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From town to city: urban planning in the Early Bronze Age of Northern Mesopotamia at Tell es-Sweyhat, Syria

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FROM TOWN TO CITY: URBAN PLANNING IN THE EARLY BRONZE AGE OF NORTHERN MESOPOTAMIA AT TELL ES-SWEYHAT, SYRIA

by

ELIZA WALLACE

B.A., Bryn Mawr College, 2004
M.A., Boston University 2009

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Approved by

First Reader

Michael Danti, Ph.D.
Assistant Professor of Archaeology

Second Reader

Christopher Roosevelt, Ph.D.
Associate Professor of Archaeology

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(Order No.)

ELIZA WALLACE

Boston University Graduate School of Arts and Sciences, 2014

Major Professor: Michael Danti, Ph.D., Assistant Professor of Archaeology

ABSTRACT

In this dissertation, I study a critical transition in the urban development of Tell es-Sweyhat, a large site in Syria occupied from c. 3000–1900 BCE. In the middle of the third millennium, Sweyhat was an open town centered on a fortress. It was ringed with cemeteries and had a ceremonial public building in its outskirts (Sweyhat Period 3). Around 2150 BCE, the settlement experienced a sudden expansion from 15ha to 35–40ha. Sweyhat became a fortified city with a high central ceremonial platform and no formal cemetery (Sweyhat Period 4). The new fortifications combined with increased population density signifies Sweyhat's transition from a town to a regional urban center. In this dissertation, I identify the changes in land use during this transition and examine the accompanying social changes.

I focus on several domestic structures excavated along the edge of the Sweyhat 4 Inner City wall, along with the associated artifact inventories, including

spinning and weaving equipment, grinding and cooking equipment, and whole ceramic vessels. One adult burial and several infant burials were also uncovered here. Additional soundings reached down into the Sweyhat 3 layers of this neighborhood. I synthesize the data from these excavations, alongside architectural remains and artifact assemblages from other excavated areas of the site, to create a narrative of the changes in the site's occupational history and the possible meanings inherent in those changes.

The results reveal that the character and location of certain daily and special activities changed, including mourning the dead, grain storage, grinding and cooking activities, and ceremonial activities. The outer town cemeteries were abandoned, possibly in favor of individual household burials. Grain storage, grinding, and cooking activities that had been located in the central storage area moved to the home. The locus of ceremonial activities shifted from the public building in the outer town to a new structure located in the city center. Access to this new structure was limited: it sat atop a high terrace that was accessible only by particular ramps or stairways, in a district at the center of the city's two fortifications. These shifts suggest increased control of formerly accessible public activities and greater attention to individual privacy. These changes were an integral part of Tell es-Sweyhat's transition from open town to walled city.

Preface

A civil war has been raging in Syria since early in 2011. The war has ended the lives of over 100,000 people so far, and has displaced hundreds of thousands more as refugees in Turkey, Jordan, and Lebanon. In light of this loss of life and the struggles of the Syrian refugees, it seems almost ridiculous to ask the question "so how does this affect the archaeology?" But writing an entire dissertation with only the barest mention of the conflict that is so prevalent in my thoughts seems even more bizarre.

The direction of Mesopotamian archaeology has been largely shaped by modern conflict. This dissertation is part of that tradition, as it was ultimately shaped by the war. If I've done my job right, you will have to look carefully to see its influence. Part of the fiction of the academe is that research projects follow a predictable story arc. We present finished research products as though they were planned from the start as the answer to carefully crafted research questions. We all know that the reality is messier. In this case, the 2011 study season, and any subsequent seasons for the foreseeable future, was cancelled as the result of an outbreak of violence in Syria early in the year. This means that in many cases, the catalog of artifacts is incomplete. I often refer to field impressions of the character of ceramic concentrations, for example, rather than counts and weights of ware types. I can't always provide illustrations of ceramics or photos of small finds. Ultimately, what it means is that the data I had available

were site plans and small finds, so I reworked the topic of the dissertation around that.

It's a strange experience watching a war unfold in a place you once knew well half a world away from the comfort of your couch. The historic Aleppo suq, where the team used to hang out and shop on our weekend trips to Aleppo, burned. I wonder how the guys at the Oscar Wilde suq are doing, and if those posters of the Australian soccer teams still hang in the shop. The citadel, where we stood listening to competing noontime calls to prayer ring out from minarets around the city was damaged with a bomb blast. The Deir ez-Zor bridge, which we crossed on a lovely evening after dinner, has crumbled. I tell myself and anyone who asks that Nefileh is probably fine. It's out in the middle of nowhere, after all. The same week that a chemical weapon attack reportedly killed as many as 1400 people in a Damascus suburb, Fuad, an essential part of the Sweyhat team, welcomed a child into the world. He posted some pictures on Facebook.

I'm not sure exactly when I started responding "I used to work in Syria" to questions about my archaeological specialty. But it hurts every time I say it. My thoughts go out to those Syrians and their families, as I hope yours will as you read this document.

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Chapter 1: Introduction

More than half of the world population lives in cities, and that percentage is projected to rise above 60% by 2040. This number is up from less than 30% in 1950,[1] and a mere 6,000 years ago, no one lived in cities (United Nations, 2011). Since urbanization now affects more than three and a half billion people, understanding the mechanisms involved in urban development seems more and more immediate. In spite of the impression one might get from the (so far) unfailingly upward trajectory of urbanism since the industrial revolution, urbanization has not been constantly increasing since its inception. Over the past several millennia of human society, the overall percentage of urban dwellers around the globe has increased. In the shorter term, however, particularly when considering the development of individual cities, the situation is far more complicated and less linear. Cities such as Detroit and Buffalo, for example, declined in urban density as their car and steel industries declined (Gallagher, 2010: 5). Similar processes of urban growth and decline have operated since the world's first cities were settled. The archaeology of early urbanization provides a deep time perspective that we can apply to modern urban concerns.

Mesopotamia, the "land between the rivers," touted as the home of the first cities, witnessed a number of "boom and bust" cycles of urban life over several millennia (Ur, 2010a). These cycles of Mesopotamian civilization also

1 These estimates were made by the United Nations Department of Economic and Social Affairs, Population Division, and can be accessed as an excel spreadsheet at http://esa.un.org/unpd/wup/CD-ROM/Urban-Rural-Population.htm.

varied immensely by region. Traditionally, the rise of civilization in Mesopotamia has been synonymous with the so-called “Sumerian Takeoff,” of complex society in the south of modern Iraq (Algaze, 2008). This traditional “cradle of civilization” represents only one small region, however. Research over the last 20 years in Turkey and Syria has shown that some areas previously considered the hinterlands of Mesopotamia had developed an unexpectedly high level of complexity independent of the Uruk culture (Ur, Karsgaard & Oates, 2011). Tell es-Sweyhat, occupied from roughly 3000–1900 BCE, was part of this northern tradition of urbanism.

Sweyhat is a special case even among northern cities, because it was founded around the end of the first “boom” in northern urbanism (c. 3000 BCE), and continually grew in size and complexity until about 100 years before its abandonment (c. 1900 BCE). Although little is known of the earliest phase of settlement at the site, by the end of the first quarter of the third millennium, the city center was dominated by a large, thick-walled fortress. Smaller mudbrick structures lay around the edges of this edifice. By the mid-third millennium, a large cemetery of earth-cut tombs surrounded the edges of the town. Around the beginning of the fourth quarter of the millennium, the town’s population exploded into a full-sized city of an estimated 35 to 40 hectares (ha). The fortress was filled in with rubble, debris, and sediment, and subsumed under a large platform or terrace approximately 3m high, which was topped with a large temple. At approximately the same time, a fortification wall complete with towers

was erected around the edge of the mound, and the outer city was enclosed by an earthen rampart. Although it was dwarfed by the very large cities of the neighboring Khabur region, Sweyhat was one of the largest cities in the Middle Euphrates region by the end of the third millennium (Wilkinson, 1994: 488). As such, it appears to have served as a regional center, perhaps along with its "twin city" across the river, Hadidi (Dornemann, 1979).

The urbanization of Tell es-Sweyhat occurred within the context of a small region with locally idiosyncratic characteristics that appears to have resisted certain elements of complex society that might have served it well. To date, over decades of excavation, the only evidence that has been uncovered of either Southern or Khabur-style administration has been two seals—one of which predates the site, and both of which were found in secondary contexts—and a small weight with a cuneiform inscription. Instead, Sweyhat's inhabitants embraced the practice of using pot marks on ceramic vessels. At its peak, Sweyhat was a small urban center at the periphery of other, larger societies. As such, understanding its growth can help archaeologists and other social scientists expand the franchise of urban centers to include more atypical types.

This dissertation focuses on Sweyhat's transition from town to city by examining what meaningful changes occurred during the reorganization of the city plan near the end of the third millennium. The research questions addressed are whether 1) mortuary practices, 2) the site's defensive strategy, and 3) city planning changed, and, if so, in what way. To accomplish these goals, I begin

by presenting the excavation data from the 2008 to 2010 seasons in the south-western sector of the site. These excavations uncovered a large sprawling late third millennium building complex, a large expanse of the city wall, the corner of a tower, several infant burials, and two soundings cut through the city wall into earlier occupation phases. This report includes a detailed description of the architecture uncovered in this area, along with descriptions of the small finds and ceramic assemblages in each room.[2] Building on this site report, I synthesize this newly excavated data comparable to previously published information on architecture and artifact assemblages into a diachronic reconstruction of the occupation at Tell es-Sweyhat in Chapter 3. In Chapter 4, I examine the changes in burial practices that occurred roughly contemporaneously with the reorganization event, through a comparison of pre-wall burials in the outer town cemetery and the burials uncovered in recent excavations. In Chapter 5, I examine the direct evidence for violent conflict and defense at Tell es-Sweyhat, and consider whether and how the city's defensive strategy shifted when it became a city. In Chapter 6, I consider the inner city architecture and the city wall through the lens of city planning.

