



The Later Phases of Southern Mesopotamian Urbanism: Babylonia in the Second and First Millennium BC

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Abstract

Although considerable attention has been devoted to early urbanism in southern Mesopotamia, the later development of cities in the region has been neglected. By studying the Babylonian cities of the second and first millennia BC, it is possible to trace continuity and change in urbanism over some 3000 years of recorded history, from city-state to empire. The ideal of the southern Mesopotamian city comprised a standardized inventory of architectural elements that was remarkably persistent but also flexible, since it did not dictate the details of their plan or construction, nor their spatial relationship with one another. The salient characteristic of the city was its role as religious center: each city's identity was bound up with its main temple, which housed its patron deity and dominated the social and economic life of the city and its hinterland.

Keywords Urbanism · Southern Mesopotamia · Babylonia · Temple · Cult center · Neighborhood · Household · Cuneiform texts

Introduction

This paper examines the later stages of southern Mesopotamian urbanism, that is, of Babylonia in the second and first millennia BC. The primary aim is to address a major gap arising from the fact that considerably more scholarly attention has been paid to the early phases of urban history in southern Mesopotamia than to the later stages, making it difficult to trace long-term developments. A second objective is to provide a much-needed synthesis of Babylonian cities at a time when fieldwork in southern Mesopotamia is undergoing a resurgence. Based on a reappraisal of the

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evidence for Babylonian urbanism, I trace cities across two millennia of political development from city-state to empire.

Southern Iraq is traditionally considered the primary locus for the development of cities during the second half of the fourth millennium BC. Uruk has played a central role in this narrative, not only as the supposed “first city” but also as the place where writing was first developed (Fig. 1). However, the primacy of Uruk has been questioned recently because some northern sites, including Tell Brak in Syria, already had achieved urban status during the Middle Uruk period, prior to any direct contact with Uruk (Emberling 2003, pp. 262–265; McMahon 2020; Ur 2012, pp. 536–538). By the end of the Late Chalcolithic (LC) 3 phase (c. 3600 BC), large sites were found across northern Mesopotamia, and interaction with the south—the so-called “Uruk expansion”—came about only after that, in LC 4–5 (Lawrence and Wilkinson 2015; Marchetti et al. 2019, pp. 215–216). Following these early developments,



Fig. 1. Map of southern Mesopotamia showing key excavated urban sites (created by the author using Antiquity À-la-carte)

there was a hiatus in northern urbanism between c. 3000 BC and 2600 BC (Lawrence and Wilkinson 2015, p. 329). Only in southern Mesopotamia, do we witness continuity in urbanism from the early cities of the fourth millennium to the city-states of the third millennium BC and beyond. The region, therefore, presents a unique opportunity to investigate urban development over a remarkably long period, from the fourth millennium BC until at least the end of the first. This time frame encompasses some 3000 years of recorded history, with numerous cuneiform texts in Sumerian and Akkadian that have a significant bearing on urbanism. By addressing the later phases we can trace the trajectory of urban development to the end of “cuneiform culture” (Radner and Robson 2011), an arbitrary cut-off arising out of problematic disciplinary boundaries (Bernbeck 2012, p. 88). Many Babylonian urban sites continued to be occupied after the end of the first millennium BC; from an urban studies perspective, it would be desirable to follow their later development, but that is beyond the scope of this study.

It is generally assumed that the essential characteristics of the southern Mesopotamian city were established during the earliest phases of urbanism and remained stable thereafter. However, investigation of the first cities, namely Uruk, Eridu, and Nippur, is hampered by the fact that only cultic structures have been excavated (Ur 2012, pp. 537–538). Other urban elements remain virtually unknown, and to get an idea of contemporary residential areas, scholars have had to look beyond the region, especially to Uruk period Habuba Kabira on the Syrian Euphrates where other kinds of structures, including what appear to be houses, have been uncovered (Strommenger 1980; cf. Vallet 1996). Recently, Stone used newly acquired data from high-resolution satellite imagery to gain a better picture of the southern cities of the later fourth and third millennia BC. By mapping the subsurface architecture visible on satellite images of sites dated through surface survey and studying this in combination with the data from Habuba Kabira, she concluded that the earliest southern Mesopotamian cities were less densely occupied than their third millennium counterparts, partly because of the practice of keeping herds of sheep and especially cattle within the city (Stone 2013, pp. 157–158). The mapping of sites from satellite imagery has to be treated with caution in the absence of ground truthing, though Stone could draw on some excavation data, for example, from the West Mound at Tell Abu Salabikh (Stone 2013, p. 161).

According to Stone (2013), only in the third millennium BC, did the southern Mesopotamian cities take on the principal characteristics that are familiar from later periods. These included city walls, densely packed residential areas, and institutions that now included the palace as well as the temple, in line with the development of Sumerian kingship during the Early Dynastic period (c. 2900–2350 BC). The political landscape was characterized by individual city-states (Postgate 1992, pp. 26–27). According to Ur (2012, p. 545), social organization comprised a nested hierarchy of households that were “different in degree, not in kind,” following the Patrimonial Household Model proposed by Schloen (2001) for the late Bronze Age Levant. Others, however, have rejected the application of this model to encompass every sector of Bronze Age society (e.g., Stone 2003).

Although it is possible to trace urban development from the earliest cities of the fourth to the end of the first millennium BC, this has scarcely been attempted

with a level of detail that does justice to the sources now available. Van de Mieroop (1997) combines evidence from different periods to present a generalized portrait of the Mesopotamian city, while accounts of southern Mesopotamian urbanism often break off around the mid-second millennium BC (e.g., Emberling 2015; Stone 1991, 1995). Studies of later cities focus almost exclusively on Babylon, albeit with important insights (e.g., Van de Mieroop 2003). Liverani (2016) traces the intellectual history of scholarship about ancient Near Eastern cities from their rediscovery to the present day, focusing on ideas and models rather than an empirical treatment. Stone (1991, 1995) deals with southern Mesopotamian urbanism into the mid-second millennium BC, citing as rationale for this cut-off “an occupation hiatus for much of the second millennium,” plus the fact that only Babylon offers a good overall picture of first millennium city layout (Stone 1995, pp. 237–238). However, recent research weakens the case for a substantial hiatus after the First Dynasty of Babylon: there is now some archaeological evidence for the elusive Sealand I dynasty (al-Hamdani 2015, 2020; Campbell et al. 2017), there has been a revival of interest in the Kassite era (c. 1595–1155 BC) (Bartelmus and Sternitzke 2017; Paulus and Clayden 2020), and there is some archaeological basis for studying the Kassite cities and settlement pattern (Brinkman 2017, p. 2). While Babylon has the best-evidenced city layout of the first millennium BC, contemporary sites such as Uruk and Ur contribute important data. A focus on the capital, Babylon, overemphasizes the role of the king in generating urban form (Baker 2007) and fails to contextualize the capital within the wider settlement hierarchy. The lack of a more wide-ranging treatment of the later phases is a missed opportunity to follow the story of southern Mesopotamian urbanism through to its conclusion. Here, I trace urban development into the end of the first millennium BC, corresponding roughly to the disappearance of cuneiform writing in the early Parthian era. I use the extraordinarily rich written record that complements the archaeological data in a way that is comparable to the Greek and Latin sources available to classical archaeologists. Numerous cuneiform texts provide the chronological framework, encompassing several major episodes of regime change. They also contribute important data on society and economy that can be correlated with the archaeological record to elucidate the relationship between urban form and contemporary society.

Setting the Scene

Environment and Natural Resources

Southern Mesopotamia—Iraq south of Baghdad—corresponds to the alluvial plain watered by the southern courses of the Tigris and Euphrates Rivers. This plain is bounded to the west by a limestone plateau and to the east by the Zagros Mountains (Pournelle 2013, p. 14). Ancient levees accumulated next to the rivers and other channels through sand and silt deposition over thousands of years (Wilkinson 2012, p. 7). The rivers were prone to meandering in the flat terrain (Pournelle 2013, p. 14). Sediment accumulation led not only to levee formation and the raising of the

river channels over time but also flooding when the rivers overflowed their banks (Wilkinson 2012, p. 7). By the early second millennium BC, the course of the Tigris had shifted to the east, and the Euphrates, henceforth the focus of settlement, had shifted to the west (Jotheri et al. 2016; Pournelle 2013, p. 27).

Southern Iraq is poor in natural resources, lacking metals, good timber, and stone, all of which had to be imported (Moorey 1994; Potts 1997). Mud was the primary construction material, mixed with chopped straw for use in sun-dried mud-bricks, baked-bricks, wall plaster, and roofing. Local timber was used for door jambs, doors, and roof beams. Imported timbers were needed for larger structures since locally available trees were limited in span (Moorey 1994, p. 355). Fuel was needed for firing bricks, so baked-bricks were used sparingly outside monumental contexts. Reed was used not only in construction, especially in roofing, but also for doors and screens. Reed structures, including urban dwellings, are mentioned in written sources but such perishable materials rarely are preserved (Baker 2007, p. 71; Joannès 2016). Bitumen from local sources was used for waterproofing built fixtures exposed to water, such as drains and toilets (Moorey 1994, pp. 332–335).

Subsistence

Throughout southern Iraq, average annual rainfall is inadequate for sustaining cultivation without artificial irrigation (Postgate 1992, p. 14). The emergence of cities went hand in hand with the collective enterprise required to mobilize a workforce for digging and maintaining the necessary irrigation infrastructure (Widell 2013, p. 57). Principal crops were barley and dates; wheat, emmer, legumes, sesame, and onions also were significant (Postgate 1992, pp. 167–172). Date orchards on the levees were interspersed with fruit trees and vegetables. Arable fields were located beyond the date orchards on the well-drained levee soils; in fallow years they were used for grazing (Postgate 1992, fig. 9.1). At the head of the Gulf, extensive marshlands known to the Babylonians as the “Sealand” formed a distinct ecosystem, with subsistence centered on fishing (Postgate 1992, pp. 6–7). The importance of these marshes in early Mesopotamian urbanism is being reevaluated (Hritz et al. 2012; Pournelle 2003; Pournelle and Algaze 2014).

Animal husbandry centered on sheep (and goats), bred primarily for dairy products and wool (Postgate 1992, pp. 158–163). Given the lack of natural resources, woolen textiles were a significant export for the Babylonians, enabling them to acquire much-needed imports. Cattle were raised particularly for milk and hides, as well as for traction (plowing) (Postgate 1992, pp. 163–164). Although donkeys and mules were important for long-distance trade and communications in northern Mesopotamia (Assyria), they were less significant in the south where water-borne transport predominated.

Historical Setting

Although “Babylonia” is sometimes used to denote southern Mesopotamia in earlier periods, I restrict its use to the second and first millennia BC. In the earlier second

millennium BC, the city-states of Isin and Larsa were important powers, followed by the kingdom of Babylon; the region was briefly united under Hammurabi, with Babylon as the capital. Under Hammurabi's successor, Samsuiluna, Babylon lost control of the southern part of southern Mesopotamia to the Sealand I dynasty, whose territory briefly extended as far north as Nippur in central Babylonia. Following the Hittite sack of Babylon in 1595 BC, the Kassite dynasty eventually terminated the Sealand I dynasty. The exact chronology and political history of the Sealand I and early Kassite dynasties remain uncertain (Boivin 2018; van Koppen 2017). In the second half of the second millennium BC, the region was controlled by the Kassites, followed by the shorter-lived Isin II (1153–1022 BC) and Sealand II (1021–1001 BC) dynasties. The late second and early first millennia BC are poorly documented, both archaeologically and textually. The available evidence increases steadily during the eighth and seventh centuries, when the Assyrian empire (c. 911–612 BC), based in northern Mesopotamia, dominated the entire region. Following Tiglath-pileser III's conquest of Babylon in 729 BC, Assyria maintained direct rule over Babylonia more or less continuously until it regained its independence under Nabopolassar (626–605 BC), founder of the Neo-Babylonian dynasty. After Assyria fell to the Babylonians and Medes in 612 BC, the Neo-Babylonian empire was the dominant Near Eastern power, but it had lasted less than a century when it was defeated by Cyrus in 539 BC. Babylonia remained a core region of the Achaemenid empire until Alexander's conquest in 331 BC. Shortly after Alexander's death, the eastern part of his empire came under the control of the Seleukids, and, finally, in the second century BC, Babylonia came under Parthian hegemony with the conquest by Mithridates I in 141 BC.

As some of the chronological terms are applied differently by different scholars, for the sake of clarity, I use the following abbreviations: OB = Old Babylonian (including the Isin-Larsa phase), roughly the first half of the second millennium to 1595 BC; MB = Middle Babylonian (including the Kassite period), the second half of the second millennium; NB = the first half of the first millennium, including the period of Assyrian domination and of the Neo-Babylonian dynasty; LB = Late Babylonian, the second half of the first millennium from 539 BC on, encompassing the Achaemenid, Seleukid, and early Parthian eras. I use more specific designations, such as "Kassite," "Achaemenid," etc., where appropriate.

Dates follow those given by Beaulieu (2018) and are cited according to the Middle Chronology, which places the Hittite sack of Babylon in 1595 BC. Alternative proposals place the fall of Babylon in 1651 BC (Long or High Chronology), in 1531 BC (Short or Low Chronology), and in 1499 BC (Ultra-low or New Chronology). Although none of these schemes has met with universal approval, the Middle Chronology is widely used and is best retained until a consensus is reached (Roaf 2012, pp. 170–171). Beaulieu (2018) provides a detailed account of the period covered by this study, with maps and timelines, while Bryce (2016, pp. 88, 101, 130) presents maps of Babylonia at various periods.

History of Archaeological Investigation

Several cities, including Babylon, Borsippa, Kutha, and Sippar, were investigated in the 19th century (Chevalier 2012; Reade 1986). This early work, conducted before the development of scientific techniques of excavation and recording, has left a legacy of building plans whose details are difficult to interpret and verify. “Regular” excavations were often followed by illicit digging, resulting in vast numbers of unprovenanced finds, especially cuneiform tablets, which found their way into Western collections via the antiquities market.

The era of scientific excavation began with the German excavations at Babylon between 1899 and 1917 (Koldewey 1990; Pedersén 2021), which set the standard for systematic excavation, recording, and publication. Other 20th century excavations followed, including long-running projects at Ur and Uruk (Matthews 1997). Political circumstances, especially the Gulf wars of 1991 and 2003, brought about a virtual cessation of fieldwork, at least by foreign missions. They also gave rise to looting at many sites and some museums, including the Iraq National Museum (Brodie 2008, 2011); Babylon was damaged through military occupation (Curtis 2011; Musa 2011). Significant threats to archaeology remain, and much remedial work is needed to strengthen and support local capacity (Matthews et al. 2020). The conditions under which Near Eastern archaeology is practiced, including the involvement of foreign teams in Iraqi archaeology and cultural heritage, remain contentious (Bernbeck 2012; Kathem and Kareem Ali 2021).

Since 1990 few excavations have been carried out on Babylonian sites, and it is only in the last few years that fieldwork by non-Iraqi archaeologists has resumed on a significant scale. New projects include those at Ur (Hammer 2019; Stone et al. 2021; Stone and Zimansky 2016), nearby Tell Khaiber (Campbell et al. 2017), and Tūlūl al-Baqarat (Lippolis 2016; Lippolis and Viano 2016). Although these new field projects are already producing significant results, for most Babylonian cities, we rely on older excavation reports. Table 1 lists the major excavated Babylonian sites by region and period, with selected literature. The sites discussed here fall within three main regions: northern Babylonia (Akkad), central Babylonia, and southern Babylonia. For the sake of completeness, Table 1 includes Old Babylonian and Kassite sites in the Diyala/Hamrin area and on the Middle Euphrates; however, my treatment of the evidence focuses on southern Mesopotamia.

History and Methodology of Survey

Settlement Survey

The fundamental surveys of Adams and others from the 1950s on laid the groundwork for our knowledge of southern Mesopotamian settlement history (see Hritz 2010, fig. 3). Key surveys covered the regions of Uruk (Adams and Nissen 1972), central southern Mesopotamia (Adams 1981), Ur and Eridu (Wright 1981), Kish (Adams 1972; Gibson 1972), Akkad (northern Babylonia) (De Meyer and Gasche 1980), and the Diyala (Adams 1965). The interdisciplinary Northern Akkad Project

Table 1 Principal excavations, by region and period

Site	Occupation period(s)*	References
<i>Northern Babylonia</i>		
Babylon	OB/MB/NB/Ach./Sel./Parth.	Finkel and Seymour 2008; Koldewey 1990; Pedersén 2021
Borsippa (Birs Nimrud)	OB/NB/Ach./Hell.	Allinger-Csollich 1991, 1998; Koldewey 1911, pp. 50–59, Taf. XII
Dilbat (Tell ed-Deylam)	OB/MB/NB	Armstrong 1992
Dur-Kurigalzu (Aqar Quf)	Kass.	Baqir 1946; Clayden 2017; Malko 2017
Išān Mazjād	OB	Mahdi 1986
Kish	OB/NB	Gibson 1972; Moorey 1978
Kutha	NB	Reade 1986
Sippar-Jahururum (Abu Habbab)	OB/NB/Ach.	De Meyer 1980
Sippar-Amnanum (Tell ed-Der)	OB/MB/NB	De Meyer 1978, 1984; De Meyer et al. 1971
<i>Central Babylonia</i>		
Isin (Išān Bahrīyāt)	OB/MB/NB	Hrouda 1977, 1981, 1987, 1992; Kaniuth 2017
Kesh (Tūlūl al-Baqarat)	NB	Lippolis 2016; Lippolis and Viano 2016
Māškan-šāpir	OB	Stone and Zimansky 2004
Nippur	OB/MB/NB/Ach./Sel./Parth.	Gibson 1975; Gibson et al. 1978, 1983, 1998; Zettler 1993
<i>Southern Babylonia</i>		
Eridu	OB/MB/NB/Ach.	Safar et al. 1981
Kissik (Tell al-Lahm)	NB	Safar 1949
Larsa (Sinkara)	OB/NB/Sel.	Huot 1985, 1987, 1989
Tell Khaiber	OB/Sealand I	Campbell et al. 2017; Shepperson 2020
Ur	OB/MB/NB/Ach/early Hell.	Clayden 2020; Hammer 2019; Stone et al. 2021; Stone and Zimansky 2016; Woolley 1965, 1974; Woolley and Mallowan 1962, 1976; Zettler and Halford 2015
Uruk	OB/MB/NB/Ach./Sel./Parth.	Crüsemann et al. 2013; Finkbeiner 1991; Kose 1998; Van Ess and Fassbinder 2019
<i> Diyala and Hamrin</i>		
Ešnunna (Tell Asmar)	OB	Frankfort et al. 1932
Nerebtum (Išchali)	OB	Delougaz et al. 1990

Table 1 (continued)

Site	Occupation period(s)*	References
Saduppum (Tell Harmal)	OB	Miglus 2006–2008b; van Koppen 2006–2008
Tell Abbas	MB	Boehmer and Dämmer 1985, pp. 81–84, pl. 166
Tell Agrab	OB	Delougaz et al. 1990
Tell Imlihiye	MB	Boehmer and Dämmer 1985, pp. 1–19, pls. 1–57
Tell Zabeidi	MB	Boehmer and Dämmer 1985, pp. 23–80, pls. 58–165
Tutub (Khatājah)	OB	Delougaz et al. 1990; Frankfort et al. 1932;
Zaralulu (Tell ed-Diba 'i)	OB	Mustafa 1949
<i>Middle Euphrates</i>		
Haradum (Khirbet ed-Diniye)	OB	Kepinski-Lecomte (1992); Kepinski et al. 2012

*Abbreviations: OB = Old Babylonian; Kass. = Kassite; MB = Middle Babylonian; NB = Neo-Babylonian; Ach. = Achaemenid; Hell. = Hellenistic; Sel. = Seleucid; Parth. = Parthian.

in the Sippar region began in 1984 but built on work conducted by Gasche in the 1970s; a major outcome was a study of watercourses of the second and first millennia BC, based on satellite imagery and other data (Gasche and Tanret 1998). Armstrong (1992, p. 224) provides a very brief account of a survey in the region south of Dilbat (Tell Deylam). The last two decades have seen the development and application of techniques of remote site detection using high-resolution satellite imagery and unmanned aerial vehicle (drone) photography, both outside the area covered by traditional settlement survey (e.g., Hritz 2004), and within it (e.g., Marchetti et al. 2019).

The traditional settlement surveys involved locating settlement mounds, whether visually or using aerial photographs, and walking over them noting the distribution of surface finds, especially datable ceramics. Examination of a site was typically brief, aimed at determining the various occupation phases and their areal extent and noting topographical features. Challenges include the underrepresentation of older occupation levels because of their greater depth. Low-lying outer areas may have become buried under alluvial deposits, obscuring the extent of occupation, or they may have been destroyed by cultivation and other modern disturbances. Short-lived settlements, by nature low-lying and perhaps ephemeral, are particularly vulnerable to burial by alluviation or to modern disturbance, or they may simply be less visible (Altaweel 2020). Older aerial photographs and satellite imagery may reflect the settlement landscape in an earlier state prior to damage through intensive cultivation and other forms of man-made disturbance.

Although these regional surveys are foundational for our knowledge of southern Mesopotamian settlement, differing approaches to periodization hinder integration of their results. There is also the difficulty of identifying diagnostic ceramic types for each period, and significant changes in the ceramic repertoire tend not to align with the boundaries between major historical periods. Recent studies of second millennium pottery place the chronology of this period on a surer footing for the future (Armstrong 2017; Armstrong and Gasche 2014; Calderbank 2020), but their results cannot easily be applied retrospectively to earlier settlement surveys. With the exception of Calderbank's (2020) study of the Sealand I dynasty pottery from Tell Khaiber, these studies rely mostly on ceramics from excavations conducted prior to 1990; there is a clear need for additional well-stratified material.

Single Site Survey

Given the vast scale of many urban settlements, there are clear benefits to methods of investigation that do not rely exclusively on excavation. Single site survey, often carried out as a precursor to, or in tandem with, excavation, traditionally involves topographical survey combined with the mapping and collection of artifacts found on the surface to establish the sequence and extent of occupation at different periods, and potentially also to map specialized activity areas. Challenges are similar to those that affect traditional settlement survey.

In recent decades archaeologists have used drone photography and high-resolution satellite imagery to map subsurface architecture (Stone 2013, p. 157, 2018,

pp. 232–233). Its visibility arises from the concentration of surface salts over the mud-brick structures, which are denser than the surrounding soil, or from differential drainage and drying of features (Hammer 2019, p. 178; Stone 2018, p. 232). In the case of a relatively flat site, subsurface traces likely represent a single occupation horizon and may, therefore, reveal the urban layout (e.g., Altaweel 2020, pp. 8, 13). The method needs to be combined with ground truthing to verify the dating of the architecture revealed through remote sensing, especially if the site has not been previously surveyed or investigated. The resolution may be too low to pick up thinner walls, and this may vary by structure type (monumental versus domestic) or by period: Neo-Babylonian houses typically have wider walls than their Old Babylonian counterparts. Nevertheless, the method has shed new light on the internal structure of some well-known settlements by identifying subsurface structures or by revealing traces of buildings and street networks (e.g., Ur 2013 on Neo-Assyrian Kalhu).

Cuneiform Sources

The cuneiform sources contain information central to understanding the nature and form of cities and their relationship with contemporary society. They establish the historical and chronological framework, permit the identification of specific sites and buildings, and provide other information on urban topography. Their data on social and economic conditions are especially important for studying house and household, urban neighborhoods, and other aspects of urban form. Cuneiform texts may elucidate city form in the near absence of contemporary archaeological evidence, as with the residential districts of Hellenistic Uruk (Baker 2014a), unbuilt land within the residential areas (Baker 2009), or reed structures within the city (Joannès 2016).

The distribution of cuneiform sources over time and space mirrors long-term developments in urbanism. Abundant documentation tends to correlate with strong central government and economic prosperity, while periods of weakened state power are often characterized as “dark ages,” reflecting the dearth of written output that accompanies episodes of deurbanization. Two such eras span the later Old Babylonian period and Sealand I dynasty to the establishment of Kassite rule (c. late 18th to late 15th century BC), and the late second and early first millennium BC, from c. 1150 BC to c. 750 BC. Four main categories of written sources complement the archaeological evidence for cities: royal inscriptions, archival documents, literary-topographical texts, and maps and building plans.

