic Landscapes

Urban economic landscapes consist of distinct inner and outer components. Within cities, differential categories of wealth acquisition, production, and display are easily readable in residential and commercial sectors. Wealthy enclaves in both ancient and modern cities are indicated by the presence of large, well-built architectural spaces (e.g., Laurence 1994, von Falkenhausen 2008). At the opposite end of the economic spectrum, slums are indicative of class distinctions expressed through a lack of legal title to land and a concomitant absence of central investment in infrastructure. Although cities' inner landscapes of slums today are viewed with despair by analysts and city planners (summarized in Davis 2006), slums do have some generative capacities. Slums accommodate new migrants who take upon themselves the burdens of house construction (cf. Kohn 2010) and the creation of provisioning networks through petty vending (Iyenda 2005). As a result, slum dwellers place relatively few demands on city services while providing low-cost labor for the manufacturing and service sectors.

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Slums may even be a functionally necessary component of initial urban growth. Slums come into existence under various circumstances, including impositions of colonial rule (Lusambili 2007), hinterland conflicts (Khalaf & Kongstad 1973, pp. 17–18), and incomplete urban design even in "planned" capitals (Mustafa 2005). The most prominent global cities today passed through a slum phase at times when migration overwhelmed housing capacity and urban infrastructure (Pepper & Richmond 2009 for London; Anbinder 2001 for New York City; Lu 1995 for Shanghai). The vast expanses of ancient cities also provide the opportunity to focus on low-income regions to investigate the juxtaposition of different social strata (see M.E. Smith 2010). Historical documents indicate a mixed social topography in ancient cities, and archaeological investigations at Pompeii (Italy), Teotihuacan (Mexico), and Chan Chan (Peru) illustrate that poorer residences were sometimes interspersed with elite dwellings in a manner that probably facilitated working relationships and economic interdependence (see, e.g., Cowgill 2003, p. 41). Because they are located in peripheral areas marked by low-visibility architecture, however, stand-alone slums may be difficult to distinguish from trash deposits and other disturbed contexts and may require an explicit theoretical framework for discovery and interpretation.

Some types of cities, such as ports and oasis centers, were likely to have come into existence precisely because of their value for exchange, indicating the primacy of economics for initial urban growth channeling rural-to-urban production but also accelerating consumption patterns within cities. Modern ethnographic evidence illustrates the production of durable goods, services, and even agricultural products at various scales within the urban environment (Ambrose-Oji 2009). Distribution mechanisms include itinerant peddlers and markets that can also be found in the countryside, but cities can support novel distribution patterns found only in areas of high population density such as bazaars in which many establishments sell the same goods.

Ancient urban centers are often interpreted as "consumer cities" that exploit their hinterlands (an analysis usually credited to Max Weber (1958 [1921]) but noted by much earlier writers such as the eighteenth-century theoretician Richard Cantillon; see Erdkamp 2001). As Erdkamp (2001, p. 342) explains, rural hinterlands are not undifferentiated but are managed for distinct purposes, including bulk subsistence staples, boutique crops, or raw materials for value-added production (such as flax or wool). Whether organized as command economies or market systems, cities had a dynamic demand-to-supply relationship that resulted in changes over time: Populations grew, migrants introduced new food preferences, and residents adopted new preparation technologies.

Archaeological investigations show that production as well as consumption occurred throughout ancient cities, as seen in the apartment compounds at Teotihuacan (Storey 1992, Cowgill 2008) and among residences at Harappa (Kenoyer 1998). Large-scale production has been documented at the fringes of population centers, such as the *kerameikos* area of ancient Athens, which also served as a cemetery zone. Historical texts from Mesopotamia (McCorriston 1997) and the medieval Indian city of Vijayanagara (Sinopoli 2003) document massive textile production of which almost no physical trace would remain. Other forms of nearly invisible economies revealed in ancient texts include the service industry, as cities would have provided many opportunities for manual labor related to transportation, record keeping, and household services ranging from cleaning to child minding.