Regional Terminology and Environment

Mesopotamia, defined primarily by the boundaries of the Tigris and Euphrates rivers, covers a very large region with a high degree of environmental

2 Detailed analysis of ceramic assemblages was not completed as of the last field season in 2010, but I provide as much detail as is available for each context.

variation. Since “Mesopotamia” has traditionally been used synonymously with only the rather restricted areas once controlled by Sumer and Akkad, I follow Algaze in using the term “Greater Mesopotamia” to include the Susiana Plain, the foothills of Iran, the area across modern Syria to the Euphrates River, and north into Turkey (Algaze, 2008). Greater Mesopotamia is the most inclusive term I will use. More often, I divide Mesopotamia into “Northern,” and “Southern” Mesopotamia (Figure 1). By “Southern Mesopotamia,” I refer to the traditional homelands of Sumer and Akkad, and I exclude Elam and the foothills of Iran. By “Northern Mesopotamia,” I refer to the smaller regions surrounding the Euphrates Valley and the Khabur tributary north of the 250mm per year average rainfall isohyet (Wilkinson, 2000: 222). The Euphrates Valley in Syria and Turkey can be divided into the “Middle Euphrates” and “Upper Euphrates,” at approximately the modern boundary between the two countries. These regional terms do not cover all of Northern Mesopotamia, as Figure 1 clearly indicates. The Balikh tributary of the Euphrates, for example, lies immediately between the Khabur and the Middle Euphrates regions, and can be considered its own subregion, as it was home to sites such as Bi’a and Hammam et-Turkman (van Loon & Meijer, 1987; Akkermans, 1990). Other important ancient cities such as Umm el-Marra and Tell Chuera lie outside of the areas immediately adjacent to rivers, and may have facilitated east-west overland movements of people and goods.

The salient feature of the Middle Euphrates region is its low average annual rainfall—around the 250mm per year isohyet—which made dry farming

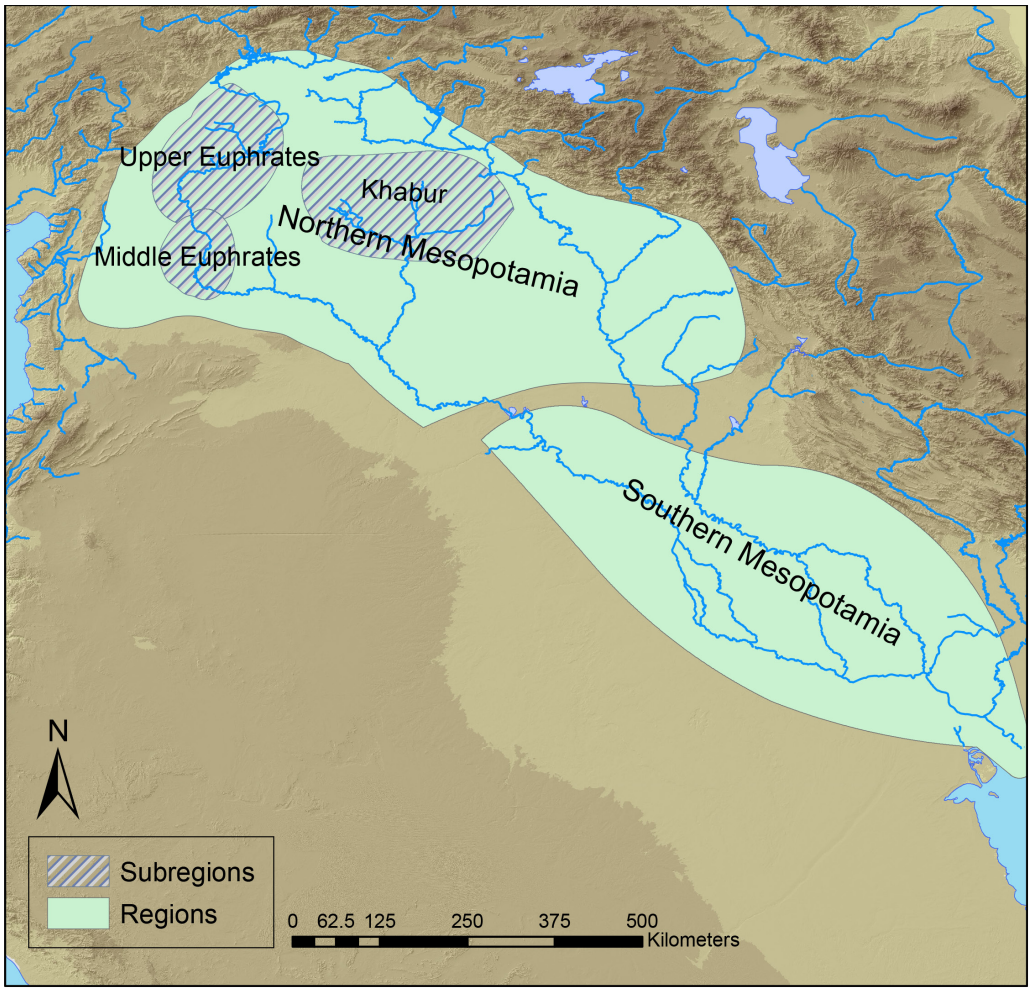


Figure 1. Subregions of Mesopotamia.

a necessary yet risky endeavor (Figure 2). The morphology of the Euphrates River Valley in the north precluded the kind of canal irrigation that was possible in the south (Ur, 2010a: 389), so farmers had little choice in the matter. Instead of irrigation, farmers managed the risk of the frequent dry years and crop failures through a mixed agro-pastoral strategy, relying on their herds of sheep and goat to get them through years with poor harvests (Danti, 2010: 130). The Khabur region, in contrast, lies mostly between the 300 and 400mm per year isohyets, making dry farming a much more attractive option, and allowing for a greater emphasis on the “agro” component of its agro-pastoral economy (Figure 3)

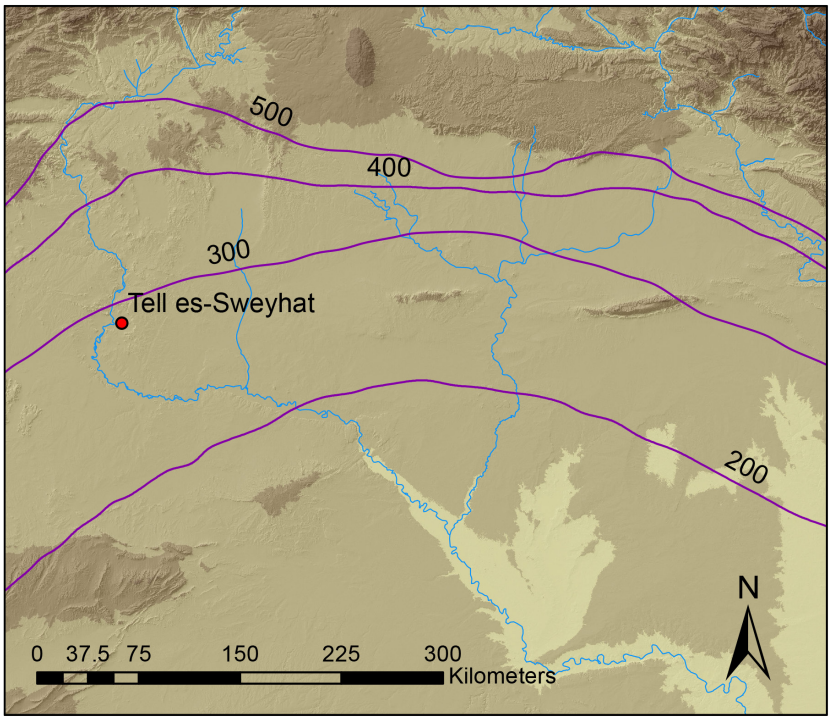


Figure 2. Average Annual Rainfall (in mm). From Wilkinson 1994.

section of the Euphrates floodplain has now been subsumed under Lake Assad, created upon the construction of the Tabqa hydroelectric dam.

During the third millennium, the Euphrates Valley provided a number of valuable natural resources. People would have relied primarily on wells for their water, seasonally supplemented by wadis. The level of the river would have varied by season, with the dry season in the late summer to early fall, and the wet season in early spring, because of the snow melt in Anatolia (Wilkinson, 2004: 21; Cooper, 2006: 29). The river was surrounded on either side by a riparian forest with trees such as willow, poplar, and tamarisk (Miller, 1997a: 124). Areas further from the river were covered in a grassy steppe with shrubs and drought-resistant trees (Wilkinson, 2004: 13). Various wild animals also roamed