Royal inscriptions are available for much of the second and first millennia BC, including the Old Babylonian period (Frayne 1990), the Isin II period to the end of Assyrian domination (Frame 1995), and the Neo-Babylonian period (Da Riva 2008, 2012, 2013a, b; Schaudig 2001; Weiershäuser and Novotny 2020). The Kassite royal inscriptions are mostly not yet available in modern translations. The few royal inscriptions dated after Cyrus’ conquest of Babylon in 539 include the Cyrus Cylinder (Schaudig 2001) and a single Seleukid royal inscription, the cylinder of Antiochos I from Borsippa (Stevens 2014).

Royal inscriptions often were buried as foundation deposits commemorating the reconstruction of a particular structure (Ellis 1968). They usually concern the building in which the inscribed object was deposited, though there are some documented instances of inscriptions found in a different location (e.g., Marchetti and Zaina 2020, p. 212). Baked-bricks, often inscribed, were robbed as building material from antiquity to the present. Usually, however, foundation inscriptions help identify individual settlements and structures since they mention them by name. They serve as a rough indicator of prevailing political and economic conditions: numerous contemporary monumental construction projects imply a strong and stable government (e.g., Da Riva 2008, pp. 110–112). Often the Neo-Babylonian royal inscriptions commemorate temples, but they include other structures such as city walls, quay walls, and palaces (Da Riva 2008, pp. 110–113).

The second text category comprises everyday archival documents drawn up to serve the needs of the moment, such as legal and administrative documents. Substantial corpora survive from the Old Babylonian (Charpin 2014) and the Neo- and Late Babylonian (Jursa 2005) periods. The relatively scarce Middle Babylonian archival documents are dominated by the numerous administrative texts from Kassite period Nippur (Paulus 2013) but with very little direct bearing on urbanism. Pedersén (1998, 2005) catalogs and analyzes the findspots and contents of excavated archives and libraries. Legal documents recording sales of urban property and matters of inheritance and dowry frequently contain information about houses and their immediate neighbors, including other urban properties and their owners, and topographical features such as streets and canals (e.g., Baker 2009, p. 90, fig. 1). They inform us about the social and economic background, which is especially useful when the tablets belong to multigeneration family archives (e.g., Baker 2015, pp. 390–398). Records that served as title deeds to property, such as real estate purchases or inheritance divisions, might be passed down over several generations. From an institutional context, administrative documents may shed light on large-scale urban construction projects. According to administrative documents from Uruk, the city's Eanna temple was responsible for supplying workers and materials for the construction of Nebuchadnezzar II's North Palace at Babylon (Beaulieu 2005), revealing the interconnectedness of the major Neo-Babylonian temple cities, and showing how manpower and resources were mobilized and organized in the monumental sector.

The third text category consists of the literary-topographical texts that celebrate the city as sacred space, dating mainly from the late second millennium BC on (George 1992, 1993). The tablet series Tintir, which is concerned with the cultic topography of Babylon, encapsulates the principal city elements, listing features such as the temples and cultic daises, city gates, city walls, watercourses, streets, and city districts (George 1992, pp. 27–72); these features often had elaborate ceremonial names in Sumerian, a language that had not been spoken since c. 2000 BC. Some topographical texts are concerned with the measurements of specific structures, such as the city wall of Babylon (George 1992, pp. 130–141), or Esagila (George 1995). Others consist of lists of ziggurats and city walls in different cities (George 1993, pp. 45–49).

The fourth and final text category that is particularly relevant to urbanism comprises the few clay tablets that bear city maps and building plans; their purpose remains obscure. These include the Kassite city map of Nippur (Oelsner and Stein 2011), which reveals a good fit when superimposed on the excavators' site contour plan (Zettler 1993, pls. 6–7). Another map fragment depicts part of western Babylon (George 1992, pp. 133–137, no. 16, pl. 28), an area that has never been investigated. Several building plans are also known (Bagg 2011; Dolce 2000; Heisel 1993). Most of these are house plans dating from the Old Babylonian period or earlier (Gruber 2012; Gruber and Roaf 2012); only a single house plan tablet is securely dated to the Neo-Babylonian period (Baker 2015, pp. 387–388). One large (albeit fragmentary) tablet in the British Museum bears the plan of a Neo-Babylonian temple whose walls are (uniquely) rendered brick by brick (Bagg 2011, p. 585, figs. 32–32a).

In addition to these four text categories, many literary texts allude to aspects of the urban experience (Liverani 2011, pp. 52–54); these include myths and epics, as well as other genres such as omens and lexical texts. The Standard Babylonian *Epic of Gilgamesh*, for example, begins and ends on the city wall of Uruk (George 2003). The omen series *Šumma Ālu* (“If a City ...”) deals with observations relating to the built environment (Freedman 1998, 2006, 2017); such omens shed light on prevailing ideas about urban living (Guinan 1989, 1996). Although literary texts inform us about Babylonian values and beliefs associated with cities, their contents can rarely be associated with a particular period and place, so I prioritize the nonliterary texts that have a direct, contemporary connection with specific aspects of the urban environment.

Texts and Archaeology

The wealth and variety of evidence available for the study of Mesopotamian urbanism calls for an integrated approach combining data from excavation, survey, and texts (Stone 2007, p. 213). The degree of disciplinary specialization involved ideally requires a multidisciplinary team; at the very least, each category of information has to be subjected to the appropriate methods of source criticism to evaluate its contribution to understanding Babylonian urbanism. The integration of textual and archaeological information is taken for granted in classical archaeology, where disciplinary conventions typically require an advanced knowledge of ancient Greek and/or Latin. In Mesopotamian studies, this practice is less well developed, largely because of disciplinary specialization. It is not possible to fully understand the urbanism of the historical periods without making use of written evidence, but there has been little explicit discussion of methodologies for integrating written and archaeological data from ancient Mesopotamia (e.g., Baker 2015, pp. 373–374; Matthews 2003, pp. 56–64; Zimansky 2005). Matthews (2003, pp. 58–60) rightly lamented the tendency for scholars—including archaeologists—to prioritize the textual sources over the archaeological. Discussion has centered on studies that draw on a direct contextual relationship between texts and archaeology, focusing on cuneiform tablets whose contents shed direct light on the very building in which they were excavated (e.g.,

Matthews 2003, pp. 60–64), especially Stone's (1981, 1987) work on Nippur neighborhoods, and Zettler's (1992) work on the Ur III period Inanna Temple at Nippur. Stone (1981) correlated physical modifications to an excavated Nippur house with adjustments in ownership following its inheritance by four brothers, while Zettler's (1992) study of the Inanna Temple examined the role of a family of temple administrators during the Ur III period. Possibilities for applying this approach in other contexts are limited because few Babylonian cuneiform tablets have been found in situ in a primary context.

In spite of the scarcity of well-contextualized tablets, we can integrate textual and archaeological data using more abstract reasoning when there is no direct contextual relationship between them. Charpin's (2003) study of merchant houses at Old Babylonian Larsa relies on a less direct connection between the texts and the excavated houses. Similarly, in recent studies of house and household, I mined the written record for Babylonian terms relating to the house and for scenarios of ownership and occupation that I integrated with the archaeological evidence to understand the social use of domestic space (e.g., Baker 2010a, 2015). In fact, most Babylonian texts whose contents are relevant to urbanism have no precisely recorded findspot, though they can usually be assigned to an ancient site and dated based on their contents. The ability to accurately situate archival tablets in time and space sets them apart from literary texts, whose contents may have a long, complex transmission history. The same is true of royal inscriptions, which are generally undated but can be assigned to a specific king's reign.

Here, I use cuneiform sources in different ways, depending on the topic. Close study of the Babylonian terminology offers an emic perspective at the level of settlement systems as well as the city, where they attest to topography, including features that are poorly represented in excavation (e.g., unbuilt land, shops, alleys) or have not yet been recovered (e.g., reed dwellings). Numerous documents relating to marriage, property transfer, and inheritance contain rich data on social, economic, and political conditions that inform our understanding of urban living and of the role of the inhabitants in shaping their environment.

Babylonian Urbanism: A Synthesis

Definitions and Settlement Types

Much ink has been spilt on the problem of defining and identifying the ancient city. The diversity of approaches reflects the lack of a clear consensus; in fact, the urban concept itself has recently been described as “unworkable” (Gaydarska 2016, p. 41). Similarly, Smith (2018) notes: “There is no single, ‘best’ definition of city . . .,” arguing that the categories “city” and “urban” actually impede our study of settlements as empirical phenomena. Nevertheless, I use these categories not only to differentiate urban sites from other kinds of settlement within Babylonia but also to facilitate use of the information for cross-cultural comparison. For Babylonia, there is a consensus—albeit often unspoken—that we are dealing with cities, based on the nature of the sites and on the presumption of continuity with early urbanism of the

fourth and third millennia BC. This is uncontroversial: Babylonian cities qualify as urban by any of the commonly cited criteria (e.g., Clark 2013, p. 4; McMahon 2020; Smith 2011a, b, 2012, 2016; Wirth 1938; Yoffee and Terrenato 2015, pp. 1–2). They covered a considerable area and were characterized by a large population with a significant density of occupation; their inhabitants were specialized rather than self-sufficient; they contained urban infrastructure, including public buildings that symbolized the presence of authority; and they affected their hinterland, not least by drawing on it for their food supply and by acting as administrative centers for the surrounding region. The question, then, is not so much whether we are dealing with cities, but rather, what is the nature of the Babylonian cities? As Emberling (2015, p. 276) observed, “our view of these [Mesopotamian] cities has ossified into a composite and static picture developed from all Mesopotamian cities.” The challenge is to analyze them in a way that is meaningful and useful for those interested in ancient urbanism and comparative urban studies; the starting point is a reappraisal of the evidence.

The Babylonian sites typically represent ancient cult centers, that is, they were dominated by the temple of the city’s patron deity who was one of the major gods of the Babylonian pantheon. The concept of the “temple city” has a long history in ancient Near Eastern studies, where it was originally applied to Sumerian cities (Liverani 2011, pp. 57–58). With appropriate qualification, it remains relevant for the cities of the second and first millennia BC; Beaulieu (2019), for example, writes of “temple towns.” The main temple, often accompanied by a ziggurat, lent the Babylonian city its identity, and as an institution it played a central role in the social and economic life of its inhabitants and those of the hinterland. Although not planned as a “cosmogram,” the whole city was conceptualized as cultic space owing to its function as home of the main city god; ideological values could be attached to individual cities, especially Babylon (George 1997). The term “cult center,” therefore, encapsulates the single most salient characteristic of the Babylonian cities and is common to all of them, regardless of size and complexity.

By no means have all these sites been investigated. Charpin (2003, p. 312) noted that our knowledge of Babylonian urbanism of the second millennium BC was limited and that discussion had long focused on the sites of Ur and Nippur. In the following year, the final report on investigations at Old Babylonian Maškan-šapir was published (Stone and Zimansky 2004), and although the project had been able to carry out only limited excavation, the detailed survey and the resulting analysis added enormously to our knowledge of urban spatial organization. For the first millennium BC, Babylon, the capital, still dominates the literature on urbanism to the near exclusion of other sites, although excavations at Nippur, Ur, Uruk, and other sites contribute important information. The principal cult centers at this time were around 32 settlements named in contemporary textual sources. Just over one-third have been excavated (to any extent), and most of the others have not been identified on the ground with any certainty.

The focus on the traditional cult centers means that other types of settlements are underrepresented, in particular, newly founded sites and smaller settlements, including villages. Rare new foundations include the Old Babylonian sites of Šaduppum in the outskirts of modern Baghdad (Miglus 2006–2008b; van Koppen 2006–2008) and

Haradum on the Middle Euphrates (Kepinski-Lecomte 1992; Kepinski et al. 2012). The new Kassite city of Dur-Kurigalzu was built by Kurigalzu I in the 14th century BC (Clayden 1996, pp. 112–117, 2017; Malko 2017). No new foundation of the first millennium BC has been investigated (at least, not until the Hellenistic period, with Alexandria/Charax Spasinou and Seleukeia-on-the-Tigris), although new Neo-Babylonian settlements are documented by survey: Adams (1981, p. 178) noted that 21 of 29 Neo-Babylonian/Achaemenid settlements showed no trace of Middle Babylonian occupation, implying a significant number of new (re-)foundations.

In addition to our poor knowledge of new city foundations, we know relatively little about sites of specific function. In spite of their small size, Old Babylonian Haradum and Šaduppum were not typical villages but well-fortified military strongholds (Haradum: van Koppen 2017, pp. 57–58; Šaduppum: Miglus 2006–2008b, p. 493; van Koppen 2006–2008, p. 491). Another small site of specific function is Tell Khaiber, a Sealand I dynasty site; it was dominated by a large public building, which seems to have served an administrative function and was subordinate to an unknown palace, possibly in nearby Ur or Larsa (Campbell et al. 2017, p. 43). My discussion of urbanism necessarily focuses on the cult centers that make up the vast majority of excavated sites, since other elements of the settlement system have scarcely been investigated.

The principal urban elements were stable over time and largely typical of Mesopotamian cities in general. Van de Mierop (1997, pp. 72–83) summarized them: an elevated situation, defensive walls, monumental buildings, non-monumental (residential) areas, city areas separated by streets and canals, and open areas. In the absence of natural hills, elevation was achieved in Babylonia by a preference for long-settled occupation mounds. Open areas are not always easy to detect, although they were common and took various forms. Nevertheless, the basic repertoire of key city elements—temples and ziggurats, palaces, canals and harbors, city walls, residential areas, and manufacturing sites—remained remarkably stable over time and space, to the extent that they reflected “a common view of what constituted a Mesopotamian city” (Stone 1991, p. 236). This basic urban pattern was established in the early 3rd millennium BC and endured with little modification until late in the first millennium (Stone 1995, p. 243). I argue that this “blueprint” for basic city form allowed for flexibility in its implementation. It is the precise configuration of these elements, and their relationship to one another that lends each city its particular character.

Tell Sites: Characteristics and Size

Our knowledge of Babylonian cities has relied almost entirely on older excavations of tell sites (occupation mounds) that accumulated over a considerable time and can typically be traced back at least as far as the third millennium BC. Most urban sites have not been investigated over a large enough area to permit analysis at the desired level of detail, so some extrapolation from piecemeal data is inevitable. The superimposition of successive occupation levels, combined with the often vast scale of the site, makes it difficult to investigate an urban layout through successive periods.

At Babylon, excavation results derive primarily from first millennium BC levels because high ground water made it difficult to access earlier levels (Pedersén 2021, pp. 23–24). Remains of important buildings, such as temples and palaces, could not be removed or disturbed to excavate beneath them to trace their earlier history.

The distinction between ancient occupation mounds and new urban foundations is important because local conditions differentially affected urban layout: with long-settled mounds, the pre-existing topography imposed constraints on urban form that did not apply to new layouts or sites with only limited prior occupation, such as Old Babylonian Maškan-šapir, where earlier occupation was of limited extent (Steinkeller 2004, pp. 26–27). Use of an ancient tell inhibited the imposition of a new city layout because of the uneven ground surface and the vast scale of earth moving that comprehensive remodeling would entail, especially when a large site, such as Babylon, was formed of several discrete settlement mounds. Although the layout of Babylon as known from the German and Iraqi excavations is typically attributed to Nebuchadnezzar II (604–562 BC), it represents largely a remodeling of elements that already existed, rather than an entire new city plan. Moreover, most of these same structures continued in use for several centuries, subject to periodic rebuilding and renovation during the Achaemenid period and even later.

Size is frequently cited as a criterion for identifying cities, yet this poses problems in a Babylonian context because of the nature of the sites. Adams (1981, p. 75) considered settlements of 10 ha or more to be inhabited by “urbanites” in contrast to smaller settlements, which he associated with “villagers” or “townsmen.” Previously he had applied a similar categorization, ranging from less than 4 ha (“villages”), 4–10 ha (“small towns”), to more than 10 ha (“large towns”) (Adams 1965, p. 39). It seems fruitless here to distinguish between cities and large (or even medium sized) towns, all of which shared common features and, to some extent, functions, and were “urban” in character. At less than 2 ha, Haradum and Šaduppum fall within Adam’s size range for villages, yet they had an internal structure typical of considerably larger towns and cities (Stone 2007, pp. 229–230). They are likely anomalous because of their specialized function, which highlights the difficulty of using size as a defining criterion without considering form and function.

Not only is size not a sufficient criterion for distinguishing urban sites, but the determination of site size is not straightforward. The Babylonians considered the city wall a defining feature physically and ideologically; even when ruined, it remained important to the inhabitants’ idea of their city (Baker 2014c, p. 94). Scholars of Babylonia (and Mesopotamia in general) usually follow this logic, after all, the city wall marks the limit of the elements that made up the urban fabric. Yet total walled area is not sensitive to the growth and contraction of the actual occupied area. Ideally, we need to know both total walled area and occupied area for each phase of a settlement’s history. The Uruk survey, for example, traced the extent of occupation over time (Finkbeiner 1991), while the line of the city wall had remained stable since the early third millennium BC (Nissen 1988, p. 71). Difficulties arise when the line of a city wall is no longer visible, as at Dilbat (Armstrong 1992, p. 220) or Kish (Gibson 1972, p. 292, fig. 45). The relationship between occupied area and walled area is complex: since a city wall might enclose low-lying cultivable land in addition to the occupation mound(s), the true extent of the city will likely be underestimated if its

wall can no longer be detected (Baker 2014c, pp. 89–90). Was the size of Seleukid/Parthian-era Uruk 550 ha or 300 ha? The former is the area enclosed by the city wall (Nissen 1988, p. 71), long disused but still recognized by the inhabitants as a monument marking the edge of the city; the latter is the occupied area as determined through surface survey (Finkbeiner 1991, p. 213). For the proper determination of city size, both measurements are essential, as is an understanding of the city margins (within and outside the city walls), especially the question of whether there were low-lying areas around the perimeter of enclosed urban space. In most cases we lack this information, although the application of modern techniques is providing new data (e.g., at Ur: Hammer 2019).

The Emic Perspective

Integration of the textual evidence permits an emic perspective, that is, an insight into how the Babylonians themselves thought (and wrote) about the city. Gaydarska (2016) argued for such an approach in the study of ancient cities as a useful counterpart to the modern, standardized terminology that is used in differentiating sites, and to determine “how people perceived their own settled world.” Here I discuss the Babylonian terminology when it elucidates specific aspects of the built environment, especially housing, but it also is worth considering at the settlement level; see Liverani (2011, p. 51) for the Sumerian and Akkadian terms. An inscription of Nebuchadnezzar II (604–562 BC) sheds light on the geographical organization of the Neo-Babylonian empire, distinguishing three core areas: Akkad (central and northern Babylonia), the Sealand (including Larsa, Ur, and Uruk; another inscription adds Eridu, Kullab, Nemed-Laguda, and Ugar-Sin), and Assyria (along the Tigris, to the north and east of Akkad) (Da Riva 2013a, p. 199).

Place names are instructive up to a point (OB: Groneberg 1980; MB: Nashef 1982; NB/LB: Zadok 1985). Settlement names may reflect form and/or function, although the date of attestation may be temporally removed from the first coining of the name. Place-name information reflects some categories of settlement, but with certain well-contextualized exceptions it is not usually amenable to finely tuned diachronic analysis. In contrast to the Neo-Assyrian royal inscriptions, which often juxtapose and quantify settlements of different ranks (De Oderico 1995, pp. 13–16), Babylon sources do not offer any direct insight: at the settlement hierarchy level the most common term, *ālu*, denotes “city” but can stand for a settlement of any size. Royal inscriptions use the term *māhāzu* to refer to a city in its role as cult center of a god/the gods, for example “Babylon, the cult center of the great lord Marduk” in an inscription of Nabopolassar (626–605 BC) (Da Riva 2013b, pp. 75–76, ii 11). Some settlement types of specialized function are attested, which is useful given the limited range of site types that has been investigated. Fortified settlements bear the prefix *Dūr-* (“wall,” by extension, “fortress”), as in the Kassite new city of *Dūr-Kurigalzu*. Similarly, ports and harbors are prefixed *Kār-* (“quay” or “harbor”; by extension, a trading settlement). Villages and hamlets are often associated with a named individual, e.g., *Ālu-ša-PN* (“village of so-and-so”). Similarly,

Huṣṣēti-ša-PN (“reed structures of so-and-so”) likely refers to an ephemeral settlement that would be difficult to detect through survey.

Some settlement names are associated with professional collectives, such as “Town of the Leather Workers”; this phenomenon likely reflects some centrally directed land allocation scheme (Baker 2016 on comparable Neo-Assyrian data). An imperial background also lies behind certain toponyms that reference the geographical origin of the inhabitants. For example, Āl-Yāhūdu (“Judah Town”) is associated with Judean exiles deported by Nebuchadnezzar II and resettled in the Babylonian countryside, probably near Nippur (Pearce and Wunsch 2014). Similarly, late Achaemenid tablets from the Murašû archive of Nippur document numerous small settlements associated with groups of common professional or geographical background settled under a “land-for-service” scheme, including Carians, Cimmerians, and Tyrians (Stolper 1985, pp. 72–79). These data hint at relics of an imperial landscape of the kind documented in the Assyrian countryside (c. 911–612 BC) through survey and connected with the program of forced resettlement (Wilkinson et al. 2005).

Settlement Landscape

Traditional settlement survey and, more recently, remote site detection, have transformed our understanding of settlement patterns. The regions covered by the traditional surveys do not accurately reflect settlement in the later second and first millennia BC due to the westwards shift of the Euphrates River. Maximal urbanization was reached in late Early Dynastic times, and thereafter it declined. The second millennium BC saw a gradual increase in the percentage of non-urban (<10 ha) sites (25.0% to 64.2%), accompanied by a decrease in the percentage of larger (>40 ha) urban sites (55.1% to 16.2%) (Adams 1981, p. 138, table 12). Adams considered this general decrease in the numbers of larger sites to continue until it was reversed around 625 BC. However, in a critique of the survey data, with particular reference to the period 1150–625 BC, Brinkman (1984, p. 175) noted that since the major courses of the Euphrates had shifted westwards during the second half of the second millennium, by the first millennium BC the major areas of settlement lay some way to the west of the former urban heartland between Nippur and Uruk, which was now mostly rural hinterland. He argued that the survey results were not representative for the later second and first millennia BC since the surveys omitted the principal areas of later settlement. Brinkman (1984, pp. 177–178) also proposed that the end of the long period of deurbanization that began in the 12th century should be dated not to 625 BC but around 747 BC, when dated cuneiform economic documents increased in number.

Use of remote sensing in recent years has begun to fill in gaps in our knowledge, both within and beyond areas already surveyed (Hritz 2004, p. 93, 2010, 2014), especially to the east and west of the dense spread of known sites between the river channels (Hritz 2010, fig. 6). Hritz (2004) explicitly addressed the “hidden landscape,” in particular the area between the Hillah and Hindiyah branches of the Euphrates, a significant yet previously underexplored area of settlement during the Kassite and later periods. These results remain provisional until the

dating of newly discovered sites can be verified (Hritz 2004, p. 104). Tell morphology is a possible dating indicator when it can be related to characteristic tell types known from other, better dated contexts; a similar method has been applied in other regions of the Near East (Hritz 2014, p. 238). Hritz points to the presence of “long, low tells which are characteristic of the first millennium and later periods to the east of Babylon” (Hritz 2004, pp. 101, 104). Similarly, the small sites detected include high, walled mounds (Hritz 2004, p. 104) that may correspond to the many small walled towns mentioned in the inscriptions of Sennacherib (704–681 BC) and other Neo-Assyrian rulers (Baker 2014c, p. 90). The association of sites with a particular watercourse may be another dating indicator.

Projects that incorporate ground truthing have been initiated recently. The QADIS project aims to update Adams’ work through systematic surface collection, the planning of visible surface remains on selected sites, the mapping of silted channels and possible field systems, and the integration of epigraphic sources (Marchetti et al. 2019). Although the project focuses on the fourth and third millennia BC, sites newly identified include many dating to the Isin-Larsa, Old Babylonian, and Neo-Babylonian periods (Marchetti et al. 2019, p. 237, fig. 12).