Cities' outer economic hinterlands have been well-studied for ancient and modern cases. The first cities transformed their surroundings, such that the appellation "urban" also brought into existence the definitional category of "rural" (see Yoffee 1995, p. 284; Cowgill 2004, p. 527). Some researchers have further credited the first cities with having very profound generative effects on their surroundings: Taylor (2013), channeling the urban theorist Jane Jacobs, favors a very broad definition of cities that reaches back well into the Neolithic era and has argued that the development of agriculture was dependent on cities. Given the now well-accepted confirmation

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that agriculture long predated cities, Jacobs's "cities-first" model requires modifications but still contains an element of truth in that cities provide significant boosts to rural productivity. Efficiencies of cultivation were prompted by two factors: first, the presence of a city as a settlement type in which most people were not farmers and hence needed to be fed; and second, the fact that laborers who might have grown food were leaving rural areas to seek nonagricultural work in cities (Hanson 2011), resulting in further pressure (and opportunity) for those who did remain in the countryside. Rural entrepreneurs, seeking to maximize production efficiencies, might have actively sought out centrally sponsored infrastructure such as roads and canals and engaged with nascent political leaders to invest in hinterlands.

Archaeological survey in Mesopotamia has documented the extent to which urban needs prompted intensive rural cultivation, as demonstrated by the widespread refuse that constitutes evidence for "manuring" of ancient fields (Wilkinson 1982). Historical documents are of some assistance particularly for the Roman period, for which texts show how the government's provision network supplied free grain for citizens from far-flung provinces including Egypt and Sardinia (Garnsey 1983). Cities' regional topography played a role in the types of provisioning strategies utilized, as ports and other cities located on rivers and oceans could often be more effectively supplied, even for staple foods, through water transport than by growing crops in their immediate environs.

In addition to food, hinterlands also provided water. Water has been of increasing interest to archaeologists who have evaluated urban hydrology from the perspective of agricultural productivity, health and hygiene, urban aesthetics, and political investments in infrastructure (e.g., Zarkadoulas et al. 2012). Much of the work on water thus far has taken place on ancient tropical cities (rather than, as one might expect, arid-lands locations; see Fletcher et al. 2008; Kim 2013; and summary in Scarborough 2003). Researchers have emphasized that an overabundance of water is as great a problem as scarcity, as floods can be debilitating for both inner and outer landscapes. Water-management infrastructure appears to have a greater potential for catastrophic failure than does infrastructure for food or fuel, a factor that has been highlighted for ancient Balkh in Afghanistan (Khazeni 2010); in modern New Orleans (Brinkley 2006); and in the projection of the unequal effects of climate change on flooding in wealthy and poor global cities (Douglas et al. 2008).

Hinterlands also provided resources in the form of taxation and sources of conscripted labor. Political leaders could elicit taxes in kind through tithes of agricultural produce or raw materials or through the imposition of a financial tax, which necessitated the existence of markets to convert raw materials, labor, and finished products into monetary units. Some taxes might be returned to the countryside through the provision of infrastructure such as roads, canals, storage facilities, and fortifications, but the expropriated funding was often disproportionately used for urban aggrandizements such as temples, palaces, and monuments, providing a mechanism by which the efforts and produce of outer landscapes were channeled into the embellishment of inner landscapes that further established cities as places of distinct aesthetic qualities.

Ritual, political, and economic activities often became interconnected as simultaneous alterative mechanisms for addressing both opportunities and uncertainties. J.W. Hanson's (2011) examination of the Roman eastern Mediterranean illustrates the extent to which a landscape that is packed with cities has a collective effect distinct from that of regions in which a "primate" city draws in a singular hinterland. In densely packed urban lattices, the competitive interconnectivity of resource provision and resulting economies of scale make the entire region more productive and more attractive as a settlement zone (not unlike the contemporary effects of the Washington–Philadelphia–New York–Boston corridor or Germany's Rhine-Ruhr metropolitan area). Political, economic, and social conditions are intertwined during periods of decline as well. As Flad & Chen (2013, pp. 228–29) note for the Three Gorges region of China in the first

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millennium BC, the intensity of ritual divination by local political leaders fluctuated in tandem with increased demands for traded salt and in response to disruptive regional political conflicts and the development of new technologies such as the use of iron pans instead of pottery for salt making. In medieval Europe, guilds restructured themselves to be protectors of morality as well as the locus of economic information at a time of demographic collapse (Richardson & McBride 2009).