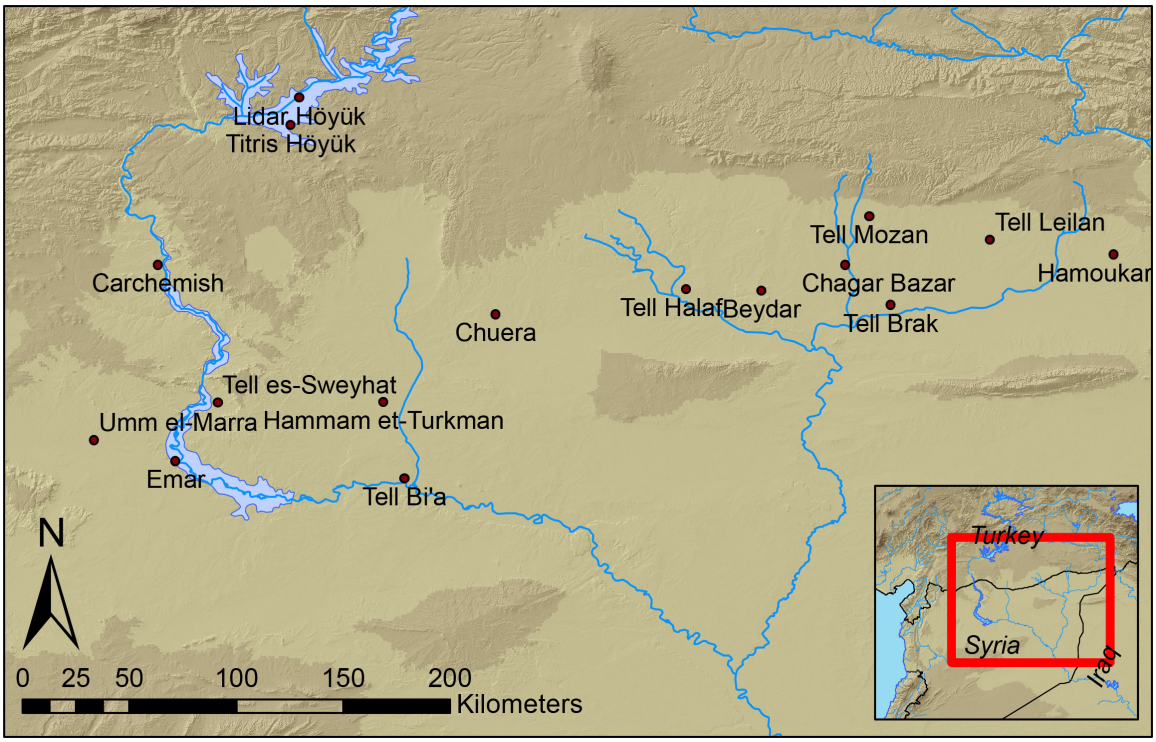


Figure 3. Important Sites in Northern Mesopotamia.

(Wilkinson, 1993: 549). The Upper Euphrates also enjoyed a level of rainfall above 300mm per year, as high as 500mm per year at Titriş Höyük (Figure 4) (Wilkinson, 1994: 485).

Over the millennia, the Euphrates has meandered and cut down as much as 30m into Pleistocene terraces, fed by its source in Turkey and a series of seasonal wadis (Wilkinson, 1993: 549). The river's path has worn away old alluvial fans and deposited others over time, as the meanders moved back and forth along the alluvial plain (Wilkinson, 1993: 550). The restricted deep Euphrates Valley occasionally widens into open embayments with rich fertile soil. Tell es-Sweyhat lies in the "big bend" of the Euphrates, in one of the larger embayments, flanked by high terraces to the east, north, and south (Figure 5). This

Figure 4. Archaeological sites, Late Chalcolithic to Middle Bronze in the Upper Euphrates.

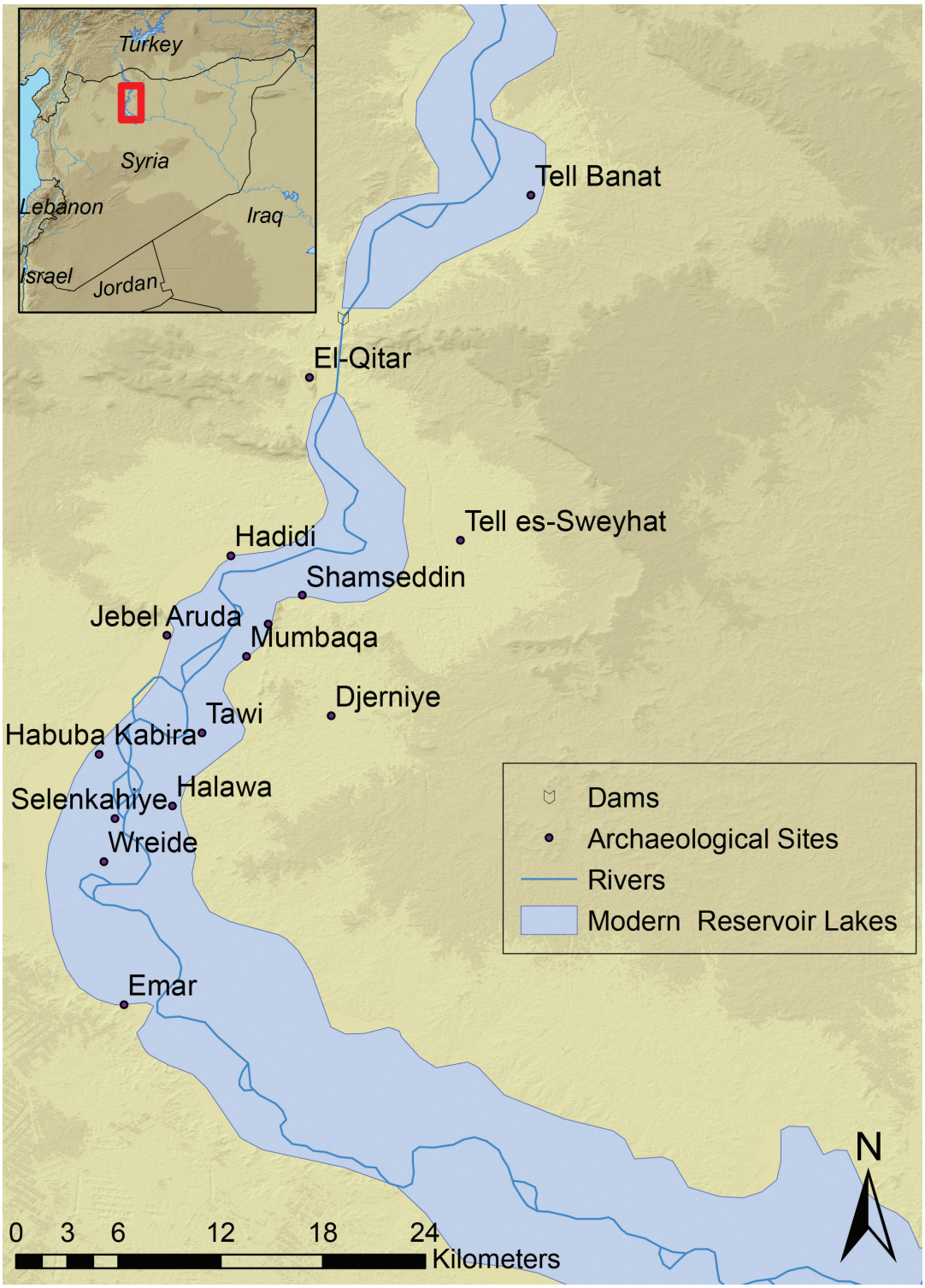


Figure 5. Archaeological sites, Late Chalcolithic to Middle Bronze in the Middle Euphrates.

the steppe and the dense vegetation by the river. Residents would have hunted deer and gazelle, hare, fox, and possibly wild half-ass Zeder 1994 (Weber, 1997).

During typical climatic conditions in the Holocene, the summers in this area are hot and dry, with temperatures reaching 120 degrees Fahrenheit, while the winters are cooler and wetter. Weather patterns in this area indicate that drought conditions are not highly local, but would extend throughout Northern Mesopotamia (Wilkinson, 2004: 13). Several aridification events have punctuated this seasonal pattern since the onset of the Holocene. The Younger Dryas, which dates to about 12,000 years ago, is probably the best-known of these aridification events (Weiss & Ristvet, 2001). Other aridification events occurred at 5.2 and 4.2 thousand years ago, as attested by various paleoclimatic proxies (Cullen *et al.*, 2000; Arz, Lamy & Päzold, 2006). Because these climatic events coincide with the end of the Uruk incursion and the hiatus in occupation at Tell Leilan and other sites in the Khabur, they have been credited with the collapse of those civilizations (Weiss *et al.*, 1993). Settlement patterns in the Euphrates region do not support this interpretation of events, however, since settlement in this region actually peaked at the time of the 4.2kya aridification event (Danti, 2010).

Archaeological Research in Mesopotamia

Wilkinson has identified three major eras of archaeological surveys in Mesopotamia, and his system applies to excavation equally well. He terms these three periods “the early pioneer phase,” from the earliest archaeological work

until the 1950s, the 1960s and 1970s, when “pragmatic” work was carried out for the salvage projects related to dam construction, and finally the recent decades, which see a range of projects addressing a wide variety of research questions. I would further subdivide the last time period by adding 1970s to 1990s, when research was still being undertaken by foreign projects in Iraq, and finally the post 2010 epoch, when work nearly simultaneously left modern Syria and entered northern Iraq because of the outbreak of violence in Syria and the end of the war in Iraq.

Some of the earliest archaeological research in the world was conducted in Northern Mesopotamia at Neo-Assyrian sites. Paul Emile Botta excavated at Nineveh and Khorsabad, and Austen Henry Layard excavated at Nineveh and Nimrud (Trigger, 2006: 70). Both scholars focused on the palaces, particularly the impressive and well-preserved bas-relief sculptures (Layard, 1849). Interest in the region grew as a result of accounts by explorers and adventurers such as Charles Doughty, followed by Gertrude Bell and T.E. Lawrence in the late 1800s and early 1900s. Lawrence had worked at Carchemish with Hogarth at the turn of the century. Concurrently, von Oppenheim became one of the first scholars to dedicate his work in pre-historic periods of Northern Mesopotamia, when he discovered the distinctive ceramic style at Tell Halaf (Akkermans & Schwartz, 2003: 9; Gossman, 2013). It was Oppenheim who would coin the term Kranzhügel, in reference to particular topographic patterns of certain ancient citadel cities. Archaeological fieldwork—both survey and excavation—became gradually more

systematic and scientific in method throughout this time period. The 1930s were a key decade for the history of archaeology in Mesopotamia, as evidenced by the foundation of the new academic journal *Iraq*. Gertrude Bell herself published a (very short) piece in the first issue of this journal (Bell, 1934). Subsequently, some of the earliest high-impact surveys conducted in Mesopotamia were Braidwood's Amuq survey and Jacobsen's Diyala survey in the 1930s (Braidwood, 1937; Hole, 1980; Ammerman, 1981; Wilkinson, 2000: 220). It is during this period of improved archaeological methods that Max Mallowan, perhaps best known as the husband of Agatha Christie, began working in the Khabur region of Syria with excavations at Chagar Bazar and a regional survey (Mallowan, 1936).