Other recent advances include an improved understanding of the hydrological landscape and the major river branches (Cole and Gasche 1998), although uncertainties remain, such as the exact course of the Tigris. Rost (2017) provides a helpful overview of the history of water management. Old Babylonian rulers were especially concerned with securing the water supply for the major cities in response to desiccation of the major river branches during a prolonged period of low precipitation. Neo-Babylonian rulers invested heavily in water management, including the dredging of rivers and even an attempted canalization of the Euphrates near Sippar to prevent it from changing course. Motivations for water management vary: the royal duty to provide agricultural abundance, a response to environmental change, a boost to economic development, and royal self-aggrandizement (Rost 2017). Jursa (2010, pp. 62–64) summarizes results for the whole of first millennium BC Babylonia, confirming Adam’s (1981, p. 246) suspicion that the origins of the great Sasanian-era irrigation systems can be traced back to the Neo-Babylonian period. Major canal construction projects also are documented in the written sources (e.g., Zawadzki 2005).

Individual Babylonian sites that have been intensively surveyed include Kish, Larsa, Maškan-šapir, Uruk, and recently Ur; excepting Maškan-šapir, these sites were all occupied during the first millennium BC as well as the second. Gibson’s (1972) Kish survey detailed the topography and occupation history of the 20 or so mounds at the sprawling site. At Larsa, archaeologists mapped some 58 mostly rectangular buildings, as well as possible streets, through field survey guided by the inspection of aerial photographs (Huot et al. 1989, fig. 9). The survey of Maškan-šapir identified different urban sectors, canals, and areas of specialist production (Stone and Zimansky 2004). The Uruk survey of 1982–1984 clarified the site’s occupation history by plotting the distribution of datable surface ceramics for each period, including OB, MB, NB/LB, and Sel/Parth (Finkbeiner 1991, pls. 28–31). Further surface survey has been carried out recently, including geophysical

prospecting, with a focus on the area immediately outside the city walls as well as selected areas around the west and southwest side of the interior (Becker et al. 2019; Van Ess and Fassbinder 2019). A combination of aerial and satellite imagery and ground observations were used to map subsurface architecture and study extramural settlement at Ur and its surroundings (Hammer 2019). The QADIS project promises to clarify the layout of selected individual cities by mapping subsurface features (Marchetti et al. 2019, p. 234, figs. 6–7; Marchetti and Zaina 2020). Results published so far include the partial excavation of a monumental Isin-Larsa building at Tell Dlehim (ancient Tummal) (Marchetti and Zaina 2020, p. 219, fig. 9).

A study of Babylon relying on high-resolution satellite imagery captured between 2002 and 2005, as well as on earlier aerial photographs, identified four “urban systems” of subsurface architecture differentiated on the basis of alignment (Lippolis et al. 2011). The traces that make up these four “urban systems” (Lippolis et al. 2011, pls. I–IV) overlap. This implies a palimpsest of features, yet it is unlikely that traces of subsurface architecture within one and the same part of the site belong to very different periods. The authors tentatively date only one of the four “urban systems,” proposing to associate the “Violet” system with an early city layout of the second millennium BC (Lippolis et al. 2011, pp. 2–3). However, this is problematic because the traces of this system are located in areas where first millennium BC remains were excavated. The earliest excavated remains at Babylon have been dated to the late Old Babylonian period (Sternitzke 2020), and it is unclear how architectural traces of an even earlier phase could be visible at surface level in the same vicinity. Judging by the plan (Lippolis et al. 2011, pl. I), some of the traces attributed to the “Violet” system directly overlay excavated features dating from the first millennium BC, such as the ziggurat enclosure. These results clearly have to be treated with caution in the absence of verification.

Urban Form

I adopt a bottom-up approach to describing and analyzing urban form, progressing from the local level (individual houses and other structures), to neighborhoods and city districts, and finally to city-wide and monumental elements. This approach helps counteract the traditional focus in Mesopotamian urbanism on the monumental sectors, which has led to undue emphasis on the role of the ruler in determining the form of the cities. These three levels of analysis represent, roughly speaking, a continuum from less planned to highly planned, in terms of how far any central authority had a hand in determining urban form. This approach recognizes the agency of the city’s inhabitants in shaping their immediate environment.

Integrating different levels of spatial analysis is current in ancient urban studies (e.g., Fisher and Creekmore 2014; M. L. Smith 2008). It is a useful analytical framework since the processes that generate urban form operate differently at different spatial scales. It also aligns with how the public and private spaces of the city are constructed, beginning with the personal space of the body and moving outward to the home, then the neighborhood, and finally the city (Madanipour 2003). Two topics do not fit neatly within this scheme but cut across the three different spatial

scales: unbuilt land and open spaces, and the location of craft production and commercial activities.

Household

I use “household” to denote a co-resident group, and I distinguish between a “simple family household” (married couple or widowed person with offspring, with or without slaves), an “extended family household” (a conjugal family unit plus one or more relatives other than offspring, with or without slaves), and a “multiple family household” (two or more conjugal family units connected by kinship or marriage) (Laslett 1972). Residence was virilocal, and the simple family household was the preferred type. Men, acting as heads of their own households, are by far the most frequent parties to legal transactions; women feature typically in marriage-related contexts or as widows. Legal documents recording property sales, marriage, and especially inheritance affairs are crucial for teasing out the complexities of household composition and intergenerational property transmission, sometimes permitting the ownership history of individual houses to be traced over two or more generations (Baker 2015; Stone 1981).

The integration of textual and archaeological data has advanced our understanding of Babylonian housing in several ways. Correlating the Akkadian terms for parts of the house with the excavated house plans helps determine how domestic space was used (OB: Jahn 2005; Kalla 1996; NB/LB: Baker 2015), especially since archaeological evidence for room function is slight. Words for rooms of specific function are scarce (e.g., Miglus 1999, pp. 222–223); rather than assuming that rooms were multifunctional, I argue that since room function was irrelevant when property was transferred, it was omitted from legal transactions (Baker 2007, p. 71). Contextual study helps elucidate processes of household transformation, sometimes over several generations. Thus, study of the Babylonian vocabulary is important for understanding the relationship between house and household and identifying longer-term processes. Individual houses expanded or contracted over time, according to the needs and resources of the inhabitants (Baker 2015; Stone 1981), and such processes reflect local neighborhood transformation and changing occupation densities (Baker 2009, pp. 93–94).

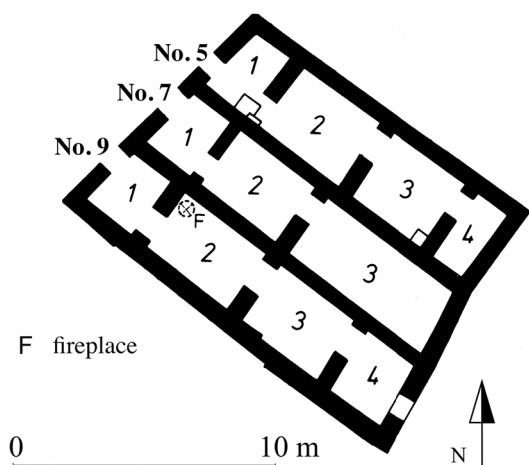
Stone (1981) distinguished between extended family houses, with rooms grouped around a central courtyard, and nuclear family houses, with linear ground plan and no courtyard. While the linear houses are unsuited for accommodating multiple family households, we should be cautious about associating courtyard houses with specific household types: the range of documented residential scenarios is wide and, in individual cases, fluid (Baker 2014b; 2015). Multiple family households are attested when brothers jointly inherited their father’s house, but these scenarios tended not to endure: some brothers would “split off” and live elsewhere, thereby reducing the size of the co-resident group. Consideration of the household cycle is, therefore, critical. Slave ownership is a further complicating factor: slaves’ residential situation, and their likely numbers, remain problematic (Baker 2014b, pp. 10–11).

House

The central-courtyard house predominated throughout the second and first millennia BC. I attribute this to combined environmental and social factors, including the fact that the courtyard provided light and air for the surrounding rooms, and a concern for household privacy (Baker 2015, pp. 399–400). This house type shares several features with the “single-entrance, courtyard house” identified by Nevett at fourth century BC Olynthos and other Greek sites, notably those that promoted domestic seclusion and shielded female household members from male outsiders (Baker 2015, p. 400; Nevett 1995). The courtyard house’s layout changed over time and varied within and between cities during a single period (Miglus 1999, pp. 23–32, 92–96, 188–193). Some staircases (which might have led to the roof) have been excavated, but most Babylonian houses lacked an upper story (Baker 2014b, p. 9; Miglus 1999, pp. 204–205). Old Babylonian and Neo-Babylonian house forms are discussed below; there are too few well-preserved ground plans of the Middle Babylonian period (e.g., Miglus 1999, pls. 45–47) to compare with earlier or later housing.

Houses without a central courtyard are less common. Stone (1981, pp. 26–29, 32) associated the “linear houses” excavated at Old Babylonian Nippur with nuclear (simple) family households. This is plausible since a key difference between them and the larger, courtyard houses was the impracticability of further subdivision. Linear houses have also been identified at Ur (see Fig. 2) and on contemporary clay tablets bearing house plans (Gruber and Roaf 2012). They typically formed an elongated rectangle with a smallish room accessed directly from the street and two or three rooms arranged in a row behind it. They have not been documented for the first millennium BC, although underexplored areas such as the city margins may have contained house types different from those of the centrally located residential areas excavated to date (Baker 2014b, pp. 17–18).

Fig. 2. Linear houses of the Old Babylonian period at Ur: AH site, Nos. 5, 7, and 9 Paternoster Row (after Miglus 1999, Taf. 10 Abb. 45; reproduced with permission)



Walls were predominantly of mud-brick, although at Old Babylonian Ur baked-brick was used for the lower courses. In the first millennium BC baked-bricks were used only for paving central unroofed courtyards and roofed rooms exposed to water, and for built installations such as drains and lavatories. Roofs were constructed of wooden beams laid over the wall tops, overlain in turn by reeds or reed matting, and then by a thick slab of mud tempered with chopped straw, a method still used in the villages of southern Iraq and elsewhere in the wider region (Ragette 2003, pp. 30–31). Locally available timber, especially the date palm and the Euphrates poplar, limited the width of rooms that could be spanned to around 3.5–4.0 m (Miglus 1999, p. 264; Moorey 1994, p. 355). Wider rooms imply the use of imported timber, since load-bearing pillars were not used. Local bitumen was used for waterproofing drains, walls, and floors exposed to water (Moorey 1994, pp. 332–335), helping identify bathrooms.

Some 214 excavated or partially excavated Babylonian houses are cataloged by Miglus (1999) in his study of urban domestic architecture, a useful resource that presents ground plans reproduced at a common scale and orientation. This includes 152 Old Babylonian, 15 Middle Babylonian, and 47 Neo-Babylonian houses (Miglus 1999, pp. 262–314). Miglus omits a few houses built after 500 BC, for example, the “Achaemenid Residence” at Abū Qubūr (Gasche 1991). Few houses have been excavated since 1990: at Ur, teams led by Stone and Zimansky and by Otto and Einwag investigated two previously unexplored large OB houses (Stone et al. 2021).

Two major Old Babylonian residential areas were excavated at Ur, designated AH and EM (Figs. 3–4; Woolley and Mallowan 1976, pls. 124, 122). AH is a larger area southeast of the religious precinct, with 52 excavated houses, while EM, a smaller area with 15 excavated houses, is southwest of the precinct (Woolley and Mallowan 1976, pl. 116). AH, with its dense housing and narrow, winding streets and alleys, is often taken as a “prototype” for the traditional Mesopotamian residential quarters. EM contained houses that were more homogeneous in size and orientation, with streets and alleys on a more regular alignment.

The house dubbed “No. 1 Store Street” in AH is an example of a single-courtyard house containing rooms on three sides of the courtyard (see Fig. 5; Brusasco 2004, p. 148; Woolley and Mallowan 1976, pp. 137–139). The main living suite containing the “chapel” was located across the courtyard from the entrance suite. The rooms identified as domestic “chapels” or “shrines” at OB Ur and some other sites typically contained built structures identified as altars (Woolley and Mallowan 1976, p. 146, fig. 40). They also tended to contain the family tomb, typically a baked-brick vault, likely connected with the ancestor cult that required the provision of offerings (*kispum*) by the head of the household (Postgate 1992, pp. 99–101). MacDougal (2018) analyzed these rites using Continuing Bonds Theory, interpreting them as a means of maintaining the relationship between the living and the deceased, rather than being enacted through fear of ghosts.

Following Hillier and Hanson (1984), Brusasco (1999–2000, 2004) applied space syntax analysis to the houses of Old Babylonian Ur. He used access graphs to represent visually the permeability of the system, that is, “how the disposition of rooms and entrances controls access and circulation of residents and visitors” (Brusasco 2004, p. 147). He compared the resulting access graphs for two

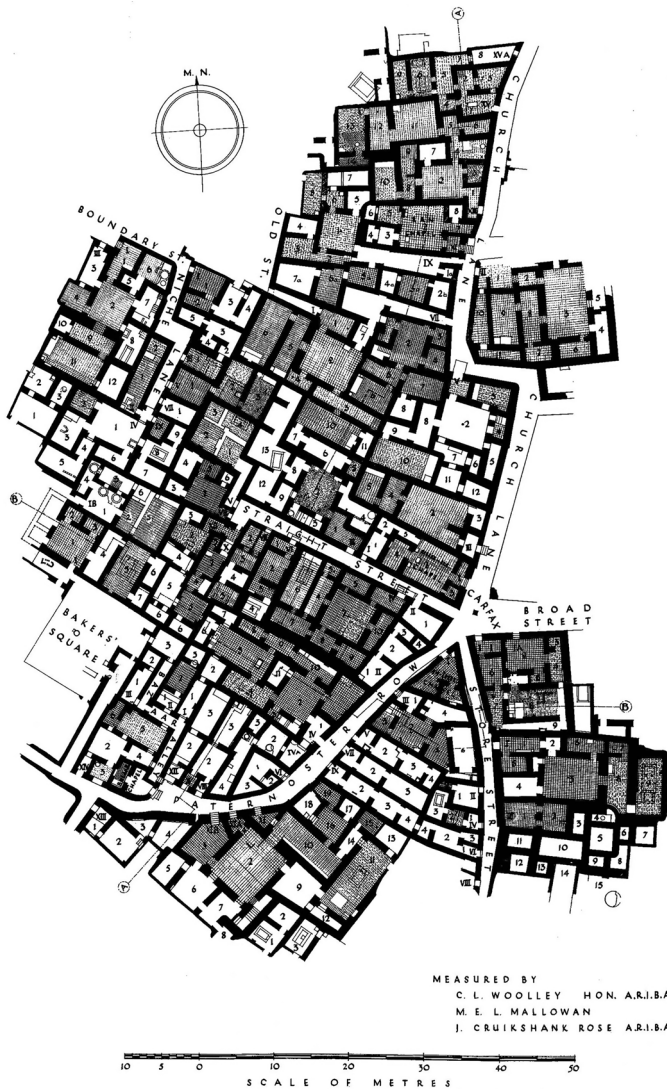


Fig. 3. An Old Babylonian residential quarter at Ur: the AH site (Woolley and Mallowan 1976, pl. 124)

courtyard houses from Ur with those for a traditional town house in Baghdad and an Ashanti residence in Africa. The access graphs for the Ur houses were similar to the Baghdad house but completely dissimilar to the Ashanti house, reflecting the matrilineal nature of Ashanti society and its matrilineal mode of residence. Brusasco (2004, p. 150) explains the similarity between the Ur houses and the traditional Baghdad house by assuming continuity within the geographical region, attributing this configuration to social inequality within the household,

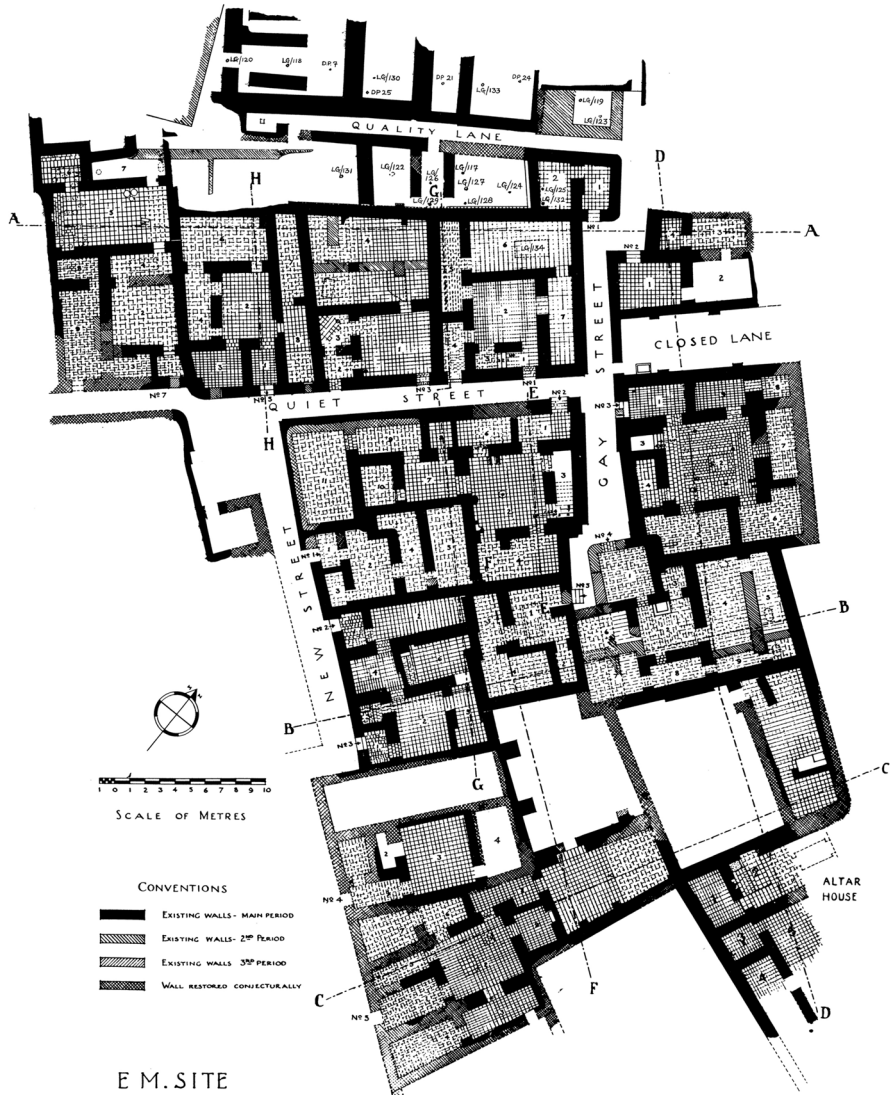
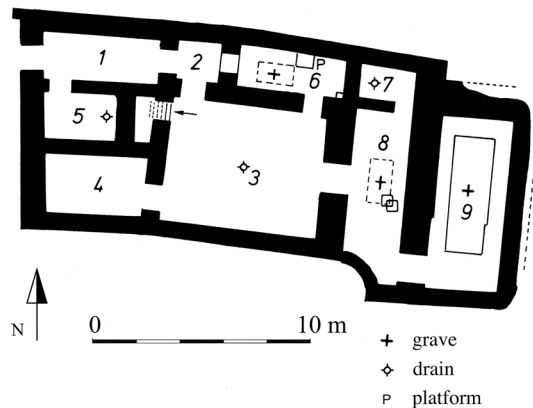


Fig. 4. An Old Babylonian residential quarter at Ur: the EM site (Woolley and Mallowan 1976, pl. 122)

particularly when the head of the household shares the residence with a junior branch of his family. He argues that the entrance area of the Baghdad house represents the spatial correlate of the Islamic law of *purdah* (i.e., the spatial segregation of women to prevent their being seen by men, especially strangers), but in the Ur house the equivalent entrance suite “is the place where the entire dominant sector (men and women) of the household carries out its business activities with formal clients” (Brusasco 2004, p. 152). However, I consider these similar

Fig. 5. A single-courtyard house of the Old Babylonian period at Ur, with rooms on three sides of the courtyard: AH site, No. 1 Store Street (after Miglus 1999, pl. 8 fig. 25; reproduced with permission). Entrance suite (rooms 1, 2, 5); the largest suite comprising main living room (8), small associated room (7), and “chapel” (9), and two single rooms accessed directly from the courtyard (4, 6).



configurations to reflect a common concern for family privacy, shielding women of the family from male outsiders (Baker 2015, pp. 380–382, 400).

At Nippur, housing was excavated in the adjacent TA and TB areas of “Tablet Hill” (Stone 1987, pl. 35). By close examination of the tablets excavated in House I of TA, Stone (1981) matched textually documented changes in ownership of parts of the house with the archaeological evidence for physical modification. Initially four brothers each inherited a share in the house, but it quickly passed into the hands of only two, and then a single brother, who sold part of it to two neighbors. This brother’s own shares in the house were physically separated, so he took further action to reconstitute a viable house for himself. Stone correlated the physical modifications to the house, comprising blocked doorways, newly created doorways, and knocked through walls, with individual stages in the series of transactions documented in the legal contracts; the rooms in question matched the sizes of plots mentioned in those contracts.

At Old Babylonian Larsa, the housing differed radically in character from that excavated at Ur and Nippur, with houses not densely packed but isolated. Surface survey, supplemented by the excavation of houses B27 and B59, revealed freestanding dwellings separated by unbuilt land, presumably gardens (Charpin 2003, p. 313; Huot 1989, figs. 2b, 3b, 9a). B27 and B59 were of broadly similar plan and measured around 500 m²; they were planned and built in one go and were not occupied for long (Charpin 2003, p. 313). The houses were looted long before excavations began: the few tablets found in situ are similar to the archival tablets from early, clandestine excavations, so the latter likely came from the houses in this area. These earlier finds from Larsa include several family archives belonging primarily to rich merchants, some of whose tablets relate to urban real estate. By studying the urban property transactions in light of the excavated house plans, Charpin (2003) showed that the houses in this part of Larsa were occupied by wealthy merchants. He considered them to be like a palace in microcosm, based on the similarity between the administrative documents from B27 and those from the Mari palace archives (Charpin 2003, pp. 313–314).

Charpin (2003, pp. 315–318) explained the history and spatial organization of house B27 by analogous reasoning based on the contents of tablets belonging to the family of Sanum that were presumably looted from his house in this general neighborhood. These document a house originally owned by Sanum and subsequently enlarged over a 40-year period by his son Ishtar-ili and then his grandson Iddin-Amurru, who each purchased multiple small adjacent plots. Charpin likened these activities to those of a property developer. After Iddin-Amurru died his five sons divided the urban property. The total area of their shares amounted to 300 m², but as Old Babylonian scribes counted only roofed space, the property was comparable to house B27, which measured 540 m² (roofed rooms: 270 m²; open courtyard: 60 m²; walls: 210 m²). Based on these proportions, Iddin-Amurru's house would have been around 500 m² in area. According to Charpin, the house was abandoned around 50 years after its construction. Feuerherm (2007) proposed an alternative interpretation of the spatial organization of house B27, in which it was occupied by the two grandsons of Sanum, the same family whose case study Charpin had used as the basis for his reconstruction, although Charpin had not directly connected that family with house B27.