Social Landscapes

Cities have a distinct impact on human psychology and on individual and household social relationships. Social scientists have been divided on whether cities foster anomie and disaffection with adverse effects on human health (e.g., Wirth 1938, Webber et al. 2010) or whether cities enable new social configurations to be established through which individuals enhance their physical and mental well-being (e.g., Singh & Siahpush 2002, Glaeser 2011). Researchers, social commentators, and urban residents alike have noted that individuals at all socioeconomic levels recognize this range of emotions and philosophize about the ways in which perceptions of opportunity and potential benefit outweigh objectively deleterious conditions such as pollution, increased expenses, and smaller living spaces (e.g., Lusambili 2007, Webber et al. 2010).

For would-be immigrants, the existence of a city provides many opportunities for decision making, not only about whether to depart the countryside but also about what to do upon arrival in the urban realm with its new arenas of employment, residence, leisure activities, and acquisition of goods. Because cities even in ancient times grew quickly through migration, there must have been many cases in which nearly everyone in a newly emergent city was a migrant or a first-generation offspring of migrants. Only when cities had been in place for some time would there have been any sense of established residents, and they would have been continually juxtaposed against more-recent immigrants who brought with them their own social networks and settled in communities where they shared languages, customs, religion, or national backgrounds (Abu-Lughod 1969, Sanders et al. 2002, Yu 2004). Port cities are particularly distinct for having ethnic enclaves tied to long-distance voyagers, a phenomenon seen in ancient cities as well as in modern ones.

The social landscapes of cities encompass ties sustained by inhabitants to rural dwellers and families in distant regions, with a fluidity of movement back and forth from the urban center (e.g., Grieco 1995, Andersson 2001, Nguyen et al. 2012). Familiarity with the surrounding countryside, augmented by the retention of kin ties, enabled rural dwellers to seek "safety in numbers" at times of hinterland crisis and enabled urban dwellers to take advantage of rural economic opportunities and to disperse into the countryside when urban warfare, natural disasters, or epidemics made cities unappealing. Some of the most heavily urbanized areas in antiquity, such as Mesopotamia, continually cycled through periods of population dispersals and coalescence such that their inhabitants were likely to have conceptualized cities as fluid entities in both space and time. Although archaeologists tend to assess urban centers as places of steady occupation because they produce such large sites, it might be more appropriate to see the agglomeration of urban architecture and infrastructure as an accretionary but staccato process in which some decades saw relatively low population densities within the urban shell.

New social networks did not always result in greater connectivity or greater freedoms for all categories of migrants. Different ethnic or socioeconomic groups may compete with each other for the rights to perform their ethnicities visibly in the urban realm and thereby suppress some expressions of identity (Streicker 1997, Sassen 2004; cf. Scott 1985). Abu-Lughod (1969) observed that in mid-twentieth-century Cairo, women found their movements constrained and scrutinized in the urban context compared with their experiences in villages. In both modern and ancient cities, the service industry and durable-goods production provided employment for

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rural migrants, but the resultant income disparities would have accentuated social and ethnic differences among urban populations. As Stissi (2013) has noted, the marginal living conditions of Athens' potters stand in stark juxtaposition to the social value of their products, which were in high demand throughout the Mediterranean world; similar conditions prevailed in Edo-period Japan, where the delicate woodblock illustrations today associated with elite urban aesthetics were produced in small, cramped workshops.

FUTURE DIRECTIONS IN URBAN LANDSCAPE STUDIES

For both modern and ancient cities, rural-urban relationships are increasingly understood as dynamic interdigitations rather than linear, unidirectional processes of integration/growth followed by decline/collapse. Then as now, individuals would have experienced urbanism at various spatial scales both through direct engagement with the city and as a ripple effect in the surrounding countryside. Productive future scholarship can be suggested for the following domains: social integration as exhibited in biology, ethnicity, and material culture; sustainability, particularly related to food and fuel; and the agentive assessment of rural-hinterland dynamics as extended from phenomenological approaches.