In the 1960s and 1970s, regional surveys were implemented throughout Mesopotamia.[3] Robert Adams carried out the surveys that led to his extremely influential publications *Land Behind Baghdad*, *The Uruk Countryside*, and *Heartland of Cities* (1965; 1972; 1981). In addition to Adams' more systematic work in Southern Mesopotamia, Northern Mesopotamia experienced an explosion of archaeological research due to the salvage work for the Tabqa and Tishrin dam projects (van Loon, 1967; Freedman, 1979; del Olmo Lete & Montero Fenollos, 1999). After regional surveys assessed the sites that would be affected by the impending dam projects, a number of large-scale excavations were undertaken. During this period, much of the mortuary data was collected that will be discussed in more detail in Chapter 4. Because the dam project plans errone-

3 See Wilkinson 2000 for a review of the history of archaeological survey in Mesopotamia, including a list of most major regional surveys.

ously projected that the site would be flooded, the Tell es-Sweyhat excavations began as salvage work. A number of the sites referred to in this dissertation, such as Habuba Kabira and Hadidi, are now under the waters of Lake Assad. In spite of the tragedy of so many very important sites ruined, the dam projects produced some positive archaeological results. The most immediate result was an improved local ceramic sequence that facilitated later regional surveys (Wilkinson, 2000: 226).

In the late 1970s, an amazing documentary find was uncovered at Tell Mardikh, or ancient Ebla (Matthiae, 1976). This huge cache of mid third millennium tablets has provided invaluable information on the jockeying between territorial states in that era. Archaeological work continued at a slower pace in Northern Mesopotamia in the 80s and 90s after the conclusion of the major dam projects.

In the 1990s, foreign archaeological projects fled Iraq, and more research shifted to Northern Mesopotamia, in Syria and Turkey. Later, the near-simultaneous decline of the Iraq War and the inception of the Syrian Civil War have caused a shift in archaeological fieldwork from Syria to Northern Iraq. The 2012 ASOR Annual Meeting program highlights this shift. The two sessions devoted to “New Directions in Iraqi Archaeology” delivered preliminary results from a number of new projects opening up in both southern Iraq and Iraqi Kurdistan. The “Archaeology in Syria” session, in contrast, included three papers based on recent field work in Syria, all ending in 2010 or 2011. The closing of Iraq in the 1990s led to

the discovery of earlier urbanism in Northern Mesopotamia. It will be interesting to watch new archaeological fieldwork unfold again in Iraq and Southern Mesopotamia.

Chronologies

The Middle Euphrates was nestled to the west of the great cities of the Khabur, north of the empires of Uruk and Akkad, and east of the Amuq, but maintained its own distinctive ceramic types. Because it was small but unique, it has been difficult for scholars to agree on appropriate chronological terminology for the area (Figure 6). The Southern Mesopotamian chronology, based on ruling dynasties in the faraway cities of Uruk, Ur, and Agade are clearly not appropriate and were abandoned long ago for discussions of the north. The Amuq sequence, based on ceramic forms to the west infrequently uncovered in Euphrates contexts, has rarely been used to describe ceramic sequences in the Euphrates.

To address the inadequacies of the existing chronological sequences, the School of American Research developed the Early Jazira chronology (Rothman, 2001; Ur, 2010a).[4] This sequence is based on ceramic traditions from the Khabur region, which were then tied to absolute radiocarbon dates. The ceramic traditions of the Euphrates and Khabur diverge, particularly in the early to middle of the third millennium, when the Ninevite 5 ceramics dominate in the Khabur.

4 The Arabic Jazira (or Jezireh) means “island,” which in this case refers to the semi-desert area between the Euphrates and Tigris, mostly in modern Syria and Iraq (Wilkinson 1994:13). The word is probably most well-known currently because of Al Jazeera, the highly respected news network.

Because of the distinction between ceramics in the two regions, the Early Jazira chronology is not entirely appropriate for the Euphrates either.

Porter attempted to devise a local chronology specific to the Euphrates region based on the local ceramic sequence. She based her work primarily on the Banat ceramics, but also examined forms from Hadidi and other local sites as necessary (Porter, 2007). Her analysis arrived at six phases spanning the period from the end of the fourth millennium to the beginning of the second millennium. Cooper used this chronology in her 2006 book on the culture history of the Euphrates region. Porter seems to have abandoned this chronology in her own 2011 work on Near Eastern civilization, probably because it covers comparative material from all of Greater Mesopotamia (Porter, 2012).

For the purposes of this dissertation, I follow Porter (2012), in using the Early Bronze chronology, established on the basis of Syro-Palestinian material culture (Wright, 1937; Jamieson, 1993: 36). I am using this system instead of Porter's 2008 chronology primarily for consistency with both the other recent Sweyhat publications and the majority of publications on the other Euphrates sites. I will discuss the local Sweyhat chronologies in more detail in Chapter 4. I occasionally use the more general terminology Early EBA, Middle EBA, and Late EBA when more precise reckonings are not appropriate. Wilkinson designates these time periods as follows: 3100-2700, 2700-2300, and 2300-2100 (Wilkinson, 2000: 225). I would extend the end of the last time period about a century, to approximately 2000, to account for the phasing at Sweyhat. The last century

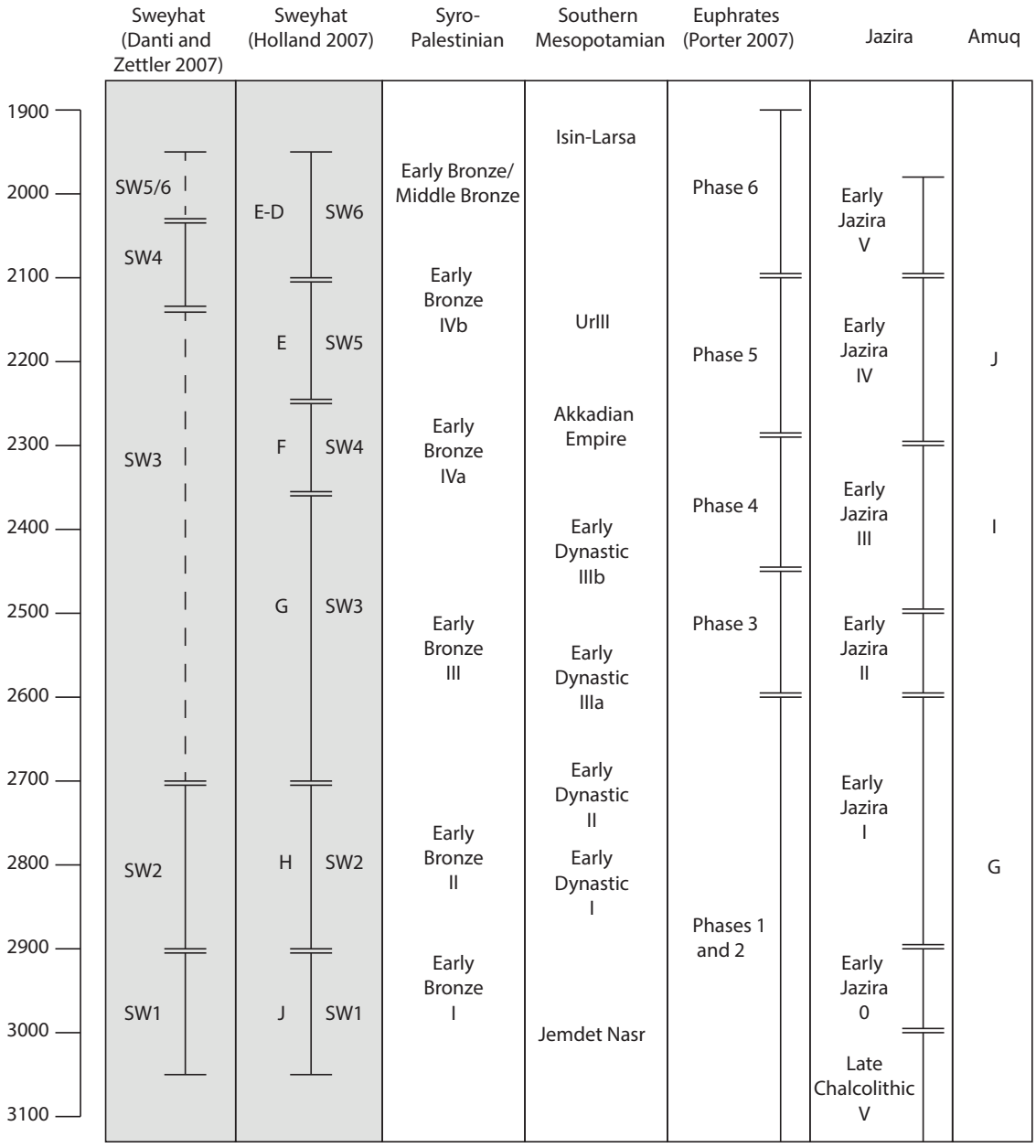


Figure 6. Comparison of Mesopotamian Chronologies and Two Sweyhat Chronologies. From Ur 2010, Cooper 2008, Holland 2006, and Danti and Zettler 2007.

of occupation at Sweyhat is termed the Early Bronze/ Middle Bronze transitional period (Danti & Zettler, 2007).