Neo-Babylonian residential districts have been excavated in the Merkes quarter of Babylon (Fig. 6; Reuther 1926, pp. 77–122, pl. 17) and within the Eanna temple's outer enclosure at Uruk (Miglus 1999, pl. 93, fig. 413). Merkes shows long-term continuity of use: housing traces were excavated in late Old Babylonian and Kassite levels (Pedersén 2021, pp. 242–243; Sternitzke 2020), and some Neo-Babylonian houses continued in use into the Hellenistic era (Reuther 1926). At Ur a smaller area of housing, NH, was excavated not far southwest of AH (Woolley and Mallowan

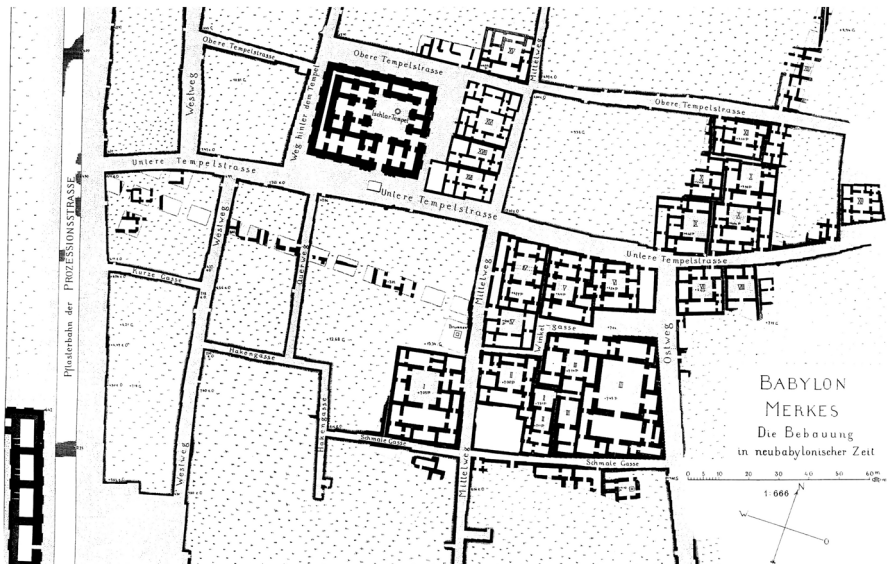


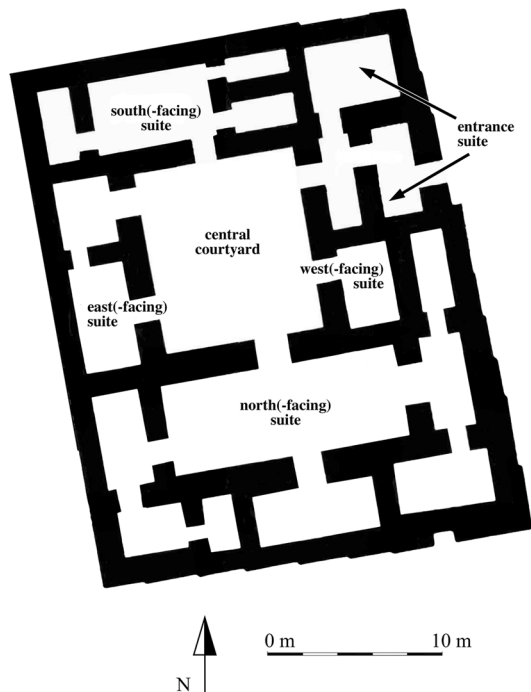
Fig. 6. A Neo-Babylonian residential quarter at Babylon: the Merkes district, showing excavated houses and the temple of Ishtar-of-Akkad (Reuther 1926, pl. 17)

1962, pl. 71). Since the remains were close to the site's surface, doorways could not always be identified, making the ground plans difficult to interpret. Recent work at Ur identified surface traces of housing on the same alignment, extending far beyond the excavated area (Hammer 2019, pp. 185–187).

Neo-Babylonian houses typically consisted of rooms on four sides of a central, open courtyard, with a single entrance from an adjacent street or alley. More rarely, rooms on only three, or even two sides of the courtyard are known, while a few larger houses (from Babylon, Ur, and Abū Qubūr) had two or three internal courtyards. Houses were inward looking, with no windows in the plain external walls. Entrance suites often included side rooms likely used for receiving callers without admitting them into the heart of the house (e.g., Babylon, Merkes, House 1; see Fig. 7). Based on the evident concern with family privacy reflected in house layout, I argued that domestic space was configured to limit contact between the women of the household and unrelated male visitors (Baker 2015, p. 400). Smaller houses afforded fewer possibilities for the spatial segregation of people and/or activities.

In a recent study I matched the Neo-Babylonian house terminology with its architectural counterparts and used the resulting scheme to interpret several case studies (Baker 2015). As the numerous sale and inheritance documents that contain detailed descriptions of individual houses list the neighboring properties and topographical features according to the compass directions (and often with measurements of the sides), I was able to draw schematic diagrams of many individual houses (e.g., Baker 2009, p. 91, fig. 2; 2014a, 185–188, figs. 1a–3). Written descriptions of

Fig. 7. A single-courtyard house of the Neo-Babylonian period showing the different sectors identified by their Babylonian terms: Babylon, Merkes, House I (created by the author, modified from Baker 2015, fig. 16.1)



whole houses contain no information about the interior, in contrast to descriptions of houses in divided ownership and/or occupation. The typical house was divided into four main suites of rooms accessed from doorways on each side of the central open courtyard (Baker 2015, pp. 376–382). These suites were named according to the direction they faced from their main doorway. The “north(-facing) suite,” on the south side of the courtyard, normally was the largest and served as the main living suite associated with the head of the household. These suites formed the basic, self-contained unit of occupation and could be assigned, for example, to a widowed mother or a younger brother as head of his own family unit (Baker 2015, pp. 398–399). Excavated rooms identified as kitchens were typically on the east side of the central courtyard, corresponding to the “west(-facing) room/suite” (Baker 2015, fig. 16.2). This integration of the textual and archaeological data forms the basis for understanding the ways in which houses were transmitted through the family over the generations.

Castel (1992) focused on determining room function in the houses of first millennium BC Babylonia, based in particular on the presence of fixtures and fittings, and on the treatment of walls and floors. This approach is useful for identifying kitchens and bathrooms, but since we rely mostly on older excavation reports, the scarcity of information on artifacts found in situ, especially on floors, makes it difficult to identify other spaces of specialized function. In another study I addressed the extent to which shared ownership and/or occupation of Neo-Babylonian houses can be detected in the archaeological record (Baker 2010a). Physical modification motivated by the necessity of sharing a house could rarely be identified; however, two excavated houses that had been divided into two separate suites retained the central courtyard and the kitchen in common use (Baker 2010a, pp. 188–193). I also investigated the question of house size and its social significance by establishing a range of dwellings (or groups of dwellings) of known size that could be associated with textually documented scenarios for ownership and/or use (Baker 2014b). Dependent temple workers of low status were associated with houses of around 120 m² on average, while free-born middle-ranking members of the temple personnel lived in houses of c. 240 m² (Baker 2014b, table 2.3). This benchmarking of dwelling sizes across the social spectrum is more informative than studying individual houses, which might accommodate households of varying size depending on the stage of the household cycle. These results have significant implications for how we understand the social composition of residential neighborhoods and use house size data to investigate social inequality.

Neighborhoods and City Districts

A two-level division into smaller neighborhoods and larger districts is a common principle of spatial organization in both ancient and premodern cities (Smith 2010, p. 139). Districts tend to be larger and to have “some kind of administrative or social identity within a city,” whereas a neighborhood is smaller and has “considerable face-to-face interaction and is distinctive on the basis of physical and/or social characteristics” (Smith 2010, pp. 139–140). The Babylonian cities are no exception: written sources attest to two scales of urban residential zones, although identifying

them in the archaeological record is problematic. Names of city districts first appear in writing in the late second millennium BC tablet series Tintir, which lists the 10 districts of Babylon, each accompanied by two defining landmarks (Tintir tablet V, lines 92–104; George 1992, pp. 69–70). Some city districts can be located approximately on the ground using topographical information contained in Tintir and in everyday documents (e.g., Babylon: George 1992, p. 24, fig. 4). A late Old Babylonian document refers to part of Babylon called “Newtown in the East” (Pientka 2002, p. 209), and the “Newtown District” of first millennium sources indicates continuity of the name, later formalized as a district within the expanded city wall.

Any administrative role for Babylonian city districts remains elusive. Outside of Tintir, the names of the districts of Babylon (and other cities) are known only from first millennium legal contracts, where they identify the location of urban properties being sold or transferred. District names are attested for most cities, at least the larger ones; Sippar is an exception, perhaps because it was relatively small and much of its occupied area lay on the quay outside the city (Baker 2011b).

Smaller-scale urban zones, or wards (Akkadian *bābtum*) were present in the Old Babylonian period, notably in Hammurabi’s Laws (Roth 1995, pp. 105, 108, 128: paragraphs §§126, 142 and 251) and in a handful of everyday texts. As the word *bābtum* is related to the word for “gate” (*bābum*), Shepperson (2012) suggested that *bābtum* denoted the people under the legal jurisdiction of a certain temple gate, since temple gates were a locus for dispensing justice. Wards are also mentioned in Neo-Babylonian everyday texts, albeit few in number, and only from the city of Borsippa; references to the “levy of the city ward” indicate a taxation background (Jursa 2010, p. 167). Whether or not wards corresponded to “neighborhoods” is unclear (Stone 1987, p. 67; cf. Postgate 1990, p. 237), as is their size, but the written evidence suggests that they comprised face-to-face communities (Smith 2010, pp. 139–140), based on close social and/or professional ties. In contrast to the city districts, none of these wards can be located even approximately.

The archaeological identification of neighborhoods remains problematic. TA and TB at Old Babylonian Nippur (Stone 1987) are too small to be considered neighborhoods (Postgate 1990, p. 237), and their boundaries are defined by the limits of excavation rather than by ancient topographical and/or social criteria. Similarly, the residential areas of first millennium BC Uruk and Babylon have no clearly discernible subdivisions into discrete neighborhoods.

Stone (1987) addressed the social composition of Old Babylonian residential districts at Nippur. Using material and textual evidence and drawing on ethnographic comparisons with traditional Islamic cities, she determined that TA and TB were occupied by wealthy and poorer households that were not spatially segregated. However, this model does not apply to all Babylonian cities uniformly: different principles of community formation operated within one and the same city at a given period, as well as in different cities and over time. While contiguous housing was the norm at Old Babylonian Ur and Nippur, the detached houses at Larsa indicate variability. In first millennium BC Uruk and Babylon priests lived within the walled precincts of the major temples, in housing that was relatively homogeneous in size

and quality (Baker 2011a, p. 543). Since temple access was restricted to personnel, this amounts to segregation by professional class.

The houses of Merkes in Babylon were generally larger than the priestly houses and better constructed. They differed from the priestly houses of Uruk in that they lacked party walls, a marker of social status (Baker 2011a, p. 541). Party walls saved space in areas occupied by smaller houses; they required cooperation between neighbors that was sometimes formalized in written agreements (Baker 2014d). Given these different types of residential areas and their variation in form and social composition, it is potentially misleading to cite AH at Ur as an “archetype”; it risks perpetuating a stereotype of the unchanging and chaotic (unplanned) “Oriental city,” a type that has been rightly criticized by some scholars (e.g., Liverani 1997; Van de Mieroop 2000), although it persists (e.g., Wilhelm 1997).

Street Network

Streets facilitated the movement of people and their gods around the city and articulated urban space by delineating building blocks and other zones. They are one of the most stable and enduring elements of an urban landscape (Oliveira 2016, p. 15). Limited excavation in a sounding in a Neo-Babylonian street at Babylon, which followed the same course as an Old Babylonian precursor, supports this (Reuther 1926, p. 66). Textual sources indicate it was a sin to divert the course of a major city street: the eighth century Babylonian king Nabû-šuma-iškun allegedly blocked the processional street of the god Šar’ur, forcing the god to take an unaccustomed route (Frame 1995, p. 120). Usually, however, the longevity of streets cannot be verified because of the difficulty of tracing city layout back through successive occupation levels.

First millennium written sources indicate a tripartite hierarchy comprising major public streets, minor public streets, and alleys (Baker 2009, pp. 95–96). For most urban inhabitants, processions through the streets on festive occasions afforded the only opportunity to catch sight of the divine statues, since temple access was restricted (Pongratz-Leisten 2006). While public streets stabilized property boundaries on the outer perimeter of residential blocks, within the blocks boundaries were fluid and could be adjusted through property transfer (Baker 2014a). Alleys were privately owned and led into the heart of the residential blocks where they terminated. They functioned as semipublic space, representing a transitional zone between the public streets and the private, domestic space of the house, whose entrance was usually configured to prevent passers-by from seeing directly into the central courtyard (Baker 2015, p. 380). We think of a house doorway as its entrance, but the Babylonians conceived of it as an “exit.” This perspective, looking from the house’s interior toward the outside world, is mirrored in property descriptions from Hellenistic Uruk: first they describe the house’s internal roofed space, then the internal unroofed space, and finally the semipublic space of the alley (Baker 2015, p. 391). The protected status of the Babylonian house vis-à-vis the physical configuration of the wider street network is similar to how the traditional housing of the Middle East has been characterized; for example, the “selective gradual privatization of public space and direct control by the owners of adjacent houses” (Bianca 2005, p. 38; cf. Abu-Lughod 1987, p. 168).

Despite the written distinction between major and minor public streets, it is usually impossible to tell them apart in excavation since the dividing line between “wide” and “narrow” streets is unclear. Major procession streets that were paved, such as the monumental Procession Street of Babylon (Pedersén 2021, pp. 201–232), are a rare exception. Otherwise, regular streets served as procession streets when needed (Miglus 2006–2008a, p. 103), which explains the frequent attestations of streets called “way of the gods and the king.”

There is little archaeological evidence for city squares, though sometimes we see a widening of a street in a strategic location, for example, in front of the main entrance to the ziggurat enclosure at Babylon, where the street fans out (Reuther 1926, pls. 2, 18). The scarcity of formal civic spaces is mirrored by a lack of civic concern for the state of the streets in residential areas. These were likely in the care of the local inhabitants, with each household responsible for the stretch of street that ran alongside their property. The same is true of drainage and sanitation: as in earlier periods (McMahon 2015), there is no evidence of community-level provision. Street levels often rose over time through the accumulation of garbage; the occupants of House I in Merkes cut steps into the street to access the door because the street had risen way above threshold level (Reuther 1926, p. 80–92).

Environmental considerations, especially the need for shade, played a crucial role in shaping the street network. Shepperson (2009) modeled the effects of sunlight at different times of the day on the streets of AH at Ur, showing how the desire for shade influenced their dimensions and orientation. A northwest–southeast and northeast–southwest orientation mitigated the effects of the strong summer sun, and narrow, winding streets afforded greater shade (Shepperson 2009, p. 366–367). By contrast, the doorways of neighborhood chapels in AH were positioned to take advantage of the morning light for cultic reasons (Shepperson 2009, pp. 370–373; 2012).

The importance of streets in articulating city layout has led to extensive attempts to reconstruct the street network of Babylon (and also Borsippa). Many published plans of Babylon show an extensive street network whose reconstruction is based on entirely false premises, relying on an early study of Unger (1931) that incorporated an erroneous number of city gates and mistook their placement (Baker 2007, pp. 67–69). Based on the mistaken assumption that a straight street connected each city gate with the city center, multiple published plans depict variations on a grid covering the entire area within Babylon’s city walls (e.g., Altaweel and Squiteri 2018, p. 141, fig. 5.10; Gates 2011, fig. 10.11; Seymour 2008, fig. 21, Van de Mierop 1997, fig. 4). None of these reconstructions fully incorporate revisions based on the corrected identification of the different city gates (see George 1992, p. 24, fig. 4). It is sometimes claimed that the streets of Babylon had an orthogonal layout, but the only incontrovertibly planned street was the Procession Street. Merkes (Reuther 1926, pl. 2) is the only part of the city for which an extensive area of street network has been mapped, and it lacks an orthogonal plan.

Urban Watercourses

Proximity to a watercourse was a primary factor in a city's location, both for domestic consumption as well as for irrigation and transport (McMahon 2013, pp. 40–41). Without a modern, detailed study of local hydrology it can be difficult to reconstruct the precise relationship between a site and the watercourse(s) on which it depended. Interdisciplinary study has contributed an improved understanding of the changing riverine landscape (Cole and Gasche 1998; Rost 2017), and recent work on individual sites and their surroundings helps situate them in their hydrological context (e.g., Babylon: Pedersén 2014; Ur: Hammer 2019), but further research of this kind is needed.

While Babylon was bisected by a major branch of the Euphrates, other cities lay adjacent or close to a river or canal. Intramural canals are a common feature when city walls enclosed low-lying areas around the urban margins, and they are more prevalent in the Babylonian cities than has been previously appreciated (e.g., McMahon 2013, p. 41). At Babylon, a canal ran off the east bank of the Euphrates through the city, to exit through the city wall to the east (George 1992, pp. 356–358). In the unexplored western part, a map fragment depicts an otherwise unknown canal running through the Tuba district, near the Shamash Gate (George 1992, fig. 5). Like major streets, intramural canals could divide urban space. At Maškan-šapir, canals separated the city into different sectors and were associated with two intramural harbors (Stone and Zimansky 2004, p. 12, fig. 5). Several intramural canals at Uruk (Kose 1998, fig. 4) are not easy to date, but first millennium textual sources mention at least 16 canals within Uruk, not necessarily all contemporary. They would have supplied the inhabitants and irrigated the cultivated areas within the city walls; recent work identified a location on the southwest side of Uruk where one of the intramural canals exited the city wall (Van Ess and Fassbinder 2019, pp. 54, 74, fig. 11). Ur had two harbors, on the north and west sides of the city, and was crossed by a canal (Hammer 2019, fig. 1). Settlement outside the walls of Sippar was located in an area known as the “quay” or “harbor” (Baker 2011b). City walls were typically surrounded by an exterior moat. At Uruk the moat comprised a canal that integrated the city into the wider canal network in the hinterland and beyond; the canal network in and around the city, including this moat, was mapped from aerial photographs (Kose 1998, fig. 4) and was recorded in a recent survey (Van Ess and Fassbinder 2019). Neo-Babylonian documents show that at some cities (Dilbat, Uruk) the outer banks of the moat was planted with date orchards.

City Walls and Gates

City walls were built at least by the early third millennium BC, when the city wall of Uruk enclosed an area over twice that of classical Athens around 500 BC (Nissen 1988, pp. 71–72). They fulfilled an important symbolic role in Mesopotamian culture, separating the civilized world of the city from the steppe beyond. Although the prevalence of walls surrounding Mesopotamian cities has been doubted (McMahon 2013, p. 32), they were in fact commonplace (Baker 2014c), as confirmed by their ubiquity in the written sources, including at settlements where no physical trace of

a city wall has been identified (e.g., Dilbat, Kish, Kutha). A major source is the system of dating by “year names” used during the late third and early second millennium BC, whereby a year was named after a significant event from the previous year. References to the construction or destruction of city walls are common in year names and royal inscriptions, and often the wall stood *pars pro toto* for the city itself. Year 35 of king Hammurabi of Babylon (i.e., 1759 BC) was called “The year: Hammurabi, the king, at the command of (An) and Enlil, destroyed the (great) wall of Mari and the (wall of) Malgium.” Written and archaeological evidence confirms that the city of Mari was destroyed, not just its wall (Charpin 2012, pp. 65–66; Horsnell 1999, p. 151). The lack of clearly identifiable aboveground remains at some sites is likely attributable to erosion or brick robbing. Also, archaeologists have not usually excavated on the perimeter of sites to locate buried remains of city walls. At Maškan-šapir the line of the city wall, enclosing around 72 ha, was mostly visible only from the air (Stone and Zimansky 2004, p. 56).

Babylonian city walls varied in form and construction; they were typically surrounded by a moat. The walls of Old Babylonian Sippar (Abu Ḥabbah) and nearby Sippar-Amnānum (Tell ed-Der) comprised massive, continuous earthen ramparts, with no apparent breaks for gates; they likely formed a barrier to flooding, with access over the top via ramps (De Meyer and Gasche 1980, p. 28). The city wall of Sippar underwent various episodes of heightening between the early second millennium BC and the Achaemenid period, when burials dug into the top of the wall indicate that it was no longer being actively maintained (Haerincx 1980, pp. 59–60). At Ur, the city wall of the Ur III period (2112–2004 BC) was originally built up against the side of the mound as a mud-brick retaining wall surmounted by a baked-brick rampart. In the Old Babylonian and Kassite periods, the exterior of houses built on the line of the original Ur III period city wall delineated a stretch of the eastern city wall (Woolley 1965, p. 73, pl. 62). There is evidence for Neo-Babylonian rebuilding, but the remains are insubstantial (Woolley 1974, p. 63, pl. 61) and the defenses were in disrepair in one location (Woolley 1974, p. 66). At Uruk, the city walls endured as earthen monuments and demarcated urban space long after they had fallen into ruins (Baker 2014c).

Babylon likely outgrew its original, Old Babylonian wall (George 1992, p. 20, fig. 3). The rectangular wall circuit known through excavation, and still visible in satellite imagery, was first laid down in the late second millennium BC; it continued in use, with periodic rebuilding, throughout the first millennium BC. The Neo-Babylonian city wall was of double construction, with a wider baked-brick inner circuit separated from a narrower outer circuit by a berm. Beyond the outer circuit was a wider berm, encircled by a wall along the inner edge of the moat, and then the moat itself (Oates 1988, pp. 145–149). The moat connected with the Euphrates on the north and south sides of the city. Nebuchadnezzar II also constructed an outer defensive wall to the east of the city in a triangular configuration, enclosing both the main walled city on the east bank of the river as well as an extensive area beyond, extending the overall walled area to over 900 ha (Fig. 8; George 1992, p. 141, fig. 7). This entire area is sometimes mistakenly taken to be the size of the Neo-Babylonian city (e.g., Altaweel and Squiteri 2018, p. 72; Van de Mierop 2003, p. 258). However, the area between the main city wall and the outer defensive wall was rural

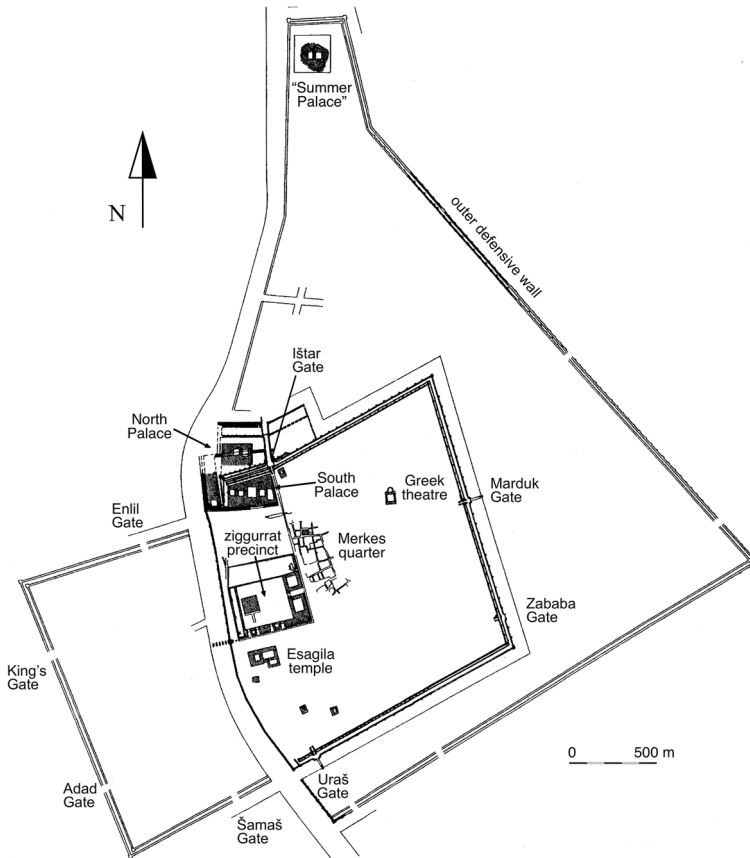


Fig. 8. Schematic plan of Babylon in the sixth century BC showing excavated structures within the main walled city and the outer defensive wall to the east (created by the author, based on Pedersén 2005, fig. 50)

hinterland, given over mostly to cultivation and some small settlements; the urban structure proper was entirely contained within the main city walls.

Babylon had eight city gates, four on each bank of the Euphrates, the most celebrated being the Ishtar Gate with its striking glazed brick decoration (Amrhein et al. 2019; Seymour 2008). The gates are listed in Tintir with both their everyday names and their ceremonial names (George 1992, p. 67, tablet 5, lines 49–58). Since the Ishtar Gate was identified by an inscription excavated in situ, and all of the city gates are listed in sequence, the individual gates can be identified either with excavated remains on the east bank or approximate locations on the west (George 1992, pp. 22–24, fig. 4).

City wall construction and maintenance in southern Mesopotamia correlates with long-term political developments in the region. The heyday for construction was during the third millennium and early second millennium BC, a period of competing city-states. By the first millennium BC, rulers of the Neo-Babylonian empire were

concerned primarily with defending their border regions, so there was a focus on the walls of the northern Babylonian cities (e.g., Babylon, Borsippa, Kish), while those of the southern cities were insubstantial (e.g., Ur) or were likely already ruined and survived as earthworks by this time (e.g., Uruk). By the Achaemenid period the walls of cities other than Babylon, the capital, were no longer being maintained, since it was only necessary to defend the empire at its borders (Baker 2014c, p. 88); the upkeep of Babylon's walls marked its status as a regional capital.