Population influxes are a distinct hallmark of both modern and ancient cities, and archaeologists have utilized both isotope and DNA analysis of skeletal populations to evaluate ancient migration patterns (e.g., Price et al. 2000, Hodell et al. 2004, Bethard 2013). However, the social integration that produces community is not always a harmonious and unproblematic process. Acts of communal or ethnic violence in antiquity are difficult to distinguish from other forms of interpersonal violence; however, one potential case is provided at the early Mesopotamian city of Tell Brak, where mass graves on the edge of the settlement contained hundreds of disarticulated juveniles and young adults in a single depositional event (McMahon et al. 2011). Many of the individuals showed evidence of healed cranial trauma and long-term nutritional stress, suggesting that they formed a group subjected to repeat episodes of violence and deprivation (McMahon et al. 2011, p. 209). At Teotihuacan, Nichols et al. (1991) noted that irrigation works were covered over by evidence for an influx of nonlocal Zapotec migrants whose occupation of the area was presumably carried out at the instigation of the state but was likely to have provoked resentment by local farmers who lost productive land.

Because cities have concentrated populations that depend on rural food production, they have become a focus of discussions about sustainability for both ancient and contemporary eras (Falconer & Fall 1995, Redman 1999, Buckley et al. 2010, Barthel & Isendahl 2012; see also Dennehy 2013). Archaeologists have examined the long-term viability of complex societies, and their collapse, because of the large number of ancient cities that were abandoned and because of interest in applying the concepts of sustainability and resilience as best-practice approaches to contemporary urban growth. Studies of collapse and sustainability have been a particular focus of work at the Cambodian city of Angkor (Fletcher et al. 2008) and in the Maya region (Emery 2010, McNeil et al. 2010). These types of studies could be expanded to include reflections on how sustainability in the contemporary world is strongly tied to issues of social justice that are addressed by both governmental and nongovernmental organizations [e.g., food surplus programs and independent initiatives such as Feeding the 5000 (**http://feeding5k.org/about.php**)].

Microregional climate change, natural disasters, and the effects of invasive species have been undertheorized for ancient sites, although faunal, botanical, and climate data sets are now increasingly robust and primed for such analyses. Newly emergent paradigms for the holistic treatment of archaeological data include the Archaeology of the Human Experience (see Hegmon 2013) and social network analysis (see Knappett 2013). Archaeologists should also be alerted to

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the longitudinal data sets developed by other disciplines which can enhance site-specific studies, such as the History Database of the Global Environment (Klein Goldewijk et al. 2011) and the Global History of Health Project (**http://global.sbs.ohio-state.edu**).

Archaeologists have been slow to evaluate the effects of fuel provisioning on the natural resource balance of the surrounding environment, for which modern assessments may provide some stark models to test. For example, Brouwer & Falcão (2004) note that in Maputo, Mozambique, the consumption of organic fuel (wood and charcoal) has actually been increasing over time despite the existence of other fuel sources. Residents of ancient cities would have required fuel for cooking and for high-temperature production of glass, metal, and pottery and may have devoted as many or more resources for the transportation of fuel as for food and water.

Rural-hinterland dynamics created more than just a binary between urban elites and rural laborers. Cities are also likely to have been the first locus for the emergence of a distinct intermediate stratum of producer-consumers who engaged in white-collar administrative work. The presence of what have been identified as "lesser elites" at Teotihuacan (Cowgill 2004, p. 538), "intermediate elites" in first-millennium AD Southeast Asia (Gallon 2013, p. 11), "townsmen" in Middle Kingdom Egypt (Quirke 1991), and *shi* (educated individuals who had passed government examinations) in first-millennium BC China (Lu 1998) constitute evidence for the emergence of a middle class that can be analyzed in the same terms as modern ones (cf. Heiman et al. 2012). These middle-stratum households would have manifested their capacities for acquiring new architectural and material forms in ways that defined urban ways of being, whether through aspirational consumption in the city (M.L. Smith 2012) or through the demonstration of "citified" ways in the countryside (cf. Jeffery et al. 2011).

CONCLUSIONS

Improvements in archaeological technologies and an awareness of the variable scale of urban footprints enable a more complex, nuanced analysis of city life. Archaeologists are using various techniques ranging from satellite imagery to ground-based remote sensing and targeted excavations to analyze how hinterland inhabitants selectively integrated themselves with urbanized economies and how rural communities sustained interactions independently from the nearest urban centers. Archaeologists are also increasingly aware that cities provide a phenomenology of experience, ranging from simple factors such as the streets available for pedestrian traffic to the most elaborate, staged monuments and events. Many of the key elements of both inner and outer urban landscapes, such as transportation, infrastructure, and production systems, relied on the collective activities of individuals and households from across the socioeconomic spectrum whose dynamic interactions can be read in the material record.

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