Late Fourth to Early Second Millennia BCE

Southern Mesopotamian chronologies typically mark the rise and fall of distinct dynasties that dominated the region during particular periods. Unlike the Syro-Palestinian chronology that defines time periods based on dominant metal technology, Southern Mesopotamian eras are defined by type-sites in prehistory and by the dominant ruling dynasties in historical periods. The Uruk period represents the intersection of both of these methods of defining a time period. This culture was named after the site of Uruk, which still boasts the most complete record of this culture to date. Based on current evidence, the city of Uruk was the largest settlement of this culture, which appears to have consisted of a loose confederation of city-states in the core area of Southern Mesopotamia with varying degrees of cooperation or competition between the cities (Algaze, 2008). These city-states hosted the first complex society, best attested by monumental public architecture, such as large religious complexes with platforms (Nissen, 2002). The Uruk culture established distinctly Uruk settlements were established outside of the so-called “core” during the peak of Uruk civilization (Algaze, 2005). After the Uruk culture declined, persisting only in certain ceramic traditions in the north, it continued into the Jemdet Nasr period in the south.

The first cities arose in Northern Mesopotamia in the late fourth millennium, a few centuries after they began to appear across the southern region. Regional surveys indicate that by the end of the fourth millennium, the settlement pattern in the north had developed its signature focus on mounded tell sites rather than “flat” sites that were occupied fleetingly (Wilkinson, 2000: 235). Some recent surveys in the Khabur region indicate that occupations on low mounds may have been more prevalent than acknowledged in Wilson’s model (Ur, 2002: 70).

Traditionally, Northern Mesopotamian urbanism has been examined in terms of influence from the late fourth millennium Southern Mesopotamian Uruk culture (Ur, 2010a: 387). According to this narrative, the Uruk culture expanded northward from its Southern Mesopotamian “core” (Algaze, 2005). These southerners established links with a local culture (referred to simply as the Late Chalcolithic) following a variety of strategies. In the Euphrates region, some of the best-known examples of this phenomenon were Habuba Kabira and Jebel Aruda in Syria, and Hacınebi Tepe in Turkey (Strommenger, 1977; Stein, 1999; Ur, 2010a: 399). Habuba Kabira was excavated as one of the many Tabqa Dam salvage projects, looks like a walled Uruk settlement lifted directly from its Southern homeland and dropped into a previously unoccupied area. This site is generally believed to represent direct colonization of the area by Uruk people. This interpretation is based largely on architectural similarities between house types at the city of Uruk and those of the newly founded Northern Mesopotamian cities.

Jebel Aruda also appeared very Uruk in its artifact assemblages and architecture. Not only religious architecture, but also houses with complete domestic assemblages were uncovered and found to be Uruk material (van Driel, 1980; 2002: 194). Hacınebi, in contrast, appears to have been a local Late Chalcolithic village with a small enclave of Uruk traders. This interpretation is based on many lines of evidence comparing various cultural practices, especially administrative practices attested by sealing products in distinctly Uruk forms and styles that contrast markedly with local traditions (Stein, 1999). At Hacınebi, evidence from administrative artifacts, architecture, ceramics, faunal, and floral remains were used in conjunction to make the case that one of the city's sectors was occupied by Uruk people (Bigelow, 1999; Pearce, 1999; Pittman, 1999). The Southern Mesopotamian presence in the north was limited, and died off nearly entirely at the end of the fourth millennium.

Until recently, local complex society in the north appeared to stem from these Uruk incursions. The obvious interpretation of the available timeline was that Uruk people moved north, bringing the idea of complexity and urbanism with them. There are, however, indicators that this traditional narrative is not an appropriate model. Recent work in Eastern Syria, primarily at Hamoukar and Tell Brak, reveals a high level of local complexity that developed independently of Uruk influence. Many local towns are entirely devoid of Uruk artifacts or influence, but still display their own slow development of complexity (Oates *et al.*, 2007; Ur, 2010a: 394). Recent survey work at Hamoukar reveals a late fifth

millennium site larger than the contemporaneous sites in Southern Mesopotamia (Ur, 2010b: 147).

The small site of Hajji Ibrahim is a small site that produced little to no evidence of the Uruk cultural horizon, in spite of its location in close proximity to sites with large Uruk presences, such as Jebel Aruda (Danti, 2000). Although the ceramics and other material culture might have indicated that the site dated to the Early Bronze Age, radiocarbon dates confirm that this small farmstead site, and therefore the local ceramic assemblage, was contemporary with Habuba Kabira and Jebel Aruda (Danti & Zettler, 2007). Wilkinson discovered evidence of small sites with Uruk material culture on the opposite side of the river, so the absence of such materials at Hajji Ibrahim is notable. Local surveys of the Tell es-Sweyhat embayment reveal that Hajji Ibrahim was one of a number of small sites dotting the landscape (Danti, 1997: 88; Wilkinson, 2004: 135-137). Excavations at the main site of Tell es-Sweyhat may have produced Late Chalcolithic period ceramics from a single storage pit (Area I Trench C, Pit B (Holland, 2006: 35). If more extensive Late Chalcolithic remains existed at Tell es-Sweyhat, they would most likely lie under meters of soil, since the bottom of Pit B sat nearly 15m below the site benchmark. Sterile soil was only reached in excavations of two small areas (Area I Trench C, and Operation 1).

Hadidi, a site that lies across the Euphrates from Tell es-Sweyhat that would in many ways grow in tandem with Sweyhat to become a sister-city, had Southern Mesopotamian materials like beveled rim bowls, but mixed with the

local assemblage. According to the excavators, “If the beveled-rim bowls and the forms related to the earlier tradition are removed, the assemblage is the same as that at Sweyhat in phases A-F of Sounding IIA.” (Dornemann, 1988: 16) These authors suggest that the site may not have been occupied during this early period, but the Uruk style materials, such as beveled-rim bowls and clay wall cones, suggest at least that some activities were undertaken in this area at this time period.

The next time periods in the Southern Mesopotamian sequence were the Early Dynastic I–III periods (EDI–EDIII), in reference to the king lists that were eventually written and copied after cuneiform writing develops from the cruder Uruk administrative pictograms and numbers (Nissen et al 1993). This sequence covered the period when the king lists shift from the fantastic multi-century reigns of rulers such as the semi-mythical Gilgamesh to the more reliable accounts of historical figures (Jacobsen, 1939). The more reliable king lists represented rulers of dominant cities that were presented as a linear succession, when in fact, their reigns overlapped (Westenholz, 1974: 156). Over the EDI to III periods, urbanization increased consistently until it reached a peak in the EDII/III, when nearly 80% of Southern Mesopotamia’s settled area was contained in a large urban center (Adams, 1981: 138). Political histories and images emphasized conflict between city-states, and even beyond Southern Mesopotamia. The Stela of the Vultures from Girsu, for example, showed armies marching into battle

behind the king of Lagash in a battle against the neighboring Umma (Winter, 1986; Alster, 2003).

At the beginning of the Early Bronze Age, the so-called Ninevite 5 cultural horizon arose in the east, in the Khabur region, while the western parts of Syria maintained a distinct local material culture. The Ninevite 5 culture is defined primarily on the basis of the pottery for which it is named. The ceramic assemblage was, in turn, named for the fifth stratigraphic period at the site of Nineveh (Mallowan, 1933; Schwartz, 1985; Roaf & Killick, 1987: 201). This distinctive ceramic tradition has been uncovered throughout the area ranging from the Khabur region of Northern Mesopotamia east to the Tigris and south to the Balikh (Wilkinson, 1990a). The Ninevite 5 ceramic culture was ultimately rooted in the Uruk ceramic styles of the fourth millennium at certain sites in the region (Akkermans & Schwartz, 2003: 214). The Ninevite 5 seal style also stemmed from the Jemdet Nasr style of seal (Schwartz, 1987: 97). Other than the continuation of the Uruk ceramic tradition, however, few cultural links between the Uruk and local EBA persisted.

The most evidence for continuity between the Uruk culture and the Ninevite 5 ceramic tradition was uncovered in the Tigris region of Northern Mesopotamia, where a “remnant population [was] producing, briefly, the precursor of early Ninevite 5” (Weiss, 2003: 601). Sites further west, in the Khabur, produced less evidence of this transitional stage between the Uruk and the Ninevite 5 assemblages, which appears only at Brak. Settlement surveys across

Northern Mesopotamia have revealed diminishing evidence of the transition west of the Tigris (Weiss, 2003: 601). Weiss' description, however, does not clarify whether this dearth of evidence stems from post-Uruk de-urbanization after the Uruk period, or an inability to recognize Local Late Chalcolithic to Early Bronze ceramic assemblages.

Most likely, the Ninevite 5 cultural horizon represented a rise of ruralism and pastoralism after the period of urban and agricultural intensification of the Uruk or Late Chalcolithic horizon (Wilkinson, 1990b: 61). Writing had all but disappeared. Both the number of settlements and the settlement hierarchy shrank from a four- to a two-tiered system (Schwartz, 1987: 96). Despite the smaller sizes of settlements in the Ninevite 5 region, society remained relatively complex, however, with some of the smaller settlements, such as Raqa'i, serving as specialized grain depots with formal central storage areas (Curvers & Schwartz, 1990: 4; Schwartz & Curvers, 1992: 398; Akkermans & Schwartz, 2003: 218). In the Ninevite 5 area, which focused on the Khabur and Tigris, many settlements expanded to around 20ha (Wilkinson, 2000: 238). At the larger sites in the Khabur, sherd "halos" indicate that intensive cultivation radiated out from the site center 1 to 2 km, with less intensive cultivation extending an additional 2 to 3-5km, with pasture land beyond (Wilkinson, 2000: 239; Ur, 2002: 76).