Defensive works are not restricted to city walls. In northern Babylonia Nebuchadnezzar II built two cross-country defensive walls, as mentioned in his inscriptions. The most northerly of the two is likely identified with Ḥabl aš-Šaḥr, a massive baked-brick structure that originally extended from the east bank of the Euphrates to the west bank of the Tigris. This wall, which survived as a visible levee 1 m high and up to 30 m across over a distance of around 15 km, was excavated and surveyed near Tell ed-Dēr (Black et al. 1987, fig. 18; Gasche et al. 1989). The more southerly defensive wall lay east of Babylon, running in the direction of Kish and beyond as far as Kar-Nergal, which was perhaps located on the Tigris. This wall has not been excavated but may be identified with embankments depicted on early maps of the region (Reade 2010).

Temples and Ziggurats

Each Babylonian city typically had a major temple that housed its patron deity (and his spouse, in the case of male gods), plus other temples dedicated to lesser gods of the pantheon. The main temple drove the local economy and played a central role in local administration. It was normally located within its own precinct near the city center, while other temples were scattered around the city. Tintir lists the names of 43 temples within Babylon, together with the districts in which they were located (George 1992, pp. 61–62). All temples centered around one or more internal courtyards, but the minor temples lacked the outer precinct that, in the case of the main city temple, accommodated extensive facilities for the many specialized activities involved in caring for the gods, including providing for their regular meals and looking after their clothing and other paraphernalia (Baker 2013, pp. 36–40). The main temple typically contained numerous shrines of other gods and goddesses, who might also have their own temples elsewhere in the city. It was normally accompanied by a ziggurat, that is, a stepped tower with a temple on the uppermost level, usually located within the same precinct as the main city temple, though at Babylon the ziggurat had its own separate precinct north of the enclosure of Esagila, the main temple of the city god, Marduk. Although the ziggurat of Babylon was dismantled in the Hellenistic period and never rebuilt, the structure is depicted as a six-stage tower on a stele of Nebuchadnezzar II, alongside an image of the king and a ground plan of the temple that stood on top of the ziggurat (George 2011). Some cities had more than one ziggurat; for example, a topographical text records Akkad, a city of uncertain location, as having two ziggurats (George 1993, p. 47). For a detailed, illustrated study of temple architecture, see Heinrich (1982); for temples excavated at Babylon by Iraqi archaeologists, see Ishaq (1979–1981) and Cavigneaux (2013).

The Babylonian temples were accessible only to consecrated members of the priesthood who were drawn from the middle and upper echelons of the urban community. The priesthood encompassed not only those who performed a purely cultic function, but anyone (almost invariably male) who owned a temple office (“prebend”) in a particular specialist role in the service of a deity and who received in return a share in temple income derived from the divine offerings (Waerzeggers 2010, pp. 33–76). The priesthood, therefore, included brewers, bakers, goldsmiths, scribes, boatmen, cultic singers, orchard keepers, and numerous other specialists. While these were all permitted to enter the temple precinct, access to sacred space within was hierarchical: the internal space of the temple was progressively more restricted, the closer one came to the divine *cella* (shrine) housing the god’s statue. In a study of the Resh temple dedicated to the god Anu at Hellenistic Uruk, I identified several architectural spaces of the temple precinct as “workstations” owned by members of the temple personnel and formulated a comprehensive scheme for the temple’s spatial organization (Baker 2013). The working areas were located around courtyards on the southeastern side of the precinct, while administrative functions were concentrated in the western sector; these two sectors were separated by Anu’s processional route from the main outer gate to his *cella* within the main shrine at the heart of the precinct (Baker 2013, p. 37, fig. 11).

The Akitu House, associated with the New Year festival, was located outside the city walls. At Uruk the Akitu House is identified with a substantial Seleukid building excavated to the northeast of the city (Kose 1998, pp. 277–289); a second structure outside the city wall on the southwest side has been tentatively identified as Uruk’s second Akitu House (Van Ess and Fassbinder 2019, pp. 54–55). At Babylon the location of the Akitu House, known from royal inscriptions and other texts, is uncertain; Schmidt (2002) proposed to identify it with a large Parthian structure excavated to the north of the city, but this is unlikely (Kose 2004; Pedersén 2021, pp. 266–268).

Distinct from “regular” temples, so-called “public chapels” were integrated into the residential fabric of AH at Old Babylonian Ur (Woolley and Mallowan 1976, pp. 30–32) and a few contemporary sites; these fronted onto the streets, with housing to one or both sides and to the rear (Miglus 1999, fig. 4). Shepperson (2012, fig. 3) showed that the doorways of these chapels at Ur were positioned to catch the morning sun; she related this to solar rituals connected with the administration of justice, such as oath taking, since the sun god Shamash was the god of justice. Other religious structures include pedestals that perhaps served as street altars; these are known from topographical texts but have only been excavated at Babylon, in the streets of Merkes (Baker 2009, pp. 96–97).

Palaces

With the development of Sumerian kingship in the third millennium BC, palaces became an established feature of the urban built environment (Stone 2013, p. 163). During the Early Dynastic period palaces included a clear throne room suite and were physically distant from the religious center of the city, embodying the symbolic separation between the religious and the secular that marked Mesopotamian

rule from this time on (Stone 2013, p. 164). This separation holds true for the Babylonian cities into the first millennium BC. In Assyria, by contrast, the palace terrace on the citadel at Dur-Šarrukin (Khorsabad), built in the late eighth century BC, accommodated a suite of small temples annexed to the west side of Sargon II's palace, as well as a ziggurat (Kertai 2015, fig. 5.1), and a major temple of the god Nabū was connected to the palace terrace by a bridge. This difference between Babylonia and Assyria in the location of royal palaces vis-à-vis temples reflects differences in royal ideology: the Assyrian king was seen as the direct earthly representative of the national god, Aššur, whereas in Babylonia the priesthood played an intermediary role between god and king (Maul 2017, pp. 346–349; Waerzeggers 2011, p. 734).

In spite of their political and administrative significance, few Babylonian palaces have been excavated, and much of what is known about them is based on textual sources. Old Babylonian examples include the Palace of the Rulers at Eshnunna (Tell Asmar) in the Diyala region (Heinrich 1984, pp. 49–55; Reichel 2016–2017) and the palace of Sin-kašid (c. 1865–1833 BC) at Uruk (Heinrich 1984, pp. 63–66). Hammurabi's palace at Babylon remains unknown due to the difficulty of accessing the Old Babylonian levels. From the second half of the second millennium BC, there is the palace at the Kassite city of Dur-Kurigalzu (mod. Aqar Quf) in northern Babylonia (Clayden 2017, pp. 458–461). In addition to the main excavated palace, two further “palatial buildings”—likely administrative buildings—were partially excavated. Dur-Kurigalzu's main palace was actually a secondary palace, since Babylon remained the capital at that time (Clayden 2017, p. 470); the Kassite royal palace in Babylon has not been excavated. Other Middle Babylonian (and early first millennium BC) palaces were located at Akkad, Ešnunna, Larsa, Ur, and Dilmun (Bahrain) (Jursa 2004a).

At Babylon there were three Neo-Babylonian palaces (Kuhrt 2001; Pedersén 2021, pp. 89–137). Two were adjacent to the northern city wall: the South Palace lay to the south of it, and the North Palace lay just across the wall to the north (see Fig. 8). The third, the so-called Summer Palace, was situated outside the city to the north, within the angle formed by the Euphrates and the northernmost angle of Nebuchadnezzar's outer defensive wall. The South Palace was begun by Nabopolassar (626–605 BC) and completed by his son Nebuchadnezzar II. The palace layout, reconstructed by Iraqi archaeologists, is visible in satellite imagery. It comprised five sectors, each with its own large central courtyard. The main entrance lay on the east side, by the Procession Street that ran along that side of the palace, beginning at the Ishtar Gate near its northeast corner. The main route into the palace led through this entrance, across two courtyards and into the largest courtyard, to the north of the great throne room. The two sectors to the west presumably accommodated the royal family.

The only other excavated palace of the first millennium BC is a smaller palatial structure at Ur near the North Harbor (Woolley and Mallowan 1962, pp. 41–43, pl. 70). The excavators considered it to be the residence of Nabonidus's daughter, whom the king installed as priestess of the moon-god at Ur, but this can be ruled out (Weadock 1975, p. 114); it likely accommodated the city governor. Palaces known to have existed in some other cities at this time have not yet been excavated (Jursa 2004b).

As the political system changed over the course of the second and first millennia BC, the function and significance of palaces evolved: first, as seat of government of a city-state, then a kingdom, and finally an empire. Their numbers also evolved: the ruler of a city-state needed only a single palace, but from the Kassite period through the first millennium BC the king's main palace in Babylon was only one of several. It served both as the king's main residence and as the administrative center for the land; in addition there were secondary palaces, both in the capital and in other major cities. The palace and the temple, as the two most important urban institutions, have often been viewed as competing. Stone (1995, p. 239) suggested that their placing symbolized the "parallel but conflicting functions of the two main institutions of the city." However, recently scholars have preferred a model that emphasizes the interdependency of palace and temple (e.g., Kleber 2008). In the first millennium BC the Babylonian king's main role was as sponsor of the temples (Waezeggens 2011), while the temples effectively functioned as a branch of the administration.

Craft Production and Commerce

The location of craft production depended on its context, domestic or institutional. Certain industries, such as ceramic production, tended to be located at the city's edge for practical reasons, including proximity to the canal network for water supply and transport of raw materials, fuel, and finished goods, and to keep noxious smoke and fumes away from the residential areas. Survey work at Uruk detected ceramic kilns at the western edge of the city (Van Ess and Fassbinder 2019, pp. 56, 75, fig. 13). Van de Mieroop (1997, p. 82) considered domestic areas mixed with industrial zones a characteristic feature of the Mesopotamian city, yet this is difficult to substantiate since archaeological evidence for discrete areas of craft production is limited. At Maškan-šapir, Stone and Zimansky (2004, pp. 53–68) mapped surface finds of artifacts and materials, including copper slag. Some particularly dense concentrations of cuprous slag, usually associated with metal fragments, may be the remains of workshops (Stone and Zimansky 2004, p. 67); however, their relationship with the city layout remains uncertain in the absence of an architectural context. For the first millennium BC cities, most evidence for production comes from the written sources, which are heavily weighted toward the institutional (temple) sector: they document the range of specialists associated with the temple, their conditions of work, and sometimes also the place(s) where they carried out their duties. Outside the institutional sphere, much craft production would have been carried out within the household. This is supported by the Neo-Babylonian apprenticeship contracts, often involving household slaves (Hackl 2010). However, at the household level we have little archaeological evidence since domestic activity areas have scarcely been identified or recorded in detail.

The presence of shops in the city is important since it relates to the question of whether or not the Babylonians had a market economy. In the past many scholars followed Polanyi's view that the Mesopotamian economy, like other premodern economies, was structured differently from modern economies (see Jursa 2010, pp. 19–21). However, the existence of a market economy in Babylonia can now be

considered settled, at least from the late seventh century BC, since there is clear evidence of prices being fixed by the interplay of supply and demand (Jursa 2014, p. 174; see also Jursa 2010, pp. 469–753, 772–783). There also are textual references to buying and selling within the Neo-Babylonian city (Jursa 2010, pp. 641–644, 780–781), in line with the archaeological and textual evidence for structures serving as shops. At Old Babylonian Ur the excavators identified several shops in AH (Woolley and Mallowan 1976, pp. 32–33); however, some of these are doubtful, including Nos. 5, 7, and 9 Paternoster Row, which have subsequently been interpreted as linear houses (see Fig. 2). The shops had a narrow street front, possibly with access for customers via a window that could be closed with a wooden shutter. For the first millennium BC, my recent identification and contextual analysis of the Neo-Babylonian term (*kuruppu*) for “shop” makes it clear that there were major public streets in Hellenistic Uruk that had rows of at least two adjacent shops along their front, with houses to the rear (Baker 2010b). These structures were typically rectangular, with a short side facing the street, and often at least one more shop next door; that they have not yet been identified in excavation is surely a matter of sampling. This written documentation supports the existing evidence for market streets as a place of buying and selling in the Babylonian city, much like the traditional bazaar.

Open Spaces, Unbuilt Land, and Intramural Gardens

Open spaces and unbuilt land took a variety of forms. Based on the first millennium evidence, I proposed a typology that comprises three main categories: unbuilt urban land (in private ownership), cultivable land (orchards and gardens) within the city, and public space, especially the street network (Baker 2009, pp. 89–90). A transdisciplinary typology of urban open spaces proposed by Stanley et al. (2012, fig. 1) covers both ancient and modern open spaces and includes additional categories: transport facilities, streets, plazas, recreational space, incidental space, parks and gardens, and food production. Within these categories each element is associated with a particular scale: city, intermediate, or residence. This approach is similar to that adopted by M. L. Smith (2008), who examined urban empty spaces at the household, neighborhood, and urban scales, emphasizing its flexibility and contrasting it with “the prescriptive bounds of architecture.”

Several elements of this comprehensive scheme (Stanley et al. 2012) have been discussed in preceding sections, namely, harbors and quays, city gate areas, and streets. The category “recreational space” cannot be identified in the Babylonian context, and I propose to merge it with “incidental space” at all scales, assuming that nearby open spaces, streets, alleys, and empty lots were used for playing. The city wall and adjacent land was also likely used for recreation, among other activities. While empty lots certainly existed, the availability of marginalized space between buildings was likely limited, especially in conditions of urban population growth with resulting pressure on land. Within the residential areas, unbuilt land was privately owned and usually belonged to an adjacent house; such plots were typically walled to deter encroachment and casual use by outsiders (Baker 2009, p. 90). In

both the Old Babylonian and Neo-Babylonian periods, private transactions distinguish between built (house) plots, derelict house plots, and unbuilt plots (Baker 2004, p. 57 n. 360; Charpin 2003, p. 311). The written sources attest to the quite frequent transfer of small unbuilt plots between neighbors; clearly these are cases of buyers extending their own property in response to changing household circumstances. The use of mud-bricks for construction facilitated small-scale adjustments between neighbors, making it simple to remodel houses according to need. The availability (or lack) of unbuilt land within residential areas serves as an index of the density of occupation, with infilling taking place as the urban population increased (Baker 2009, p. 93).

There is some limited written evidence for the existence of royal gardens in Babylonia, though access to these was likely restricted to the king and his circle. The site of the “Hanging Gardens of Babylon,” known only from later sources, has not yet been plausibly identified; Dalley’s (e.g., 2015) proposal to locate them in the Assyrian city of Nineveh has not met with universal approval (cf. Bichler and Rollinger 2005). While intramural burial was common, cemeteries may be underrepresented because of the lack of attention paid to the city margins.

The category “food production” is well documented for Babylonian cities. Date orchards and gardens were often located in the lower-lying areas around the city’s margins, as at Uruk, where canals flowed within the city walls. The Kassite city map of Nippur depicts an area in an angle formed by the city wall on the south side bearing a cuneiform caption “gardens within the city” (Oelsner and Stein 2011, pp. 106, 110). At least part of this area was built on during the Neo-Babylonian period, since some housing was excavated within it, close to the city wall (Gibson et al. 1983).

Spatial Organization

Urban spatial organization is often framed in terms of planned versus organic development, but this is overly simplistic since cities with an orthogonal layout tend to be classed as planned while those that lack one are considered unplanned. Smith (2007) argues instead for a consideration of spatial principles, especially the coordination of buildings and spaces, and the standardization of urban forms, to dispense with the Western preoccupation with planned versus unplanned. He distinguishes three definitions of “planning” proposed by scholars of ancient cities: the deliberate actions of builders, the formulation of a “specific regular urban design,” and coordination among buildings, reflecting a formal organization of space (Smith 2007, pp. 6–7). I have tended to employ the first definition, especially with respect to the results of planning decisions made by a central authority, typically the ruler (Baker 2007, pp. 73–74). Using this restricted sense, I distinguish between the results of deliberate, usually top-down planning decisions, on the one hand, and the effects of more piecemeal growth or development, which arise out of numerous cumulative actions and decisions made primarily by the local inhabitants (Baker 2014a), on the other. As Smith points out, these latter actions are also deliberate and self-conscious (Smith 2007, p. 6), although their effects may be incremental; the difference is in the scale of the operation and the identity of the actors. The framework of analysis that I use,

from local scale to neighborhood and finally to city scale, progresses broadly speaking from less planned to more planned (e.g., Smith 2007, p. 7): residential areas were reshaped on a more or less continuing basis by their inhabitants in ways that reflected their immediate needs and resources, while city-scale elements such as the city walls and monumental areas were the product of more episodic, top-down planning decisions.

The nature of Babylonian sites poses a problem for any attempt to identify a regular urban design or a formal organization of space, according to Smith's second and third definitions of planning. Unlike the cities of classical Greece and Rome, or the ancient Egyptian or Aztec cities, we lack standing remains of stone that make it easier to discern elements of a grand plan: aside from Babylon, the layout of most Babylonian cities is too poorly known for that. On the other hand, we do have written documentation that allows the reconstruction of the context, motives, and ideologies that lay behind planning decisions at all levels. My approach is to integrate a wide range of factors that influenced the physical form of the Babylonian city, including climate, materials and technology, social structure, pre-existing property boundaries and patterns of land ownership and tenure, religious and ideological values, and central planning decisions (Baker 2007, pp. 73–74). This helps us to understand the totality of processes that shaped the city, informing the interpretation of urban elements that have been recovered in piecemeal fashion and whose role (if any) in a "grand plan" is not necessarily clear. These factors operated at different spatial and temporal scales across different elements of the urban fabric. For example, the inhabitants of residential areas were constrained by the availability of land and resources in ways that did not apply to the monumental sector as planned or modified by the ruler or his delegates.

The picture is not always so clear-cut. From time to time, the ruler instigated a centrally directed resettling of people within a city; in such cases, the process likely involved the parceling out of land according to a regular scheme, on which the settlers then built their houses, thereby limiting the state's involvement. Assuming the original plots were laid out in a regular pattern, this would become degraded over the generations as houses expanded and contracted to meet the needs of their owners. This remains speculative, since it is usually not possible to trace an excavated residential area back to its origins. The Neo-Babylonian housing at Ur is an exception to this: area NH was laid out on a newly cleared site crossed by straight streets that, according to the excavators, "seems to imply that a stronger municipal government had taken over control of the street system of Ur" (Woolley and Mallowan 1962, p. 44). However, the houses themselves had internal walls on a different alignment to the streets and were quite irregular in shape, suggesting that top-down planning was not the only factor that determined their layout, and that perhaps earlier property boundaries were still involved. At Hellenistic Uruk, the administration of the Resh temple allocated plots of land to its personnel for house building, and one such case involves a plot with sides of 50 cubits, suggestive of regular parcellation (c. 625 m²) (Baker 2005, pp. 35–36; Corò 2012). Such a scheme is likely behind the relatively homogeneous houses occupied by priests living within the Eanna temple precinct at Neo-Babylonian Uruk (Miglus 1999, p. 206). Further investigation is needed to trace the development of Babylonian residential areas over time, ideally

back to when they were first laid out, and to model their subsequent development through generations of use.

It is difficult to determine detailed organizational principles for the “coordination of buildings and spaces” in the absence of more complete city plans, although most of the features that Smith (2007) considers under this heading have been recovered at one or more Babylonian sites. His other main category, “standardization,” is more accessible. The concept of a “blueprint” for the Babylonian (or Mesopotamian) city provides an architectural inventory (Smith 2007, pp. 25–26) that is highly standardized across settlements. True orthogonality is rare but can be seen in the small, specialized sites of Haradum and Šaduppum. The main city temple and its ziggurat tended to be located near to the city center or some way to the side, while the palace, where present, was on the periphery, and lesser temples were scattered around the city. Their restricted access means that the great palace and temple courtyards, the largest formal open spaces in the city, were exclusive spaces. Building orientation is often consistent, for example, in Neo-Babylonian houses the largest room was normally on the southeast side, corresponding to the location of the divine cellas in the temples (the god’s chamber where the divine statue was seated), and also to the throne room in the South Palace at Babylon. Residential districts were often “semi-orthogonal” in form, but they were not planned; rather, the appearance of regularity was generated by “simple factors of practicality and efficiency” (Smith 2007, pp. 13–15).

City-State to Empire

City as Cult Center

The Babylonian city’s primary function throughout the second and first millennia BC was as cult center, despite prolonged episodes of deurbanization. Beaulieu (2019) traced the role of these “temple towns” in nation building by examining historically documented priestly migrations. During the later Old Babylonian period, in the 18th century BC, southern Babylonian priests migrated with their gods to northern cities such as Kish and Babylon, faced with economic crisis in the south and the Sealand I dynasty conquest (Beaulieu 2019, pp. 4–5). The abandonment of central and southern Babylonian cities at that time is attested archaeologically, for example, at Nippur (Stone 1977) and Isin (Kaniuth 2017). A major motivation for the priestly migrations was likely the desire to keep the gods safe until the First Dynasty of Babylon could regain control over the south, but that never happened. Following the establishment of the Kassite dynasty, it was Kurigalzu I who set about restoring the neglected cult centers, including the southern cities. Although Kurigalzu’s extensive reconstruction program might be regarded as a concerted program of re-urbanization, Kassite Babylonia remained largely rural in contrast to earlier periods, and with their focus on temples, the Kassite rulers “created the historicized landscape of venerable cult centers that became the hallmark of Babylonia in the first millennium,” serving as *lieux de mémoire* (Beaulieu 2019, p. 5). This echoes Brinkman’s

suggestion that “the monumental Ur of Neo-Babylonian times was to some extent an artificial creation supported by royal money” (Brinkman 1969, p. 347, n. 2).

Archaeological data support this scenario in the first millennium BC: at some cities, while the main temple was sustained through royal support, a significant part of the associated settlement was situated off the mound itself. The fringes and the immediate surroundings of the Babylonian cities have rarely been intensively investigated, hampering our understanding of suburbs and the spread of extra-mural settlement, but at Ur we now have good evidence for this. While the walled mound occupied around 60 ha, with some extension beyond (Wright 1981, p. 330), recent work showed that in its later occupation periods (Late Larsa/Old Babylonian and Neo-Babylonian) the site may have been as large as 120–500 ha (Hammer 2019). This evidence for substantial areas of settlement off the main mound undermines the role of the main city temple as a focal point of settlement for the inhabitants.

The same phenomenon is observed at other Neo-Babylonian sites. At Sippar, the main temple—the Ebabbar, dedicated to the sun god, Shamash—was located at the western end of the walled main mound (De Meyer 1980, plan 2). The extent of Neo-Babylonian occupation on this mound is uncertain, but limited excavations encountered Old Babylonian remains directly beneath the surface (Fadhil and Alsamarraee 2005), while Neo-Babylonian written sources attest to a thriving settlement on the nearby quay, a trading center outside the city that has not yet been located (Waerzeggers 2014, pp. 75–93). At Kish, a sprawling site made up of numerous discrete mounds, the main ziggurat and temple to the god Zababa, located on Tell Uhaimir in the western part of the site, was no longer densely occupied by the Neo-Babylonian period (Moorey 1978, pp. 28–29); most inhabitants then lived around Ingharra (ancient Hursagkalamma) some distance to the east, in the vicinity of another temple dedicated to the goddess Ishtar/Ninlil. Judging by the archival evidence from this area, its inhabitants included members of the priesthood of Zababa, who would have had to walk quite some distance to perform their temple duties. A similar situation prevailed at Eridu, an important site for the early phases of urbanism located southwest of Ur. Neo-Babylonian occupation has not been found on the main mound of Abu Shahrain, where the ziggurat was located, but excavation indicated that there was Neo-Babylonian and Achaemenid occupation on Mound 5 to the southeast (Safar et al. 1981, pp. 31–32). The ziggurat had been rebuilt by Nebuchadnezzar II, but the personnel who served it lived some distance away. Finally, recent Iraqi and Italian excavations at Tūlūl al-Baqarat, plausibly identified as ancient Kesh (Viano 2019), have revealed evidence for the main city temple on Mound TB1, presumably that of the city’s patron deity, the goddess Ninhursag (Lippolis 2016; Lippolis and Viano 2016). The excavators note that mound TB1 “seems to be occupied by ceremonial structures inside of an enclosure with internal rooms” (Lippolis 2016, p. 73), somewhat removed from any associated settlement (Lippolis and Viano 2016, p. 143). The nature and location of the first millennium BC settlement remains to be determined.

These sites with settlement areas located some distance from the main temple are all examples of second-tier cities of the kind that were headed by a “high priest,” as distinct from the major cities of Babylon, Borsippa, and Uruk, governed by a “bishop” or “temple administrator” and a “city governor” (Jursa 2005, p. 50). This

difference in administration is not entirely diagnostic of the distinction between larger and smaller urban sites, but from the Babylonian perspective the division into first-tier and second-tier centers does correlate with the relative importance of the local temple. It also reflects the Babylonian settlement hierarchy, in the sense that some temple cities are known to have had “satellites” or dependents, that is, settlements whose temple depended on a higher-order temple for their administration. For example, Uruk’s dependents included Eridu, Larsa, Udanu, and also probably Kissik and Kullab. These relationships are not necessarily based on proximity, since both Eridu and Kissik were closer to Ur than to Uruk, and Udanu was likely located in the vicinity of Marad in central Babylonia. In the case of Sippar, a second-tier center, we can identify a third tier formed of its dependents: the administration of Ebabbar was involved in the affairs of smaller temples in cities such as Akkad and Bās/Šapazzu, both of unknown location in northern Babylonia. The cities of Dur-Galzu (earlier Dur-Kurigalzu) and Zabban also had a close relationship with the Ebabbar at Sippar, and perhaps Opis belonged in this sphere too. Interconnections between the first millennium cities are treated in greater detail by Jursa (2010).

This phenomenon underscores the importance of the relationship between the city, the temple (and its priesthood, who dominated the local urban élite), and the institution of kingship. With the political development from city-state to territorial state and then to empire, control over a network of interconnected “temple towns” became concentrated in the hands of a single ruler whose ideology required him to support the temples and ensure that the gods were supplied with everything they needed, without interruption. The disconnect between the main city temple and a significant part of the site’s occupation reinforces the idea that these cult centers were being kept alive through royal sponsorship, but that for at least some of the inhabitants, their daily lives did not revolve around the temple or, for reasons that are not yet clear, they chose to live some distance away.

Religious Practice: Its Changing Spatial Context

Over the course of the second and first millennia BC, we also see significant changes in the spatial context of cultic practice in the southern Mesopotamian cities. There are differences in housing between the Old Babylonian and Neo-Babylonian periods. First, there was a change in house layout along with the inclusion or omission of certain fixtures. The Old Babylonian main living suite often included a room that contained the family grave(s) as well as a built shrine. This suite would likely be occupied by the head of the extended family, who would be responsible for performing the necessary offerings for the deceased ancestors (Postgate 1992, pp. 99–101). By the Neo-Babylonian period, these features had disappeared: not a single built shrine has been identified in a private house, and there is no clear correlation between intramural burials and the main living suite. These developments are mirrored by changes in the Babylonian terminology for parts of the house. By the Neo-Babylonian period, the terms previously in use had been replaced almost in their entirety: the only survivals from Old Babylonian are *barakku* (“vestibule”) and *rugbu* (“loft,” “upper story”). Whereas the Old Babylonian terms identified individual rooms, the

emphasis had shifted in Neo-Babylonian times to naming house sectors according to their position relative to the central courtyard. Some Old Babylonian room names had a cultic association—*ešertum* (“chapel, shrine”), *paṗāḫum* (“cella, shrine”), and *šubtum* (“residence” [in a temple])—but by the first millennium BC these words had completely dropped out of use in the house context and the terminology was entirely secular. These changes may be connected with changes in the nature and practice of family and household cult. However, two documents from one family archive from sixth century BC Babylon refer to the obligation to provide offerings for the deceased (Baker 2004, no. 1, r. 15, no. 36, r. 13). The first document specifies the delivery of offerings in the north(-facing) suite of the house, the main living suite typically associated with the male head of the household (Baker 2015, p. 377). It would be the exact equivalent of the main living room of the Old Babylonian house that was associated with a chapel and the family vault. These two tablets suggest that the tradition of providing offerings for the ancestors continued, but the archaeological evidence indicates a material change in how religious practice was accommodated within the house. The loss of a dedicated shrine and its accompanying fixtures may reflect a decline in the importance of family religion, perhaps in connection with the emergence of the strong national cult of the god Marduk.

Similar developments can be observed at the level of residential neighborhoods. Some Old Babylonian housing districts, notably AH at Ur, included public chapels, that is, single rooms of cultic function that were integrated into the surrounding housing and accessed directly from the street (e.g., Miglus 1999, pl. 4). In Neo-Babylonian housing areas, there are no such public chapels. Instead, we see monumental, freestanding temples scattered throughout the city, often integrated into the residential areas, for example, the Ishtar-of-Akkad temple in Babylon, Merkes (Reuther 1926, pl. 17; see Fig. 6). By the Neo-Babylonian period there is a near-complete monumentalization of religious architecture that may be connected with the establishment of a state religion in the 12th century BC, with the formal elevation of Marduk as head of the Babylonian pantheon (Lambert 2013, pp. 271–274).

Religious reform had other discernible effects on the city. There was likely a top-down reorganization of the urban landscape of Uruk as a consequence of cultic reform motivated by Xerxes’ suppression of the Babylonian revolts that broke out in his second year (484 BC). In the later Achaemenid period, the great Eanna temple of the goddess Ishtar went out of use, and the priestly housing located within the temple’s outer precinct was abandoned. It was likely at that time that the Resh, a major new temple to the god Anu, recently elevated as head of the city pantheon, was built, along with a nearby temple dedicated to Ishtar and Nanaya. The earliest excavated remains of the Resh are dated to the Seleukid era (Kose 1998), but there are grounds for supposing that the original construction was earlier, in the late Achaemenid period in line with the major reform of the Urukian pantheon (Baker 2014e, pp. 189–191). The effects of this reorganization of the city’s cultic center have not been verified through excavation, but surface survey of the site indicated a shift in the areas of occupation in the Hellenistic era compared with the Neo-Babylonian period (Finkbeiner 1991, pls. 30–31), and contemporary documentation indicates that mostly new names of city districts were then in use, reflecting a top-down

reorganization of the city center affecting the surrounding housing areas (Baker 2014e, pp. 196–197).

Housing and Social Inequality

The political development from city-state to empire was accompanied by increasing social inequality, judging by the data on house sizes. There was a significant increase in average house size between the Old Babylonian period and the Neo-Babylonian, from c. 152 m² to c. 417 m², as well as an increase in the range of documented sizes, with the largest excavated Old Babylonian house measuring 700 m²; the largest Neo-Babylonian house was more than twice as large, 1490 m² (Baker 2011a, pp. 539–541). These developments imply “not only a general improvement in urban living conditions, but also an unprecedented degree of social inequality” (Baker 2011a, p. 541). It has been suggested that the larger average size of the Neo-Babylonian houses is partly due to greater numbers of resident slaves (Stone 2015, p. 444). While this may have been a factor, it is impossible to quantify the number of slaves who lived within the household, and we cannot tell for certain where they normally lived (Baker 2014b, pp. 10–11). There are extremely few written references to slaves’ places of residence, and when mentioned in the texts, the circumstances are likely atypical since the commonplace was not normally written down. As slave ownership was essentially a prerogative of the wealthy elite, they are inherently more likely to have been associated with larger houses, but it is doubtful that the presence of slaves alone was the driving force behind the general increase in house size.

The key to better understanding the relationship between house size and household wealth in urban Babylonia lies, I believe, in studying the effects of inter-generational transmission of wealth, a known driver of inequality in the ancient world (e.g., Bowles et al. 2010), just as in the present day. Under Neo-Babylonian inheritance practice, the eldest son took a preferential share in the paternal estate (Oelsner et al. 2003, pp. 938–940), whereas in the Old Babylonian period, his share was the same as—or only marginally bigger than—his co-heirs (Westbrook 2003, pp. 395–397). While this difference in practice likely exacerbated social inequality, the extent to which it did so remains to be determined. These potential drivers of social inequality also need to be examined in the light of prevailing economic circumstances and longer-term trends. The increase in average house size and the emergence of greater social inequality in the first millennium BC compared with the Old Babylonian period is likely associated with the general rise in economic prosperity during the so-called “long sixth century,” between the fall of Assyria in 612 BC and the Babylonian revolts against Xerxes in 484 BC (Jursa 2010, pp. 4–5).

In archaeological studies of ancient inequality, house size is the most commonly used proxy for household wealth (e.g., Basri and Lawrence 2020; Kohler and Smith 2018; Kohler et al. 2017). As an archaeological attribute, it is more readily and systematically identifiable than other possible indicators, such as rich burials or luxury/exotic items. For urban Babylonia, numerous textually documented house sizes are

available in addition to the excavated house sizes, although these must be carefully contextualized since sale documents often involve only parts of houses rather than entire houses (Baker 2014b, pp. 11–14; Van de Mierop 1999, pp. 261–262). Nevertheless, based on the wealth of historical documentation, it is possible to evaluate the relationship between house size and household wealth, leading to important caveats concerning the use of this proxy in studying inequality in ancient societies where the paternal estate was apportioned between the heirs.

The calculation of Gini coefficients requires the assumption that the number of occupants remains constant (Basri and Lawrence 2020), but Babylonian data show that this is problematic, and caution is needed to use house size as a proxy for wealth without considering conditions of ownership and the changing size and composition of the household. Contextual study of two textually documented houses of virtually identical size from Hellenistic Uruk indicated that the property-owning families had radically different social and economic circumstances: one property was shared between six cousins at its maximum extent of division, while the other represented only a very small part of one man's extensive urban land holdings (Baker 2015, pp. 390–398). Further research is needed to investigate the complex relationship between house size on the one hand and household wealth and demography on the other.

Conclusions

The basic ideal of the southern Mesopotamian city remained stable throughout the millennia-long trajectory of development from city-state to empire. This “blueprint” for its physical fabric comprised elements that were nearly ubiquitous, but it did not dictate the details of their plan or construction, nor their spatial relationship with one another. This inherent flexibility allowed for considerable variability in urban form over time and space. In terms of function, the Babylonian cities exemplify Smith's (2016, p. 165) class of “political cities” that combined the characteristics of the “regal-ritual city” and “capital city.” Their most striking characteristic was their role as cult center: each city's identity was bound up with its main temple, which housed its patron deity and dominated the social and economic life of the city and its hinterland. By the first millennium BC, the political and governmental functions of the capital, Babylon, were dispersed among the lesser cities through the delegation of power mediated via the close relationship between city, temple (and priesthood), and ruler. Although the category “economic city” applies mainly to modern cities (Smith 2016, pp. 164–165), the Babylonian cities had a significant economic component by the Old Babylonian period that became even more highly developed by around the mid-first millennium BC, with the development of a monetized economy and a significant role for markets (Jursa 2010). Changes over time include an increase in size and complexity: the so-called “age of empires” that began in the first millennium BC witnessed the emergence of a class of cities, including Babylon, which were considerably larger than their predecessors (Altaweel and Squitieri 2018). The movement of people, including an imperial program of forced resettlement, was certainly

a factor in their growth, just as it also affected rural areas through the infilling of small settlements to extend or intensify cultivation.

References

- Abu-Lughod, J. L. (1987). The Islamic city – Historic myth, Islamic essence, and contemporary relevance. *International Journal of Middle East Studies* **19**: 155–176.
- Adams, R. McC. (1965). *Land Behind Baghdad: A History of Settlement on the Diyala Plains*, University of Chicago Press, Chicago.
- Adams, R. McC. (1972). Appendix V: Settlement and irrigation patterns in ancient Akkad. In Gibson, M. (ed.), *The City and Area of Kish*, Field Research Projects, Coconut Grove, Miami, pp. 182–208.
- Adams, R. McC. (1981). *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates*, University of Chicago Press, Chicago.
- Adams, R. McC., and Nissen, H. J. (1972). *The Uruk Countryside: The Natural Setting of Urban Societies*, University of Chicago Press, Chicago.
- al-Hamdani, A. (2015). *Shadow States: The Archaeology of Power in the Marshes of Southern Mesopotamia*, PhD dissertation, Department of Anthropology (Archaeology), Stony Brook University, Stony Brook, NY.
- al-Hamdani, A. (2020). The settlement and canal systems during the First Sealand Dynasty (1721–1340 BCE). In Paulus, S., and Clayden, T. (eds.), *Babylonia under the Sealand and Kassite Dynasties*, De Gruyter, Berlin, pp. 28–57.
- Allinger-Csollich, W. (1991). Birš Nimrud I: Die Baukörper der Ziggurat von Borsippa. *Baghdader Mitteilungen* **22**: 383–499.
- Allinger-Csollich, W. (1998). Birš Nimrud II: ‘Tieftempel’ - ‘Hochtempel’ (Vergleichende Studien: Borsippa - Babylon). *Baghdader Mitteilungen* **29**: 95–330.
- Altaweel, M. (2020). The importance of flat archaeological sites in the age of empires and new digital methods for their identification and analysis: A case study from the Peshdar Plain in Iraqi Kurdistan. In Hasegawa, S., and Radner, K. (eds.), *The Reach of the Assyrian and Babylonian Empires: Case Studies in Eastern and Western Peripheries*, Harrassowitz Verlag, Wiesbaden, pp. 7–23.
- Altaweel, M., and Squitieri, A. (2018). *Revolutionizing a World: From Small States to Universalism in the Pre-Islamic Near East*, UCL Press, London.
- Amrhein, A., Fitzgerald, C., and Knott, E. (eds.) (2019). *A Wonder to Behold: Craftsmanship and the Creation of Babylon’s Ishtar Gate*, Princeton University Press, Princeton.
- Armstrong, J. A. (1992). West of Edin: Tell al-Deylam and the Babylonian city of Dilbat. *Biblical Archaeologist* **55**: 219–226.
- Armstrong, J. A., and Gasche, H. (2014). *Mesopotamian Pottery: A Guide to the Babylonian Tradition in the Second Millennium BC*, Recherches et Publications, Neuchâtel.
- Armstrong, J. A. (2017). Babylonian pottery in the Kassite period. In Bartelmus, A., and Sternitzke, K. (eds.), *Karduniaš: Babylonia Under the Kassites: The Proceedings of the Symposium Held in Munich 30 June to 2 July 2011 / Tagungsbericht des Münchner Symposiums 30. Juni bis 2. Juli 2011. Volume 2: Archaeological Studies*, De Gruyter, Boston, pp. 421–436.
- Bagg, A. M. (2011). Mesopotamische Bauzeichnungen. In Selz, G., and Wagensohn, K. (eds.), *The Empirical Dimension of Ancient Near Eastern Studies / Die empirische Dimension altorientalische Forschungen*, LIT Verlag, Vienna, pp. 543–586.
- Baker, H. D. (2004). *The Archive of the Nappāḫu Family*, Institut für Orientalistik der Universität Wien, Vienna.
- Baker, H. D. (2005). The property portfolio of a family of builders from Hellenistic Uruk. In Baker, H. D., and Jursa, M. (eds.), *Approaching the Babylonian Economy: Proceedings of the START Project Symposium Held in Vienna, 1–3 July 2004*, Ugarit-Verlag, Münster, pp. 7–43.
- Baker, H. D. (2007). Urban form in the first millennium BC. In Leick, G. (ed.), *The Babylonian World*, Routledge, New York, pp. 66–77.
- Baker, H. D. (2009). A waste of space? Unbuilt land in the Babylonian cities of the first millennium BC. *Iraq* **71**: 89–98.
- Baker, H. D. (2010a). The social dimensions of Babylonian domestic architecture in the Neo-Babylonian and Achaemenid periods. In Curtis, J., and Simpson, S. (eds.), *The World of Achaemenid*

- Persia—History, Art and Society in Iran and the Ancient Near East*, IB Tauris, London, pp. 179–194.
- Baker, H. D. (2010b). Babylonian shops. *Nouvelle Assyriologiques Brèves et Utilitaires* **2010**(4): 108 (no. 88).
- Baker, H. D. (2011a). From street altar to palace: Reading the built environment of urban Babylonia. In Radner, K., and Robson, E. (eds.), *The Oxford Handbook of Cuneiform Culture*, Oxford University Press, Oxford, pp. 533–552.
- Baker, H. D. (2011b). Sippar A. II. Im 1. Jahrtausend. § 3.5. Topographische Informationen. *Reallexikon der Assyriologie* **12**: 535–536.
- Baker, H. D. (2013). Beneath the stairs in the Rēš temple of Hellenistic Uruk: A study in cultic topography and spatial organization. *Zeitschrift für Orient-Archäologie* **6**: 18–42.
- Baker, H. D. (2014a). The Babylonian cities: Investigating urban morphology using texts and archaeology. In May, N. N., and Steinert, U. (eds.), *The Fabric of Cities: Aspects of Urbanism, Urban Topography and Society in Mesopotamia, Greece and Rome*, Brill, Leiden, pp. 171–188.
- Baker, H. D. (2014b). House size and household structure: Quantitative data in the study of Babylonian urban living conditions. In Baker, H. D., and Jursa, M. (eds.), *Documentary Sources in Ancient Near Eastern and Greco-Roman Economic History: Methodology and Practice*, Oxbow Books, Oxford, pp. 7–23.
- Baker, H. D. (2014c). Babylonian city walls in a historical and cross-cultural perspective. In Neumann, H., Dittmann, R., Paulus, S., Neumann, G., and Schuster-Brandis, A. (eds.), *Krieg und Frieden im alten Vorderasien: 52e Rencontre Assyriologique Internationale / International Congress of Assyriology and Near Eastern Archaeology, Münster, 17.–21. Juli 2006*, Ugarit-Verlag, Münster, pp. 87–96.
- Baker, H. D. (2014d). Trennwand (party wall). B. Im 1. Jahrtausend. *Reallexikon der Assyriologie* **14**: 121–122.
- Baker, H. D. (2014e). Temple and city in Hellenistic Uruk: Sacred space and the transformation of Late Babylonian society. In Frood, E., and Raja, R. (eds.), *Redefining the Sacred: Religious Architecture and Text in the Ancient Near East and Egypt 1000 BC–AD 300*, Brepols, Turnhout, pp. 138–208.
- Baker, H. D. (2015). Family structure, household cycle, and the social use of domestic space in urban Babylonia. In Müller, M. (ed.), *Household Studies in Complex Societies: (Micro) Archaeological and Textual Approaches*, Oriental Institute, University of Chicago, Chicago, pp. 371–407.
- Baker, H. D. (2016). Urban craftsmen and other specialists, their land holdings, and the Neo-Assyrian state. In Moreno García, J. C. (ed.), *Dynamics of Production in the Ancient Near East 1300–500 BC*, Oxbow Books, Oxford, pp. 53–73.
- Baqir, T. (1946). Iraq government excavations at Aqar Quf: Third interim report, 1944–5. *Iraq* **7**: 73–93.
- Bartelmus, A., and Sternitzke, K. (eds.) (2017). *Karduniaš: Babylonia Under the Kassites: The Proceedings of the Symposium Held in Munich 30 June to 2 July 2011 / Tagungsbericht des Münchner Symposiums 30. Juni bis 2. Juli 2011*. 2 vols., De Gruyter, Boston.
- Basri, P., and Lawrence, D. (2020). Wealth inequality in the ancient Near East: A preliminary assessment using Gini coefficients and household size. *Cambridge Archaeological Journal* **30**: 689–704.
- Beaulieu, P.-A. (2005). Eanna's contribution to the construction of the North Palace at Babylon. In Baker, H. D., and Jursa, M. (eds.), *Approaching the Babylonian Economy: Proceedings of the START Project Symposium Held in Vienna, 1–3 July 2004*, Ugarit-Verlag, Münster, pp. 45–73.
- Beaulieu, P.-A. (2018). *A History of Babylon, 2200 BC–AD 75*, Wiley Blackwell, Hoboken, NJ.
- Beaulieu, P.-A. (2019). Temple towns and nation building: Migrations of Babylonian priestly families in the late periods. *Journal of Ancient Near Eastern Religions* **19**: 3–17.
- Becker, H., Van Ess, M., and Fassbinder, J. (2019). Uruk: Urban structures in magnetic and satellite images. In Crüsemann, N., Van Ess, M., Hilgert, M., Salje, B., and Potts, T. (eds.), *Uruk: First City of the Ancient World*, J. Paul Getty Museum, Los Angeles, pp. 335–341.
- Bernbeck, R. (2012). The political dimension of archaeological practices. In Potts, D. T. (ed.), *A Companion to the Archaeology of the Ancient Near East*, vol. 1, Wiley-Blackwell, Oxford, pp. 87–105.
- Bianca, S. (2005). *Urban Form in the Arab World, Past and Present*, Thames and Hudson, London.
- Bichler, R., and Rollinger, R. (2005). Die hängenden Gärten zu Ninive – die Lösung eines Rätsels? In Rollinger, R. (ed.), *Von Sumer bis Homer: Festschrift für Manfred Schretter zum 60. Geburtstag am 25. Februar 2004*, Ugarit-Verlag, Münster, pp. 153–217.

- Black, J. A., Gasche, H., Gautier, A., Killick, R. G., Nijs, R., and Stoops, G. (1987). Habl aš-Šaḥr 1983–85: Nebuchadnezzar II's cross-country wall north of Sippar. *Northern Akkad Project Reports* 1: 3–46.
- Boehmer, R. M., and Dämmer, H.-W. (1985). *Tell Imlihiye - Tell Zubeidi - Tell Abbas: Hamrin Report 13*, Philipp von Zabern, Mainz am Rhein.
- Boivin, O. (2018). *The First Dynasty of the Sealand in Mesopotamia*, De Gruyter, Berlin.
- Bowles, S., Smith, E. A., and Borgerhoff Mulder, M. (2010). The emergence and persistence of inequality in premodern societies: Introduction to the special section “Intergenerational wealth transmission and inequality in premodern societies.” *Current Anthropology* 51: 7–17.
- Brinkman, J. A. (1969). Ur: The Kassite period and the period of the Assyrian kings. *Orientalia* 38: 310–348.
- Brinkman, J. A. (1984). Settlement surveys and documentary evidence: Regional variation and secular trend in Mesopotamian demography. *Journal of Near Eastern Studies* 43: 169–180.
- Brinkman, J. A. (2017). Babylonia under the Kassites: Some aspects for consideration. In Bartelmus, A., and Sternitzke, K. (eds.), *Karduniaš: Babylonia Under the Kassites: The Proceedings of the Symposium Held in Munich 30 June to 2 July 2011 / Tagungsbericht des Münchner Symposiums 30. Juni bis 2. Juli 2011. Volume 1: Philological and Historical Studies*, De Gruyter, Boston, pp. 1–44.
- Brodie, N. (2008). The market background to the April 2003 plunder of the Iraq National Museum. In Stone, P. G., and Bajjalay, J. F. (eds.), *The Destruction of Cultural Heritage in Iraq*, Boydell and Brewer, Woodbridge, pp. 41–54.
- Brodie, N. (2011). The market in Iraqi antiquities 1980–2009 and academic involvement in the marketing process. In Manacorda, S., and Chappell, D. (eds.), *Crime in the Art and Antiquities World: Illegal Trafficking in Cultural Property*, Springer, New York, pp. 117–133.
- Brusasco, P. (1999–2000). Family archives and the social use of space in Old Babylonian houses at Ur. *Mesopotamia* 34–35: 3–173.
- Brusasco, P. (2004). Theory and practice in the study of Mesopotamian domestic space. *Antiquity* 78: 142–157.
- Bryce, T. (2016). *Atlas of the Ancient Near East: From Prehistoric Times to the Roman Imperial Period*, Routledge, New York.
- Calderbank, D. (2020). Dispersed communities of practice during the First Dynasty of the Sealand: The pottery from Tell Khaiber, southern Iraq. In Paulus, S., and Clayden, T. (ed.), *Babylonia under the Sealand and Kassite Dynasties*, De Gruyter, Berlin, pp. 58–87.
- Campbell, S., Moon, J., Killick, R., Calderbank, D., Robson, E., Shepperson, M., and Slater, F. (2017). Tell Khaiber: An administrative centre of the Sealand period. *Iraq* 79: 21–46.
- Castel, C. (1992). *Habitat urbain Néo-Assyrien et Néo-Babylonien: De l'espace bâti à l'espace vécu*, Librairie Orientaliste Paul Geuthner, Paris.
- Cavigneaux, A. (2013). Les fouilles Irakiennes de Babylone et le temple de Nabû Ša Ḥarē: Souvenirs d'un archéologue débutant. In André-Salvini, B. (ed.), *La tour de Babylone: Études et recherches sur les monuments de Babylone (Actes du colloque du 19 Avril 2008 au Musée du Louvre, Paris)*, Musée du Louvre, Département des Antiquités Orientales, Rome, pp. 65–76.
- Charpin, D. (2003). La politique immobilière des marchands de Larsa à la lumière des découvertes épigraphiques de 1987 et 1989. In Huot, J.-L. (ed.), *Larsa, travaux de 1987 et 1989*, Institut Français d'Archeologie du Proche-Orient, Beirut, pp. 311–322.
- Charpin, D. (2012). *Hammurabi of Babylon*, I. B. Tauris, London.
- Charpin, D. (2014). The historian and the Old Babylonian archives. In Baker, H. D., and Jursa, M. (eds.), *Documentary Sources in Ancient Near Eastern and Greco-Roman Economic History: Methodology and Practice*, Oxbow Books, Oxford, pp. 24–58.
- Chevalier, N. (2012). Early excavations (pre–1914). In Potts, D. T. (ed.), *A Companion to the Archaeology of the Ancient Near East*, vol. 1, Wiley-Blackwell, Oxford, pp. 48–69.
- Clark, P. (2013). Introduction. In Clark, P. (ed.), *The Oxford Handbook of Cities in World History*, Oxford University Press, Oxford, pp. 1–24.
- Clayden, T. (1996). Kurigalzu I and the restoration of Babylonia. *Iraq* 58: 109–121.
- Clayden, T. (2017). Dūr-Kurigalzu: New perspectives. In Bartelmus, A., and Sternitzke, K. (eds.), *Karduniaš: Babylonia Under the Kassites: The Proceedings of the Symposium Held in Munich 30 June to 2 July 2011 / Tagungsbericht des Münchner Symposiums 30. Juni bis 2. Juli 2011. Volume 2: Archaeological Studies*, De Gruyter, Boston, pp. 437–478.
- Clayden, T. (2020). Ur in the Kassite period. In Paulus, S., and Clayden, T. (eds.), *Babylonia under the Sealand and Kassite Dynasties*, De Gruyter, Berlin, pp. 88–124.