To the west, little connection to Southern Mesopotamia persisted in the Euphrates and Amuq regions. As in the Ninevite 5 culture area, the local form

of complexity persisted, with administrative artifacts such as cylinder and stamp seals of the local style remaining in use. These local administrative artifacts appeared in the middle Euphrates at Halawa, but their presence was virtually unknown at Tell es-Sweyhat (Akkermans & Schwartz, 2003: 226). To date, only one stamp seal and one cylinder seal have been uncovered at the site, both of which were found in secondary contexts during the 2010 season on the Eastern Mound. These recent finds supplement only a single formal weight inscribed in cuneiform, found in a primary use context in Area IV (Holland, 2006: 231). Potters marks on ceramic jars and unmarked jar stoppers represent the extent of local administrative artifacts.

A number of sites, including Carchemish, Jerablus Tahtani, Shiyukh Tahtani, Ahmar, Qara Quzaq, Banat, Kabur, Shamseddin, Hadidi, Munbaqa, and Habuba Kabira were all occupied continuously through the early part of third millennium. At some of these small cities, the social complexity exhibited during the Late Chalcolithic continued, but at a smaller scale. Qara Quzaq, for example, already had a cultic compound and temple in the early third millennium (Valdes Pereiro, 1999: 120). Shiukh Tahtani also boasted a large public building of some kind dating to the EBI-II period (Falsone, 1999: 138).

Some new cities were founded in the early centuries of the third millennium that would grow to become major urban centers. Halawa A, for example, was established in the second quarter of the third millennium. Occupation areas at Tell Hadidi expand into new districts in the EBII and EBIII periods (Dornemann,

1988: 26, 27). Local traits of complexity were also embodied in the fortification projects at Tilbeshar, Halawa B, Jerablus Tahtani, and Habuba Kabira (not to be confused with the Uruk settlement of Habuba Kabira Sud) and in the early fort structure at Tell es-Sweyhat (Peltenburg, 2007: 13). Scholars often describe local traditions from the EBI-III periods, before Mari and Ebla grew to become regional powerhouses, as "simple communities," thereby downplaying local developments of complexity (Peltenburg, 2007). The above evidence indicates that complexity persisted throughout the early centuries of the Early Bronze Age, but in a form distinct from the Southern Mesopotamian variety. In the north, administration was carried out by means other than writing, and a network of smaller specialized sites may have performed the functions of a single megacity in the south.

During the second half of the Early Bronze Age in Northern Mesopotamia, urbanization increased again markedly. Different trajectories in settlement size distinguish the Euphrates from the Khabur region. The increase and subsequent decrease in urbanization during this period, as in the previous period, is often attributed to climatic change, incursions from Southern Mesopotamians, or both. The most impactful development in the mid third millennium was the development of writing as a means of conducting administrative work. Suddenly, archives full of tablets, primarily economic and political in nature, appeared throughout the south, and at major regional centers in the north, such as Mari, Ebla, and Beydar (Parrot, 1953; Pettinato, 1981; Ismail *et al.*, 1996). These archives recorded the economic and political activities of Ebla, in northwest Syria,

and Mari, at the southernmost edge of modern Syria on the Euphrates River, including their interactions with various smaller regional centers in the north (Michalowski, 1985: 297). The two city-states were vying for control of Northern Mesopotamia, particularly the Middle Euphrates.

Mid-way through the third millennium, the northern cities Ebla and Mari increased in importance. Documents discovered at Ebla discussed its control over agricultural products (Pettinato, 1981: 81; Archi & Biga, 2003). Prestige materials, such as silver and gold, also would have been controlled by these outlying city-states.

An archive of thousands of tablets was one of the most informative discoveries in the burned Palace G at Ebla, below the western slope of the high mound (Pettinato, 1981: 51). Burned Palace G is a huge complex, with a large central colonnaded courtyard, and a number of specialized wings (Matthiae, 1976; Matthiae, 1980). Within the archival area, distinct rooms housed archives for different purposes, which give particular insight into the organizational principles of the bureaucracy at Ebla. The excavators date Palace G and the archives to roughly 2400–2250BCE on the basis of ceramic forms and epigraphic concordances with southern Mesopotamian texts (Matthiae, 1976: 102). The Ebla tablets provide insights into bureaucratic, economic, and political practices. These archives, written in a local Semitic language, described a distribution system of food rations, palace-owned flocks of sheep, and wool (Pettinato, 1981). They reveal a Northern Mesopotamia organized into city-states with “tripartite

political structures consisting of a king, royal officials, and ‘elders.” (Akkermans & Schwartz, 2003: 239)The term “elder” is intriguing, and may indicate that a kinship-based system of control coexisted with the more hierarchical system that typically accompanies state-level society.

The archives at Ebla also describe a tense rivalry with the city of Mari, in which the two cities competed for control of Northern Mesopotamia, particularly the Euphrates area that often served as a boundary between the two powers (Archi & Biga, 2003). Between 2400 and 2300BCE, the two cities engaged in a power-struggle for control of territory that lasted “no more than fifty years” (Archi & Biga, 2003: 1). These polities used some combination of warfare and diplomacy in their attempts to control land, with documents recording treaties and negotiations in addition to reports of aggression and violence (Pettinato, 1981: 103; Pettinato, 1986: 230). Initially, Mari expanded its territory, according to a letter to the King of Ebla from King Enna-Dagan of Mari bragging about various conquests along the Euphrates River (Pettinato 1991, 237). Various kings claimed to have reached Emar and even beyond to Carchemish (Archi & Biga, 2003: 2). During this time, Ebla paid tribute to Mari, and contemporary documents indicate that Mari worked to keep larger regional centers such as Nagar (Modern Tell Brak) in check (Archi & Biga, 2003: 11). Later, however, Ebla defeated Mari in battle, then immediately secured its dominance by making treaties with cities such as Nagar.

Mari, modern Tell Hariri, has been excavated since 1933, and most work has been done on elite areas of the site, with little work on the residential or non-elite sectors (Parrot, 1935). A large third millennium fortification wall, which indicates some degree of urban planning, enclosed an area of 250ha (Akkermans & Schwartz, 2003: 23). It is not entirely clear where all these new city dwellers came from, since an increase in birth rate does not seem to account for such an increase in settlement size. It might be tempting to posit that Southern Mesopotamians moved northward during the peak of Akkadian urbanism in the south, but the material culture does not bear out that interpretation, because the earliest ceramics were in the local Ninevite 5 style of the Khabur (Akkermans & Schwartz, 2003: 263). The artifacts from these contexts suggest that the richest period of occupation at Mari dates to around 2500–2300BCE, or before Sargon consolidated power in the south.

Palace G at Ebla has been an invaluable archaeological find because it was destroyed in a conflagration. Both Sargon and Naram-Sin, Old Akkadian Kings, claim to have subjugated Ebla, which made them the prime suspects at first. According to Sargon, “He (the god Dagan) gave to him (Sargon) the Upper Land: Mari, Larmuti, and Ebla as far as the Cedar Forest and the Silver Mountains.” Naram-sin later refuted this, saying that “for all time since the creation of mankind, no king whosoever had destroyed Armanum and Ebla, the god Nergal…opened the way for Naram-Sin…and gave him Armanum and Ebla” (Archi & Biga, 2003: 16). Originally, excavators attributed the destruction

of Palace G to either Sargon or Naram-Sin, dramatically recounting that “as the flames of Naram-Sin’s army devoured the shelves, the tablets settled on top of one another, preserved in horizontal heaps like cards in a file” (Matthiae, 1976: 100). Armanum may be identified with modern Banat, which lies to the north of Tell es-Sweyhat’s embayment (Otto, 2006). The destruction of Palace G at Ebla is now thought to have been caused by Mari, since it was the only regional power strong enough to defeat Ebla, and had been locked in a power struggle for years (Archi & Biga, 2003: 35). Mari was likely defeated by Sargon in turn a little over a decade later (Archi & Biga, 2003).

In the Middle Euphrates region, cities expanded during the ascendancy of Mari and Ebla, with increased construction not only of residential areas, but also of public projects such as temples and fortifications (Cooper, 2006: 15). The occupied area of Banat increased to 30 ha at this time, making it nearly as large as Tell es-Sweyhat (McClellan, 1999: 417). Architectural styles of these public projects became more standard across the region—temples *in antis*, for example, became the norm between around 2450 and 2300BCE (Cooper, 2006: 15).

By 2300 to 2100, occupation was discontinued or declined at some major sites in this region, including Jerablus Tahtani and Selenkahiye V (Cooper, 2006: 20). This decline of some sites does not appear to represent an overall decline in urbanization in the Middle Euphrates, however. For example, occupation at Tell Banat appears to have shifted to Tell Kabir during this period (McClellan & Porter, 1999: 107). Occupation at many major sites such as Halawa, Habuba Kabira,

and Amarna continued unabated, while other sites, such as Emar, were founded during this time (Cooper, 2006: 20).

In contrast with the competing city states of the Early Dynastic period, the Akkadian period in Southern Mesopotamia saw the centralization of power under a single dynasty of rulers. Throughout his reign, Sargon bragged about defeating various cities, including Mari and Ebla (Westenholz, 1974). Sargon's grandson, Naram-Sin was perhaps the Akkadian ruler who bragged the most, toting his far-flung exploits, perhaps most famously on his enormous stela. A seal with the name of Tar'am-Agade, the daughter of Naram-Sin, was uncovered at Tell Mozan (ancient Urkesh) linking this king to Northern Mesopotamia (Buccellati & Kelly-Buccellati, 2002).