- Cole, S. W., and Gasche, H. (1998). Second- and first-millennium BC rivers in northern Babylonia. In Gasche, H., and Tanret, M. (eds.), *Changing Watercourses in Babylonia—Towards a Reconstruction of the Ancient Environment in Lower Mesopotamia*, University of Ghent, Ghent, and the Oriental Institute, University of Chicago, Chicago, pp. 1–64.
- Corò, P. (2012). By the written order of the *rab ša rēš ali ša Uruk*: Towards an understanding of the *bit ritti* system in Hellenistic Uruk. In Lanfranchi, G. B., Morandi Bonacossi, D., Pappi, C., and Ponchia, S. (eds.), *Leggo! Studies Presented to Frederick Mario Fales on the Occasion of His 65th Birthday*, Harrassowitz Verlag, Wiesbaden, pp. 149–160.
- Crüsemann, N., van Ess, M., Hilgert, M., and Salje, B. (eds.) (2013). *Uruk—5000 Jahre Megacity*, Imhof Verlag, Berlin.
- Curtis, J. (2011). The present condition of Babylon. In Cancik-Kirschbaum, E., Van Ess, M., and Marzahn, J. (eds.), *Babylon: Wissenskultur in Orient und Okzident*, De Gruyter, Berlin, pp. 3–17.
- Dalley, S. (2015). *The Mystery of the Hanging Garden of Babylon: An Elusive World Wonder Traced*, Oxford University Press, Oxford.
- Da Riva, R. (2008). *The Neo-Babylonian Royal Inscriptions: An Introduction*, Ugarit-Verlag, Münster.
- Da Riva, R. (2012). *The Twin Inscriptions of Nebuchadnezzar at Brisa (Wadi esh-Sharbin, Lebanon): A Historical and Philological Study*, Institut für Orientalistik der Universität Wien, Vienna.
- Da Riva, R. (2013a). Nebuchadnezzar II's prism (EŞ 7834): A new edition. *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* **103**: 196–229.
- Da Riva, R. (2013b). *The Inscriptions of Nabopolassar, Amēl-Marduk and Neriglissar*, De Gruyter, Berlin.
- Delougaz, P., Hill, H. D., and Jacobsen, T. (1990). *Old Babylonian Public Buildings in the Diyala Region*, Oriental Institute, University of Chicago, Chicago.
- De Meyer, L. (ed.) (1978). *Tell ed-Der II: Progress Reports (First Series)*, Peeters, Leuven.
- De Meyer, L. (ed.) (1980). *Tell ed-Dēr III: Sounding at Abū Ḥabbah (Sippar)*, Peeters, Leuven.
- De Meyer, L. (ed.) (1984). *Tell ed-Der IV: Progress Reports (Second Series)*, Peeters, Leuven.
- De Meyer, L., Gasche, H., and Paepe, R. (1971). *Tell ed-Der I: Rapport Preliminaire sur la Première Campagne (février 1970) / Voorlopig Verslag over de Eerste Campagne (februari 1970)*, Peeters, Leuven.
- De Meyer, L., and Gasche, H. (1980). Contributions à la topographie de Abū Ḥabbah. In De Meyer, L. (ed.), *Tell ed-Dēr III: Sounding at Abū Ḥabbah (Sippar)*, Peeters, Leuven, pp. 23–36.
- De Oderico, M. (1995). *The Use of Numbers and Quantifications in the Assyrian Royal Inscriptions*, The Neo-Assyrian Text Corpus Project, Helsinki.
- Dolce, R. (2000). Some architectural drawings on clay tablets: Examples of planning activity or sketches? In Mattiae, P., Enea, A., Peyronel, L., and Pinnock, F. (eds.), *Proceedings of the First International Congress on the Archaeology of the Ancient Near East, Rome, May 18th-23rd 1998*, vol. 1, Università di Roma “La Sapienza,” Rome, pp. 363–396.
- Ellis, R. S. (1968). *Foundation Deposits in Ancient Mesopotamia*, Yale University Press, New Haven.
- Emberling, G. (2003). Urban social transformations and the problem of the “first city”: New research from Mesopotamia. In Smith, M. L. (ed.), *The Social Construction of Ancient Cities*, Smithsonian Institution Press, Washington, DC, pp. 254–268.
- Emberling, G. (2015). Mesopotamian cities and urban process. In Yoffee, N. (ed.), *The Cambridge World History, Volume III: Early Cities in Comparative Perspective, 4000 BCE–1200 CE*, Cambridge University Press, Cambridge, pp. 253–278.
- Fadhil, A., and Alsamarrae, Z. R. A. (2005). Ausgrabungen in Sippar (Tell Abu Habbah): Vorbericht über die Grabungsergebnisse der 24. Kampagne 2002. *Baghdader Mitteilungen* **36**: 157–224.
- Feuerherm, K. G. (2007). Architectural features of Larsa's urban dwelling B 27 and division of inheritance. *Journal of Near Eastern Studies* **66**: 193–204.
- Finkbeiner, U. (ed.) (1991). *Uruk. Kampagne 35–37, 1982–1984: Die archäologische Oberflächenuntersuchung (Survey)*, Philipp Von Zabern, Mainz am Rhein.
- Finkel, I. L., and Seymour, M. J. (eds.) (2008). *Babylon: Myth and Reality*, British Museum, London.
- Fisher, K. D., and Creekmore III, A. T. (2014). Making ancient cities: New perspectives on the production of urban places. In Creekmore III, A. T., and Fisher, K. D. (eds.), *Making Ancient Cities: Space and Place in Early Urban Societies*, Cambridge University Press, Cambridge, pp. 1–31.
- Frame, G. (1995). *Rulers of Babylonia from the Second Dynasty of Isin to the End of the Assyrian Domination (1157–612 BC)*, University of Toronto Press, Toronto.
- Frankfort, H., Jacobsen, T., and Preusser, C. (1932). *Tell Asmar and Khafaje: The First Season's Work in Eshmunna 1930/31*, University of Chicago Press, Chicago.

- Frayne, D. (1990). *Old Babylonian Period (2003–1595 BC)*, University of Toronto Press, Toronto.
- Freedman, S. M. (1998). *If a City is Set on a Height: The Akkadian Omen Series Šumma ālu ina mēlē šakin, Volume 1: Tablets 1–21*, Samuel Noah Kramer Fund, Philadelphia.
- Freedman, S. M. (2006). *If a City is Set on a Height: The Akkadian Omen Series Šumma ālu ina mēlē šakin, Volume 2: Tablets 22–40*, Samuel Noah Kramer Fund, Philadelphia.
- Freedman, S. M. (2017). *If a City Is Set on a Height: The Akkadian Omen Series Šumma ālu ina mēlē šakin, Volume 3: Tablets 41–63*, Eisenbrauns, Winona Lake, IN.
- Gasche, H. (1991). Fouilles d'Abu Qubur: Quatrième campagne (1990), I: Chantier F, la 'residence Achéménide': Nouvelles données. *Northern Akkad Project Reports 7*: 5–9.
- Gasche, H., Baud, C. A., Bruschiweiler, F., Chaix, L., Druc, I., Gardiol, J.-B., et al. (1989). Ḥabl aš-Šaḥr 1986, nouvelles fouilles: L'ouvrage défensif de Nabuchodonosor II au nord de Sippar. *Northern Akkad Project Reports 2*: 23–70.
- Gasche, H., and Tanret, M. (eds.) (1998). *Changing Watercourses in Babylonia: Towards a Reconstruction of the Ancient Environment in Lower Mesopotamia*, University of Ghent, Ghent, and Oriental Institute, University of Chicago, Chicago.
- Gates, C. (2011). *Ancient Cities: The Archaeology of Urban Life in the Ancient Near East and Egypt, Greece and Rome*, Routledge, Abingdon.
- Gaydarska, B. (2016). The city is dead! Long live the city! *Norwegian Archaeological Review 49*: 40–57.
- George, A. R. (1992). *Babylonian Topographical Texts*, Peeters, Leuven.
- George, A. R. (1993). *House Most High: The Temples of Ancient Mesopotamia*, Eisenbrauns, Winona Lake, IN.
- George, A. R. (1995). The bricks of E-sagil. *Iraq 57*: 173–197.
- George, A. R. (1997). 'Bond of the lands': Babylon, the cosmic capital. In Wilhelm, G. (ed.), *Die orientalische Stadt: Kontinuität, Wandel, Bruch. 1: Internationales Colloquium der Deutschen Orientalgesellschaft, 9.-10. Mai 1996 in Halle/Saale*, Saarbrücker Druckerei und Verlag, Saarbrücken, pp. 125–145.
- George, A. R. (2003). *The Babylonian Gilgamesh Epic: Introduction, Critical Edition and Cuneiform Texts*, Oxford University Press, Oxford.
- George, A. R. (2011). A stele of Nebuchadnezzar II. In George, A. R. (ed.), *Cuneiform Royal Inscriptions and Related Texts in the Schøyen Collection*, CDL Press, Bethesda, MD, pp. 153–165.
- Gibson, M. (1972). *The City and Area of Kish*, Field Research Projects, Coconut Grove, Miami.
- Gibson, M. (1975). *Excavations at Nippur: Eleventh Season*, University of Chicago Press, Chicago.
- Gibson, M., Franke, J. A., Civil, M., Bates, M. L., Boessneck, J., Butzer, K. W., Rathbun, T. A., and Malin, E. F. (1978). *Excavations at Nippur: Twelfth Season*, Oriental Institute, University of Chicago, Chicago.
- Gibson, M., Zettler, R. L., and Armstrong, J. A. (1983). The southern corner of Nippur: Excavations during the 14th and 15th seasons. *Sumer 39*: 170–190.
- Gibson, M., Armstrong, J. A., and McMahon, A. (1998). The city walls of Nippur and an Islamic site beyond: Oriental Institute excavations, 17th season, 1987. *Iraq 60*: 11–44.
- Groneberg, B. (1980). *Die Orts- und Gewässernamen der altbabylonischen Zeit*, Dr. Ludwig Reichert, Wiesbaden.
- Gruber, M. (2012). KA2 GIBIL – Ein altbabylonischer Hausteilungsplan? In Baker, H. D., Kaniuth, K., and Otto, A. (eds.), *Stories of Long Ago: Festschrift für Michael D. Roaf*, Ugarit-Verlag, Münster, pp. 177–191.
- Gruber, M., and Roaf, M. (2012). Addendum: Converting the barber's room into a staircase: Home improvements in Old Babylonian Sippar. In Baker, H. D., Kaniuth, K., and Otto, A. (eds.), *Stories of Long Ago: Festschrift für Michael D. Roaf*, Ugarit-Verlag, Münster, pp. 191–205.
- Guinan, A. K. (1989). The perils of high living: Divinatory rhetoric in Šumma ālu. In Behrens, H., Loding, D., and Roth, M. T. (eds.), *DUMU-E2-DUB-BA-A: Studies in Honor of Åke W. Sjöberg*, University of Pennsylvania Museum, Philadelphia, pp. 227–235.
- Guinan, A. K. (1996). Social constructions and private designs: The house omens of šumma ālu. In Veenhof, K. R. (ed.), *Houses and Households in Ancient Mesopotamia*, Nederlands Instituut voor het Nabije Oosten, Leiden, pp. 61–68.
- Hackl, J. (2010). Money and labour. 5.6.4.5. Apprenticeship contracts. In Jursa, M., *Aspects of the Economic History of Babylonia in the First Millennium BC: Economic Geography, Economic Mentalities, Agriculture, the Use of Money and the Problem of Economic Growth*, Ugarit-Verlag, Münster, pp. 700–725.

- Haerincq, E. (1980). Les tombes et les objets du sondage sur l'enceinte de Abū Ḥabbah. In De Meyer, L. (ed.), *Tell ed-Dēr III: Sounding at Abū Ḥabbah (Sippar)*, Peeters, Leuven, pp. 53–79.
- Hammer, E. (2019). The city and landscape of Ur: An aerial, satellite, and ground reassessment. *Iraq* **81**: 173–206.
- Heinrich, E. (1982). *Die Tempel und Heiligtümer im alten Mesopotamien: Typologie, Morphologie und Geschichte*, De Gruyter, Berlin.
- Heinrich, E. (1984). *Die Paläste im alten Mesopotamien*, De Gruyter, Berlin.
- Heisel, J. P. (1993). *Antike Bauzeichnungen*, Wissenschaftliche Buchgesellschaft, Darmstadt.
- Hillier, B., and Hanson, J. (1984). *The Social Logic of Space*, Cambridge University Press, Cambridge.
- Horsnell, M. J. A. (1999). *The Year-Names of the First Dynasty of Babylon, Volume 2: The Year Names Reconstructed and Critically Annotated in Light of their Exemplars*, McMaster University Press, Hamilton, ON.
- Hritz, C. (2004). The hidden landscape of southern Mesopotamia. *Akkadica* **125**: 93–106.
- Hritz, C. (2010). Tracing settlement patterns and channel systems in southern Mesopotamia using remote sensing. *Journal of Field Archaeology* **35**: 184–203.
- Hritz, C. (2014). Contributions of GIS and satellite-based remote sensing to landscape archaeology in the Middle East. *Journal of Archaeological Research* **22**: 229–276.
- Hritz, C., Pournelle, J., and Smith, J. (2012). Revisiting the Sealands: Report of preliminary ground reconnaissance in the Hammar district, Dhi Qar and Basra Governorates, Iraq. *Iraq* **74**: 37–49.
- Hrouda, B. (1977). *Isin – Išān Bahrīyāt I: Die Ergebnisse der Ausgrabungen 1973–1974*, Becks, Munich.
- Hrouda, B. (1981). *Isin – Išān Bahrīyāt II: Die Ergebnisse der Ausgrabungen 1975–1978*, Becks, Munich.
- Hrouda, B. (1987). *Isin – Išān Bahrīyāt III: Die Ergebnisse der Ausgrabungen 1983–1984*, Becks, Munich.
- Hrouda, B. (1992). *Isin – Išān Bahrīyāt IV: Die Ergebnisse der Ausgrabungen 1986–1989*, Becks, Munich.
- Huot, J.-L. (1985). L'E.babbar de Larsa durant le 1er millénaire (travaux de 1983). *Akkadica* **44**: 14–17.
- Huot, J.-L. (1987). *Larsa, 10e Campagne, 1983 et 'Oueili, 4e Campagne, 1983: Rapport préliminaire*, Éditions Recherche sur les Civilisations, Paris.
- Huot, J.-L. (1989). *Larsa, Travaux de 1985*, Éditions Recherche sur les Civilisations, Paris.
- Huot, J.-L., Rougeulle, A., and Suire, J. (1989). La structure urbaine de Larsa: Une approche provisoire. In Huot, J.-L. (ed.), *Larsa: Travaux De 1985*, Éditions Recherche sur les Civilisations, Paris, pp. 19–52.
- Ishaq, D. (1979–1981). The excavations at the southern part of the Procession Street and Nabu Sha Hare temple. *Sumer* **41**: 30–33 (English), 49–54 (Arabic).
- Jahn, B. (2005). *Altbabylonischer Wohnhäuser*, Verlag Marie Leidorf, Rahden/Westf.
- Joannès, F. (2016). Le (bī) ḥuṣṣu et les contrats de construction néo-babyloniens. In Corò, P., Devecchi, E., De Zorzi, N., and Maiocchi, M. (eds.), *Libiamo ne' lieti calici: Ancient Near Eastern Studies Presented to Lucio Milano on the Occasion of his 65th Birthday by Pupils, Colleagues and Friends*, Ugarit-Verlag, Münster, 287–305.
- Jotheri, J., Allen, M. B., and Wilkinson, T. J. (2016). Holocene avulsions of the Euphrates River in the Najaf area of western Mesopotamia: Impacts on human settlement patterns. *Geoarchaeology* **31**: 175–193.
- Jursa, M. (2004a). Palast: A.IVa Mittelbabylonisch. *Reallexikon der Assyriologie und Vorderasiatischen Archäologie* **10**: 208–209.
- Jursa, M. (2004b). Palast: A.IVb Neubabylonisch. *Reallexikon der Assyriologie und Vorderasiatischen Archäologie* **10**: 209–212.
- Jursa, M. (2005). *Neo-Babylonian Legal and Administrative Documents: Typology, Contents and Archives*, Ugarit-Verlag, Münster.
- Jursa, M. (2010). *Aspects of the Economic History of Babylonia in the First Millennium BC: Economic Geography, Economic Mentalities, Agriculture, the Use of Money and the Problem of Economic Growth*, Ugarit-Verlag, Münster.
- Jursa, M. (2014). Factor markets in Babylonia from the late seventh to the third century BCE. *Journal of the Economic and Social History of the Orient* **57**: 173–202.
- Kalla, G. (1996). Das altbabylonische Wohnhaus und seine Struktur nach philologischen Quellen. In Veenhof, K. R. (ed.), *Houses and Households in Ancient Mesopotamia*, Nederlands Instituut voor het Nabije Oosten, Leiden, pp. 247–256.

- Kaniuth, K. (2017). Isin in the Kassite period. In Bartelmus, A., and Sternitzke, K. (eds.), *Karduniaš: Babylonia under the Kassites: The Proceedings of the Symposium Held in Munich 30 June to 2 July 2011 / Tagungsbericht des Münchner Symposiums 30. Juni bis 2. Juli 2011. Volume 2: Archaeological Studies*, De Gruyter, Boston, pp. 492–507.
- Kathem, M., and Kareem Ali, D. (2021). Decolonising Babylon. *International Journal of Heritage Studies* **9**: 831–845.
- Kepinski-Lecomte, C. (1992). *Haradum I: Une ville nouvelle sur le Moyen-Euphrate (XVIIIe - XVIIIe siècles av. J.-C.)*, Éditions Recherche sur les Civilisations, Paris.
- Kepinski, C., Clancier, P., and Tenu, A. (2012). *Haradum III: Haradu forteresse du moyen Euphrate iraquien (XIIe-VIIe siècles av. J.-C.)*, De Boccard, Paris.
- Kertai, D. (2015). *The Architecture of Late Assyrian Royal Palaces*, Oxford University Press, Oxford.
- Kleber, K. (2008). *Tempel und Palast. Die Beziehungen zwischen dem König und dem Eanna-Tempel im spätbabylonischen Uruk*, Ugarit-Verlag, Münster.
- Kohler, T. A., Smith, M. E., Bogaard, A., Feinman, G. M., Peterson, C. E., Betzenhauser, A., et al. (2017). Greater post-Neolithic wealth disparities in Eurasia than in North America and Mesoamerica. *Nature* **551**: 619–622.
- Kohler, T. A., and Smith, M. E. (eds.) (2018). *Ten Thousand Years of Inequality: The Archaeology of Wealth Differences*, University of Arizona Press, Tucson.
- Koldewey, R. (1911). *Die Tempel von Babylon und Borsippa nach den Ausgrabungen durch die Deutsche Orient-Gesellschaft*, J. C. Hinrichs, Leipzig.
- Koldewey, R. (1990). *Das wieder erstehende Babylon*, 5th ed. (revised by B. Hrouda), Becks, Munich.
- Kose, A. (1998). *Uruk: Architektur IV, von der Seleukiden- bis zur Sasanidenzeit*, Philipp von Zabern, Mainz am Rhein.
- Kose, A. (2004). Kritische Bemerkungen zum vermeintlich gefundenen Bit Akitu von Babylon. *Baghdader Mitteilungen* **35**: 39–58.
- Kuhrt, A. (2001). The palace(s) of Babylon. In Nielsen, I. (ed.), *The Royal Palace Institution in the First Millennium BC: Regional Development and Cultural Interchange Between East and West*, Aarhus University Press, Aarhus, pp. 77–94.
- Lambert, W. (2013). *Babylonian Creation Myths*, Eisenbrauns, Winona Lake, IN.
- Laslett, T. P. R. (1972). Introduction: The history of the family. In Laslett, T. P. R., and Wall, R. (eds.), *Household and Family in Past Time*, Cambridge University Press, Cambridge, pp. 1–89.
- Lawrence, D., and Wilkinson, T. J. (2015). Hubs and upstarts: Pathways to urbanism in the northern Fertile Crescent. *Antiquity* **89**: 328–344.
- Lippolis, C., Monopoli, B., and Baggio, P. (2011). Babylon's urban layout and territory from above. *Mesopotamia* **46**: 1–8, pls. I–IV.
- Lippolis, C. (2016). Preliminary report of the Italian Expedition (MAITaB) at Tūlūl al-Baqarat (Wasit Province): Seasons 2013–2016. *Mesopotamia* **51**: 67–99.
- Lippolis, C., and Viano, M. (2016). 'It is indeed a city, it is indeed a city! Who knows its interior?' The historical and geographical setting of Tūlūl al-Baqarat: Some preliminary remarks. *Mesopotamia* **51**: 143–146.
- Liverani, M. (1997). The ancient Near Eastern city and modern ideologies. In Wilhelm, G. (ed.), *Die orientalische Stadt: Kontinuität, Wandel, Bruch. 1: Internationales Colloquium der Deutschen Orient-Gesellschaft, 9.-10. Mai 1996 in Halle/Saale*, Saarbrücker Druckerei und Verlag, Saarbrücken, pp. 85–107.
- Liverani, M. (2011). Stadt (city). *Reallexikon der Assyriologie* **13**: 50–74.
- Liverani, M. (2016). *Imagining Babylon: The Modern Story of an Ancient City*, De Gruyter, Berlin.
- MacDougal, R. (2018). Ancient Mesopotamian remembrance and the family dead. In Klass, D., and Steffen, E. M. (eds.), *Continuing Bonds in Bereavement: New Directions for Research and Practice*, Routledge, New York, pp. 262–275.
- Madanipour, A. (2003). *Public and Private Spaces of the City*, Routledge, London.
- Mahdi, A. M. (1986). Ishan Mazyad—Important centre Agadeen. *Histoire et Archéologie* **103**: 65–67.
- Malko, H. (2017). Dūr-Kurigalzu: Insights from unpublished Iraqi excavation reports. In Bartelmus, A., and Sternitzke, K. (eds.), *Karduniaš: Babylonia under the Kassites: The Proceedings of the Symposium Held in Munich 30 June to 2 July 2011 / Tagungsbericht des Münchner Symposiums 30. Juni bis 2. Juli 2011, Volume 2: Archaeological Studies*, De Gruyter, Boston, pp. 479–491.
- Marchetti, N., Al-Hussainy, A., Benati, G., Luglio, G., Scassozi, G., Valeri, M., and Zaina, F. (2019). The rise of urbanized landscapes in Mesopotamia: The QADIS integrated survey results and the

- interpretation of multi-layered historical landscapes. *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* **109**: 214–237.
- Marchetti, N., and Zaina, F. (2020). Rediscovering the heartland of cities: Early southern Mesopotamian states in their setting through new field research. *Near Eastern Archaeology* **83**: 210–221.
- Matthews, R. J. (1997). History of the field: Archaeology in Mesopotamia. In Meyers, E. M. (ed.), *The Oxford Encyclopedia of Archaeology in the Near East*, vol. 3, Oxford University Press, New York, pp. 56–60.
- Matthews, R. (2003). *The Archaeology of Mesopotamia: Theories and Approaches*, Routledge, London.
- Matthews, R., Rasheed, Q. H., Palmero Fernández, M., Fobbe, S., Nováček, K., Mohammed-Amin, R., Mühl, S., and Richardson, A. (2020). Heritage and cultural healing: Iraq in a post-Daesh era. *International Journal of Heritage Studies* **26**: 120–141.
- Maul, S. (2017). Assyrian religion. In Frahm, E. (ed.), *A Companion to Assyria*, Wiley Blackwell, Hoboken, NJ, pp. 336–358.
- McMahon, A. (2013). Mesopotamia. In Clark, P. (ed.), *The Oxford Handbook of Cities in World History*, Oxford University Press, Oxford, pp. 31–48.
- McMahon, A. (2015). Waste management in early urban southern Mesopotamia. In Mitchell, P. D. (ed.), *Sanitation, Latrines and Intestinal Parasites in Past Populations*, Routledge, London, pp. 19–39.
- McMahon, A. (2020). Early urbanism in northern Mesopotamia. *Journal of Archaeological Research* **28**: 289–337.
- Miglus, P. A. (1999). *Städtische Wohnarchitektur in Babylonien und Assyrien*, Philipp Von Zabern, Berlin.
- Miglus, P. A. (2006–2008a). Prozession(sstraße). B. Archäologisch. *Reallexikon der Assyriologie und Vorderasiatischen Archäologie* **11**: 103–105.
- Miglus, P. A. (2006–2008b). Šaduppīm. B. Archäologisch. *Reallexikon der Assyriologie und Vorderasiatische Archäologie* **11**: 491–495.
- Moorey, P. R. S. (1978). *Kish Excavations 1923–1933*, Oxford University Press, Oxford.
- Moorey, P. R. S. (1994). *Ancient Mesopotamian Materials and Industries: The Archaeological Evidence*, Oxford University Press, Oxford.
- Musa, M. U. (2011). The situation of the Babylon archaeological site until 2006. In Cancik-Kirschbaum, E., Van Ess, M., and Marzahn, J. (eds.), *Babylon: Wissenskultur in Orient und Okzident*, De Gruyter, Berlin, pp. 19–46.
- Mustafa, M. A. (1949). Soundings at Tell Al-Dhiba`i. *Sumer* **5**: 173–186.
- Nashef, K. (1982). *Die Orts- und Gewässernamen der altbabylonischen Zeit*, Dr. Ludwig Reichert, Wiesbaden.
- Nevett, L. C. (1995). Gender relations in the classical Greek household: The archaeological evidence. *Annual of the British School at Athens* **90**: 363–381.
- Nissen, H. J. (1988). *The Early History of the Ancient Near East, 9000–2000 BC*, University of Chicago Press, Chicago.
- Oates, J. (1988). *Babylon*, rev. ed., Thames and Hudson, London.
- Oelsner, J., Wells, B., and Wunsch, C. (2003). Neo-Babylonian period. In Westbrook, R. (ed.), *A History of Ancient Near Eastern Law*, Brill, Leiden, pp. 911–974.
- Oelsner, J., and Stein, P. (2011). Der Stadtplan von Nippur (HS 197). *Archiv für Orientforschung* **52**: 104–116.
- Oliveira, V. (2016). *Urban Morphology: An Introduction to the Physical Form of Cities*, Springer, Switzerland.
- Paulus, S. (2013). The limits of Middle Babylonian archives. In Faraguna, M. (ed.), *Archives and Archival Documents in Ancient Societies. Trieste, 30 September–1 October 2011*, Edizioni Università di Trieste, Trieste, pp. 87–103.
- Paulus, S., and Clayden, T. (eds.) (2020). *Babylonia under the Sealand and Kassite Dynasties*, De Gruyter, Berlin.
- Pearce, L. E., and Wunsch, C. (2014). *Documents of Judean Exiles and West Semites in Babylonia in the Collection of David Sofer*, CDL Press, Bethesda, MD.
- Pedersén, O. (1998). *Archives and Libraries in the Ancient Near East 1500–300 BC*, CDL Press, Bethesda, MD.
- Pedersén, O. (2005). *Archive und Bibliotheken in Babylon: Die Tontafel der Grabung Robert Koldeweys 1899–1917*, Deutsche Orient-Gesellschaft, Berlin.

- Pedersén, O. (2014). Waters at Babylon. In Tvedt, T., and Oestigaard, T. (eds.), *A History of Water: Series III, Volume 1: Water and Urbanization*, I. B. Tauris, London, pp. 107–129.
- Pedersén, O. (2021). *Babylon: The Great City*, Zaphon, Münster.
- Pientka, R. (2002). Ein spätaltbabylonische Kaufvertrag aus Babylon. In Wunsch, C. (ed.), *Mining the Archives: Festschrift for Christopher Walker on the Occasion of his 60th Birthday*, ISLET, Dresden, pp. 201–212.
- Pongratz-Leisten, B. (2006). Prozession(ssstraße). A. In den schriftlichen Quellen. *Reallexikon der Assyriologie und Vorderasiatischen Archäologie* **11**: 98–103.
- Postgate, J. N. (1990). Archaeology and the texts—Bridging the gap. *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* **80**: 228–240.
- Postgate, J. N. (1992). *Early Mesopotamia: Society and Economy at the Dawn of History*, Routledge, London.
- Potts, D. T. (1997). *Mesopotamian Civilisation: The Material Foundation*, Athlone Press, London.
- Pournelle, J. R. (2003). Marshland of Cities: Deltaic Landscapes and the Evolution of Early Mesopotamian Civilization, PhD dissertation, Anthropology Department, University of California, San Diego.
- Pournelle, J. R. (2013). Physical geography. In Crawford, H. (ed.), *The Sumerian World*, Routledge, London, pp. 13–32.
- Pournelle, J. R., and Algaze, G. (2014). Travels in Edin: Deltaic resilience and early urbanism in greater Mesopotamia. In McMahon, A., and Crawford, H., (eds.), *Preludes to Urbanism: The Late Chalcolithic of Mesopotamia, in Honour of Joan Oates*, MacDonald Institute for Archaeological Research, Cambridge, pp. 7–34.
- Radner, K., and Robson, E. (eds.) (2011). *The Oxford Handbook of Cuneiform Culture*, Oxford University Press, Oxford.
- Ragette, F. (2003). *Traditional Domestic Architecture of the Arab Region*, Menges, Sharjah.
- Reade, J. (1986). Rassam's excavations at Borsippa and Kutha, 1879–82. *Iraq* **48**: 105–116.
- Reade, J. (2010). How many miles to Babylon? In Baker, H. D., Robson, E., and Zólyomi, G. (eds.), *Your Praise is Sweet: A Memorial Volume for Jeremy Black from Students, Colleagues and Friends*, British Institute for the Study of Iraq, London, pp. 281–290.
- Reichel, C. (2016–2017). Centre and periphery—The role of the “Palace of the Rulers” at Tell Asmar in the history of Ešnunna. *Canadian Society for Mesopotamian Studies Journal* **11–12**: 29–53.
- Reuther, O. (1926). *Die Innenstadt von Babylon (Merkes)*, J. C. Hinrichs, Leipzig.
- Roaf, M. (2012). The fall of Babylon in 1499 BC or 1595 BC. *Akkadica* **133**: 147–174.
- Rost, S. (2017). Water management in Mesopotamia from the sixth till the first millennium BC. *WIREs Water* **4**(5): e1230. <https://doi.org/10.1002/wat2.1230>.
- Roth, M. T. (1995). *Law Collections from Mesopotamia and Asia Minor*, Scholars Press, Atlanta.
- Safar, F. (1949). Soundings at Tell al-Lahm. *Sumer* **5**: 154–72.
- Safar, F., Mustafa, M. A., and Lloyd, S. (1981). *Eridu*, State Organization of Antiquities and Heritage, Baghdad.
- Schaudig, H. (2001). *Die Inschriften Nabonids von Babylon und Kyros' des Grossen samt den in ihrem Umfeld entstandenen Tendenzschriften: Textausgabe und Grammatik*, Ugarit-Verlag, Münster.
- Schloen, J. D. (2001). *The House of the Father as Fact and Symbol: Patrimonialism in Ugarit and the Ancient Near East*, Eisenbrauns, Winona Lake, IN.
- Schmidt, J. (2002). Das Bit Akītu von Babylon. *Baghdader Mitteilungen* **33**: 281–317.
- Seymour, M. J. (2008). Robert Koldewey and the Babylon excavations. In Finkel, I. L., and Seymour, M. J. (eds.), *Babylon: Myth and Reality*, British Museum, London, pp. 41–45.
- Shepperson, M. (2009). Planning for the sun: Urban forms as a Mesopotamian response to the sun. *World Archaeology* **41**: 363–378.
- Shepperson, M. (2012). The rays of Šamaš: Light in Mesopotamian architecture and legal practice. *Iraq* **74**: 51–64.
- Shepperson, M. (2020). An architectural analysis of the Sealand building at Tell Khaiber, southern Iraq. *Iraq* **82**: 207–226.
- Smith, M. E. (2007). Form and meaning in the earliest cities: A new approach to ancient urban planning. *Journal of Planning History* **6**: 3–47.
- Smith, M. E. (2010). The archaeological study of neighborhoods and districts in ancient cities. *Journal of Anthropological Archaeology* **29**: 137–154.

- Smith, M. E. (2011a). What is a city? Definitions of the urban. Blog post on Wide Urban World: <http://wideurbanworld.blogspot.com/2011a/02/what-is-city-definitions-of-urban.html>, Tuesday, February 22, 2011.
- Smith, M. E. (2011b). Defining cities and urbanism (again). Blog post on Wide Urban World: <http://wideurbanworld.blogspot.com/2011b/11/defining-cities-and-urbanism-again.html>, Sunday, November 6, 2011.
- Smith, M. E. (2012). Cities, semi-urban places, and definitions. Blog post on Wide Urban World: <http://wideurbanworld.blogspot.com/2012/11/cities-semi-urban-places-and-definitions.html>, Monday, November 5, 2012.
- Smith, M. E. (2016). How can archaeologists identify early cities? Definitions, types, and attributes. In Fernández-Götz, M., and Krause, D. (eds.), *Eurasia at the Dawn of History: Urbanization and Social Change*, Cambridge University Press, Cambridge, pp. 153–168.
- Smith, M. E. (2018). Defining cities and urbanism (2018 version). Blog post on Wide Urban World: http://wideurbanworld.blogspot.com/2018/07/defining-cities-and-urbanism-2018_29.html, Sunday, July 29, 2018.
- Smith, M. L. (2008). Urban empty spaces: Contentious places for consensus-building. *Archaeological Dialogues* **15**: 216–231.
- Stanley, B. W., Stark, B. L., Johnston, K. L., and Smith, M. E. (2012). Urban open spaces in historical perspective: A transdisciplinary typology and analysis. *Urban Geography* **33**: 1089–1117.
- Steinkeller, P. (2004). A history of Mashkan-shapir and its role in the kingdom of Larsa. In Stone, E., and Zimansky, P., *The Anatomy of a Mesopotamian City: Survey and Soundings at Mashkan-Shapir*, Eisenbrauns, Winona Lake, IN, pp. 26–42.
- Sternitzke, K. (2020). Babylon in the second millennium BCE: New insights on the transitions from Old Babylonian to Kassite and Isin II periods. In Paulus, S., and Clayden, T. (eds.), *Babylonia under the Seal and the Kassite Dynasties*, De Gruyter, Berlin, pp. 125–145.
- Stevens, K. (2014). The Antiochus cylinder, Babylonian scholarship and Seleucid imperial ideology. *Journal of Hellenic Studies* **134**: 66–88.
- Stolper, M. W. (1985). *Entrepreneurs and Empire: The Murašû Archive, the Murašû Firm, and Persian Rule in Babylonia*, Nederlands Instituut voor het Nabije Oosten, Leiden.
- Stone, E. C. (1977). Economic crisis and social upheaval in Old Babylonian Nippur. In Levine, L. D., and Young, T. C. (eds.), *Mountains and Lowlands: Essays in the Archaeology of Greater Mesopotamia*, Udena Publications, Malibu, pp. 267–289.
- Stone, E. C. (1981). Texts, architecture and ethnographic analogy: Patterns of residence in Old Babylonian Nippur. *Iraq* **43**: 19–33.
- Stone, E. C. (1987). *Nippur Neighborhoods*, Studies in Ancient Oriental Civilization 44, Oriental Institute, University of Chicago, Chicago.
- Stone, E. C. (1991). The spacial organization of Mesopotamian cities. *Aula Orientalis* **9**: 235–242.
- Stone, E. C. (1995). The development of cities in ancient Mesopotamia. In Sasson, J. (ed.), *Civilizations of the Ancient Near East*, vol. 1, Scribners, New York, pp. 235–248.
- Stone, E. C. (2003). Review of *The House of the Father as Fact and Symbol: Patrimonialism in Ugarit and the Ancient Near East*, by J. David Schloen, 2001. *Cambridge Archaeological Journal* **13**: 121–124.
- Stone, E. C. (2007). The Mesopotamian urban experience. In Stone, E. C. (ed.), *Settlement and Society: Essays Dedicated to Robert McCormick Adams*, Cotsen Institute of Archaeology, University of California, Los Angeles, pp. 213–234.
- Stone, E. C. (2013). The organization of a Sumerian town: The physical remains of ancient social systems. In Crawford, H. (ed.), *The Sumerian World*, Routledge, Abingdon, pp. 156–178.
- Stone, E. C. (2015). Social conditions in the ancient Near East: Houses and households in perspective. In Müller, M. (ed.), *Household Studies in Complex Societies: (Micro) Archaeological and Textual Approaches*, Oriental Institute, University of Chicago, Chicago, pp. 437–446.
- Stone, E. C. (2018). The trajectory of social inequality in ancient Mesopotamia. In Kohler, T. A., and Smith, M. E. (eds.), *Ten Thousand Years of Inequality: The Archaeology of Wealth Differences*, University of Arizona Press, Tucson, pp. 230–261.
- Stone, E. C., and Zimansky, P. (2004). *The Anatomy of a Mesopotamian City: Survey and Soundings at Mashkan-shapir*, Eisenbrauns, Winona Lake, IN.
- Stone, E. C., and Zimansky, P. (2016). Archaeology returns to Ur: A new dialog with old houses. *Near Eastern Archaeology* **79**: 246–259.

- Stone, E., Otto, A., Charpin, D., Einwag, B., and Zimansky, P. (2021). Two great households of Old Babylonian Ur. *Near Eastern Archaeology* **84**: 182–191.
- Strommenger, E. (1980). *Habuba Kabira: Ein stadt for 5000 jahren*, Von Zabern, Mainz am Rhein.
- Unger, E. (1931). *Babylon: Die heilige Stadt nach der Beschreibung der Babylonier*, De Gruyter, Berlin.
- Ur, J. (2012). Southern Mesopotamia. In Potts, D. T. (ed.), *A Companion to the Archaeology of the Ancient Near East*, vol. 1, Wiley-Blackwell, Oxford, pp. 533–555.
- Ur, J. A. (2013). The morphology of Neo-Assyrian cities. *Subartu* **6–7**: 11–22.
- Vallet, R. (1996). Habuba Kabira (Syrie) ou la naissance de l'urbanisme. *Paléorient* **22**(2): 45–76.
- Van de Mieroop, M. (1997). *The Ancient Mesopotamian City*, Oxford University Press, Oxford.
- Van de Mieroop, M. (1999). Thoughts on urban real estate in ancient Mesopotamia. In Hudson, M., and Levine, B. A. (eds.), *Urbanization and Land Ownership in the Ancient Near East*, Peabody Museum Bulletin, Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, MA, pp. 253–287.
- Van de Mieroop, M. (2000). Review of G. Wilhelm (ed.), *Die Orientalische Stadt: Kontinuität, Wandel, Bruch*. Berlin 1997. *Journal of the American Oriental Society* **120**: 98–99.
- Van de Mieroop, M. (2003). Reading Babylon. *American Journal of Archaeology* **107**: 257–275.
- Van Ess, M., and Fassbinder, J. (2019). Uruk-Warka: Archaeological research 2016–2018, preliminary report. *Sumer* **65**: 47–85.
- van Koppen, F. (2006–2008). Šaduppūm. A. Nach schriftlichen Quellen. *Reallexikon der Assyriologie und Vorderasiatische Archäologie* **11**: 488–491.
- van Koppen, F. (2017). The Early Kassite period. In Bartelms, A., and Sternitzke, K. (eds.), *Karduniaš: Babylonia Under the Kassites: The Proceedings of the Symposium Held in Munich 30 June to 2 July 2011 / Tagungsbericht des Münchner Symposiums 30. Juni bis 2. Juli 2011, Volume 1: Philological and Historical Studies*, De Gruyter, Boston, pp. 45–92.
- Viano, M. (2019). On the location of Irisağrığ once again. *Journal of Cuneiform Studies* **71**: 35–52.
- Waezeggars, C. (2010). *The Ezida Temple of Borsippa: Priesthood, Cult, Archives*, Nederlands Instituut voor het Nabije Oosten, Leiden.
- Waezeggars, C. (2011). The pious king: Royal patronage of temples. In Radner, K., and Robson, E. (eds.), *The Oxford Handbook of Cuneiform Culture*, Oxford University Press, Oxford, pp. 725–751.
- Waezeggars, C. (2014). *Marduk-Rēmāni: Local Networks and Imperial Politics in Achaemenid Babylonia*, Peeters, Leuven.
- Waddock, P. N. (1975). The Giparu at Ur. *Iraq* **37**: 101–128.
- Weirshäuser, F., and Novotny, J. (2020). *The Royal Inscriptions of Amēl-Marduk (561–560 BC), Neriglissar (559–556 BC), and Nabonidus (555–539 BC), Kings of Babylon*, Eisenbrauns, University Park, PA.
- Westbrook, R. (2003). Old Babylonian period. In Westbrook, R. (ed.), *A History of Ancient Near Eastern Law*, Brill, Leiden, pp. 361–430.
- Widell, M. (2013). Sumerian agriculture and land management. In Crawford, H. (ed.), *The Sumerian World*, Routledge, London, pp. 55–67.
- Wilhelm, G. (ed.) (1997). *Die Orientalische Stadt: Kontinuität, Wandel, Bruch*, Saarbrücker Druckerei und Verlag, Saarbrücken.
- Wilkinson, T. J. (2012). Introduction to geography, climate, topography and hydrology. In Potts, D. T. (ed.), *A Companion to the Archaeology of the Ancient Near East*, vol. 1, Wiley-Blackwell, Oxford, pp. 3–26.
- Wilkinson, T. J., Ur, J., Barbanes Wilkinson, E., and Altaweel, M. (2005). Landscape and settlement in the Neo-Assyrian empire. *Bulletin of the American Schools of Oriental Research* **340**: 23–56.
- Wirth, L. (1938). Urbanism as a way of life. *American Journal of Sociology* **44**: 1–24.
- Woolley, L. (1965). *The Kassite Period and the Period of the Assyrian Kings*, Ur Excavations 8, British Museum, London, and University Museum, University of Pennsylvania, Philadelphia.
- Woolley, L. (1974). *The Buildings of the Third Dynasty*, Ur Excavations 6, British Museum, London, and University Museum, University of Pennsylvania, Philadelphia.
- Woolley, L., and Mallowan, M. (1962). *The Neo-Babylonian and Persian Periods*, Ur Excavations 9, British Museum, London, and University Museum, University of Pennsylvania, Philadelphia.
- Woolley, L., and Mallowan, M. (1976). *The Old Babylonian Period*, Ur Excavations 7, British Museum, London, and University Museum, University of Pennsylvania, Philadelphia.
- Wright, H. T. (1981). Appendix: The southern margins of Sumer: Archaeological survey of the area of Eridu and Ur. In Adams, R. McC., *Heartland of Cities: Surveys of Ancient Settlement and Land*

- Use on the Central Floodplain of the Euphrates*, University of Chicago Press, Chicago, pp. 295–345.
- Yoffee, N., and Terrenato, N. (2015). Introduction: A history of the study of early cities. In Yoffee, N. (ed.), *The Cambridge World History, Volume III: Early Cities in Comparative Perspective, 4000 BCE–1200 CE*, Cambridge University Press, Cambridge, pp. 1–24.
- Zadok, R. (1985). *Geographical Names According to New- and Late-Babylonian Texts*, Dr. Ludwig Reichert, Wiesbaden.
- Zawadzki, S. (2005). The building project north of Sippar in the time of Nabonidus. In Baker, H. D., and Jursa, M. (eds.), *Approaching the Babylonian Economy: Proceedings of the START Project Symposium Held in Vienna, 1–3 July 2004*, Ugarit-Verlag, Münster, pp. 381–392.
- Zettler, R. L. (1992). *The Ur III Temple of Inanna at Nippur: The Operation and Organization of Urban Religious Institutions in the Late Third Millennium BC*, Reimer Verlag, Berlin.
- Zettler, R. L. (1993). *Nippur III: Kassite Buildings in Area WC-1*, Oriental Institute, University of Chicago, Chicago.
- Zettler, R. L., and Hafford, W. B. (2015). Ur. B. *Archäologisch. Reallexikon der Assyriologie und Vorderasiatischen Archäologie* **15**: 367–385.
- Zimansky, P. (2005). Archaeology and texts in the ancient Near East. In Pollock, S., and Bernbeck, R. (eds.), *Archaeologies of the Middle East*, Blackwell, Malden, MA, pp. 308–326.

Bibliography of Recent Literature

- Baker, H. D. (2012). The Neo-Babylonian empire. In Potts, D. T. (ed.), *A Companion to the Archaeology of the Ancient Near East*, vol. 2, Wiley-Blackwell, Oxford, pp. 914–930.
- Battini, L., and Calvet, Y. (2003). Construction royale, construction privée: La maison B 59 de Larsa. *Iraq* **65**: 131–141.
- Calvet, Y. (2001). Remarques sur l’urbanisme de Larsa à l’époque paléo-Babylonienne. In Breniquet, C., and Kepinski, C. (eds.), *Études mésopotamiennes: Recueil de textes offert à Jean-Louis Huot*, Editions Recherches sur les Civilisations, Paris, pp. 57–63.
- Calvet, Y. (2003). Bâtiments paléo-babyloniens à Larsa. In Huot, J. L. (ed.), *Larsa, travaux de 1987 et 1989*, Institut Français d’Archeologie du Proche-Orient, Beirut, pp. 143–297.
- Keith, K. (2003). The spatial patterns of everyday life in Old Babylonian neighborhoods. In Smith, M. L. (ed.), *The Social Construction of Ancient Cities*, Smithsonian Institution Press, Washington, DC, pp. 56–80.
- Matsumoto, K., and Oguchi, H. (2002). Excavations at Kish, 2000. *Al-Rāfidān* **23**: 1–16.
- Matsumoto, K., and Oguchi, H. (2004). News from Kish: The 2001 Japanese work. *Al-Rāfidān* **25**: 1–8.
- Miglus, P. A. (2004). Palast. B. *Archäologisch. Reallexikon der Assyriologie und Vorderasiatischen Archäologie* **10**: 233–276.
- Shepperson, M. (2015). Ziggurats: A viewer’s guide. *Archaeological Reviews from Cambridge* **30**: 94–101.
- Shepperson, M. (2017). *Sunlight and Shade in the First Cities: A Sensory Archaeology of Early Iraq*, Vanderhoek and Ruprecht, Göttingen.
- Steinert, U. (2011). Akkadian terms for streets and the topography of Mesopotamian cities. *Altorientalische Forschungen* **38**: 309–347.
- Steinert, U. (2014). City streets: Reflections on urban society in the cuneiform sources of the second and first millennium BC. In May, N. N., and Steinert, U. (eds.), *The Fabric of Cities: Aspects of Urbanism, Urban Topography and Society in Mesopotamia, Greece and Rome*, Brill, Leiden, pp. 123–169.

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