Occupation at both Tell es-Sweyhat and Tell Hadidi continued to expand during the end of the EBA. Occupation of both sites continued through to the EB/MB transition (around 2100 to 1900), and died out shortly after (Dornemann, 1988: 38). Urbanization at the end of the Early Bronze Age in the Middle Euphrates region contrasted with the contemporary situation in the Khabur.

After the decline of the Akkadian Empire, the third dynasty of Ur arose and consolidated power in the southern region. Gudea is probably the best-known king of this era because of his distinctive diorite royal portraits, although he himself ruled from Lagash, rather than Ur.[5] Inscriptions on these statues

5 Although Ur III, properly speaking, refers only to the third dynasty of Ur, I use it here as a designation for the corresponding period of time throughout Southern Mesopotamia. Gudea was a member of the second dynasty of Lagash, which likely overlapped with the beginning of the third dynasty of Ur (Steinkeller, 1988)

touted his accomplishments in foreign trade. Documents from this time period were written in Sumerian, rather than Akkadian, although Sumerian was not a commonly spoken language by that time. Instead, Sumerian was used as an official language. Ur III kings and officials did not break completely with the Akkadian period, but rather drew some of their legitimacy from the preceding dynasty.

When Sweyhat and Hadidi reached their acmes, settlement in the Khabur showed a sudden depopulation (Wilkinson, 2000: 235). The decline in settlement at the end of the Early Bronze Age occurred about a century earlier in the Khabur than in the Euphrates, while urban settlements in the Euphrates were still going strong (Ristvet & Weiss, 2005: 13; Weiss *et al.*, 2012). Abandonment at the mega-cities of the Khabur, particularly at Leilan, has been attributed to a climate change event around this time period (Weiss & Ristvet, 2001: 610; Weiss *et al.*, 2012: 185).

In comparison to the Akkadian empire, the Ur III state was relatively modest, with a small core paying taxes to a central government closely tied to the state religion (Sharlach, 2004: 8). Even this most basic information stems from the remarkable wealth of textual and administrative artifacts dating to this time period. Because of this rich data source, the Ur III bureaucracy is the best-known and most closely examined bureaucracy from the ancient Near East. Because so much evidence is available, scholars have been able to correlate records with other aspects of the material record to understand the central

administrative authority better than in any other time period (Steinkeller, 1987). Melinda Zeder, for example, conducted a joint textual and zooarchaeological study of tax structure as it applied to the redistribution of meat at Drehem (Zeder, 1994b). She finds that some components of the redistribution system were heavily regulated, such as where the animals came from and where they were delivered, but that other aspects of this process, such as herd management, were left up to the pastoral specialists. She also finds that some secondary products, such as wool, were centrally redistributed, whereas dairy products were not (Zeder, 1988: 10). Joint analyses linking seals, sealings, and texts can be so detailed that scholars can actually reconstruct the roles of individual bureaucrats (Zettler, 1997a).

Mostly because the amount of textual data available exploded during the Akkadian period, ancient historians have leaned heavily on the propagandistic reports of the Southern Mesopotamian kings as explanations for archaeological evidence. The direct archaeological evidence for these southern incursions into the north during the Akkadian period is relatively rare, however. Most of the evidence for a true southern presence in the north has been uncovered in the Khabur area (Michalowski, 1985: 301). At Brak, the royal palace was constructed with some bricks that bore Naram-Sin's stamp (Mallowan, 1947: 26; Oates, 1982: 189). The direct role that Naram-Sin had at Brak is unclear, as he does not seem to have clarified his role at ancient Nagar beyond military incursions. The upper levels of debris in this palace also contained a tablet that mentions Ur-Nammu,

the first of the Ur III kings (Mallowan, 1947: 22). Little to no evidence suggests that Southern Mesopotamian presence at Brak continued into the Ur III period.

Some seal impressions bearing the name of Tar'am-Agade, identified as Naram-sin's daughter, have been found at the royal palace of Mozan (ancient Urkesh). She was apparently present at the palace in some political capacity, based on the iconography of the cylinder seal that she used (Buccellati & Kelly-Buccellati, 2001: 63). Beyond this basic information, her role at the palace is unclear, although the excavators postulate that she may have been married to the local ruler, serving as the queen of Urkesh (Buccellati & Kelly-Buccellati, 2001: 63). No particular evidence necessitates this interpretation, and there is no reason to believe that she was not at the palace as some kind of political emissary in her own right, drawing her authority from her father, Naram-Sin.

Overall, the Early Bronze Age in the Middle Euphrates was an era of transition. After the proto-historic urban period of the 4th millennium declined, the area was characterized by smaller, simpler, non-urban sites. This network of towns and villages became more complex slowly throughout the early EBA, with some regional centers, such as Tell es-Sweyhat, beginning to form. The florescence of EBA urbanism in this area occurred around the time that Tell es-Sweyhat radically redesigned its urban layout, at the end of the EBA. Around the end of the first century of the second millennium, urbanism in the Middle Euphrates declined once again. People appear to have abandoned the embayment entirely,

with only occupation at smaller towns along the floodplain continuing (Wilkinson, 2004: 143).

The previous review of urbanization and political history of Mesopotamia provides the background for Sweyhat's gradual expansion and eventual reorganization. Although textual evidence indicates a flurry of interactions between local regional polities such as Mari and Ebla and the Euphrates and Khabur regions, the archaeological record does not suggest that Sweyhat was ever under the direct control of any of these regional powers.

This dissertation examines the social transitions that accompany the architectural changes and population growth at Tell es-Sweyhat. By first presenting new excavation data and then contextualizing it within the data published to date, I will provide the foundation for making a detailed assessment of the nature of changes in use of space at Tell es-Sweyhat throughout the third millennium. Throughout the rest of the dissertation, I narrow the focus to the transition between the Sweyhat 3 and 4 phases. Since this transition is characterized in part by both a sudden increase in population and population density, coupled with the construction of fortification walls, I have identified it as the point at which Tell es-Sweyhat burgeoned from a town into a city. I examine the impact of this shift on burial practices, defensive practices, and urban planning practices. Ultimately, I conclude that while each of these areas of practice shift in distinct ways, they reflect a change in the conception of public and private space at Tell es-Sweyhat.

Chapter 2: Site Report on Recent Excavations

In this chapter, I present the results of excavations along the edge of the inner city carried out by Boston University between 2008 and 2010. The goal of these excavations was to explore the reorganization event at the end of Sweyhat Period 3, or around 2150 BCE. In 2008, three 10x10m trenches were placed along the path of the inner city fortification wall, as estimated based on previous excavations in Areas IV and IX (Figure 7). These operations were numbered 101, 102, and 103, from north to south. The tell surface slopes down from north to south, so the latest phase of occupation (Sweyhat Period 6) was preserved only in Operation 101. In 2008, the team excavated the Sweyhat Period 6 architectural phase in Operation 101, and the room debris and wind-blown sediment that covered the Sweyhat Period 4 buildings in Operations 102 and 103. The deposits were shallower in Operation 103, so the Sweyhat Period 4 floors were reached there during the 2008 season. In an attempt to trace the path of some of the architecture from Operation 103, a 5x10m trench was opened to the east of Operation 103, which was named Operation 104. Unfortunately, Operation 104 was carved with large pits, which obscured most of the architecture in that area. All of the operations excavated in 2008 contained intrusive Late Roman burials, which were fully excavated during that season.

The 2008 excavations uncovered the Inner City wall in Operation 103 and in part of 102, but its path lay just to the west of Operation 101. In order to

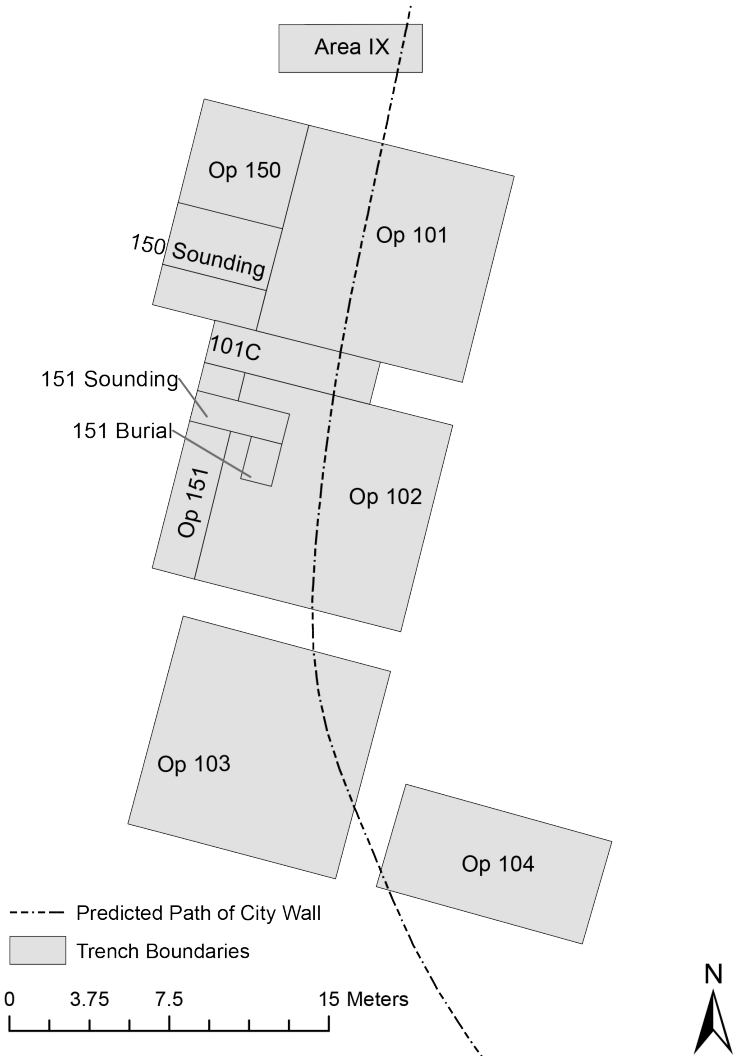


Figure 7. Operation Numbers in the Southwestern Low Inner City (SWLIC).

uncover a longer stretch of the city wall, we expanded excavations in the 2009 season. Operations 150 and 151, 5x10 and 2x10m trenches respectively, uncovered the city wall to the east of Operations 101 and 102. No later architecture or burials overlay the wall in these areas. In order to ascertain whether the wall was constructed on the remains of an earlier wall, and to understand its construction technique, we cut two narrow soundings through the city wall in Operations 150 and 151. Finally, we removed part of a 2m wide baulk that had separated

Operations 101 and 102 to reveal more of an unusual, possibly cultic, room in the Sweyhat Period 4 building. We uncovered and excavated another Late Roman burial in this area.

In the 2010 season, we excavated deeper in the Operation 150 sounding, down to a layer of sediment that was soaked by the water table that has been raised artificially high over recent years by excessive irrigation. We had intended to dig just as deep in the Operation 151 sounding, but we stopped to excavate two burials that we uncovered in the course of excavating in 151. We had to extend the sounding two meters to the south of the Operation 151 sounding in order to completely uncover the third millennium burial, and in the process also uncovered a later infant burial. We also excavated deeper into Phase 3 in Operation 102, but did not uncover any earlier architectural remains.

History of Excavations

Excavations began at Tell es-Sweyhat as a salvage project associated with the construction of the Tabqa dam in the 1970s (van Loon, 1967; Freedman & Lundquist, 1977; Freedman, 1979). This dam project sparked a wildfire of excavation and survey projects throughout the potentially affected area that now lies under or near Lake Assad (Bounni, 1977). While many excavation reports chronicle large-scale, fast excavations outrunning the swiftly rising waters of the new lake (Kampschulte & Orthmann, 1984), Tell es-Sweyhat was fortunately unaffected. Calculations for the volume of the impound lake were too high, so

Sweyhat was spared and would remain available for excavations to reopen in 1989 as a University of Pennsylvania Project.

Most Inner City excavation areas were opened in the 1970s, and research in the Outer City began later in the 1990s, when the University of Pennsylvania reopened excavations under Richard Zettler's leadership. During this time,

Table 1. History of Excavations at Tell es-Sweyhat.

Year	Director	Areas/Operations	Publications
1973	Holland and Dayton	On-site survey, Areas I, II, III, and IV	Holland 2007
1974	Holland and Dayton	Areas III, IV, V, VI, VII, VIII, IX, X, and XI, Soundings S.1, S.2, and T.1	Holland 2007
1975	Holland	Area IV, study season	Holland 2007
1989	Holland and Zettler	Ops 1, 2, 3, and 4, Lower town survey	Zettler 1997, Holland 2007
1991	Holland and Zettler	Operations 1, 4, 5, 6, 7, 8, and 9	Zettler 1997, Holland 2007
1992	Holland	Operations 5, 10, 11, Area IV (Trench IVN, Trench IVT, XA, XB), Regional survey	Holland 2007
1993	Zettler	Operations 1, 12, 13, 14, 15, 16, 17, 18, and 19	Zettler 1997
1995	Zettler	Operations 1, 20, 21, 22, 23, 24, and 25	Zettler 1997
1998	Zettler	Operations 26, 27, and 28	
2000	Zettler	Ops 12, 20, 21, 24, 29, 30, 31, 32, 34	Danti and Zettler 2007
2001	Zettler	Ops 31, 39, 38, 37, 36, 35	Danti and Zettler 2007
2005	Zettler	Operations 30, 39, 40	
2007	Zettler		
2008	Danti	Operations 100, 101, 102, 103, 104	
2009	Danti	Operations 200, 101, 102, 150, 151, 110	
2010	Danti	Operations 102, 150, 151, 110, 111, 112, 113	

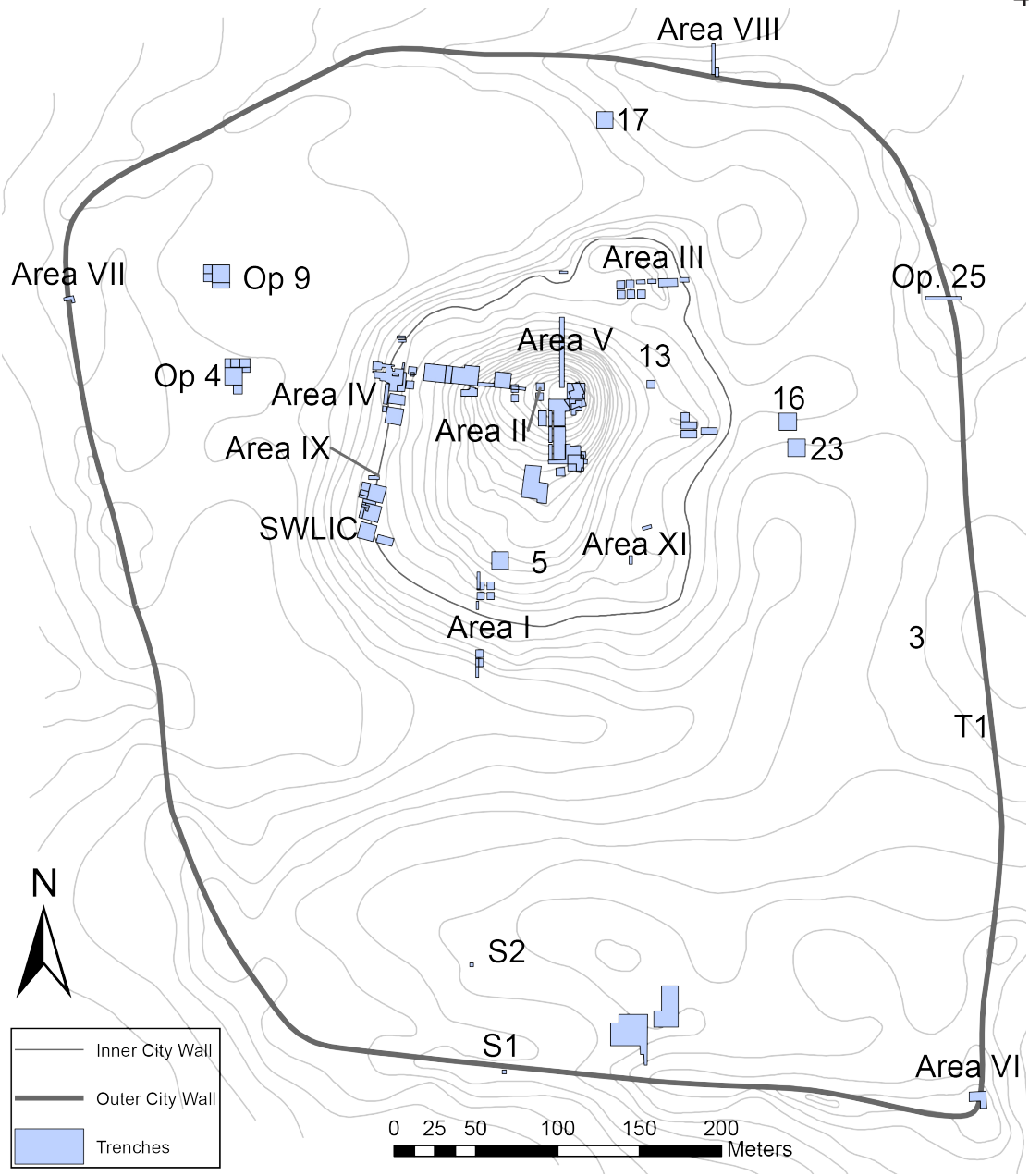


Figure 8. Tell es-Sweyhat Areas and Operations.

Michael Danti conducted excavations at the nearby satellite site Hajji Ibrahim, and conducted a regional survey to complement the earlier work of Wilkinson (Wilkinson, 2004). Excavations at Tell es-Sweyhat continued every other year throughout the 1990s and 2000s, when the project changed leadership once again (Table 1). In 2008, Michael Danti, a veteran of the Tell es-Sweyhat excava-

tions in the 1990s, took over as project director. Excavations proceeded under the sponsorship of Boston University, with University of Pennsylvania affiliation, until the outbreak of violence early in 2011, when the study and excavation season planned for that summer was cancelled.

In the 1970s, excavation was limited primarily to the main mound with a few excavation areas in the vicinity of the Outer City wall. These excavation units were labeled “Areas,” which contained subsets called “operations,” while the University of Pennsylvania numbering system does away with the “area” terminology to distinguish these excavations from those of the previous era (Figure 29). The University of Chicago briefly partnered with the University of Pennsylvania in these excavations, working alternate seasons, and discontinuing work after 1992.

In 1993 and 1995, the University of Pennsylvania team explored the Outer Town through geophysical prospection, test excavations, and pedestrian survey (Peregrine *et al.*, 1997). They conducted a geomagnetic survey, which produced architectural plans for the outer town buildings in some areas. These surveys were later ground-truthed with targeted excavations, in the northern, northeastern, and northwestern, and southern sectors. Artifact collection units were placed in a pattern radiating out from the center citadel to the outer limits of the site. Aerial photographs clearly show not only the outer fortification wall, but also revealed a southern extension outside that wall, so units were placed to cover that area as well. Later in the decade, Danti supplemented Wilkinson’s survey

with a regional survey of the upper highlands, to establish the settlement history of the area between the Euphrates and Balikh (Danti, 2000).

In 2008 to 2010, fieldwork focused on the High Inner City, expanding excavations around the temple complex, and around the southwestern and eastern edges of the Low Inner City. Seleucid and Late Roman architecture was explored through excavation areas in the southern sector of the Low Inner City.

Sweyhat Chronology

All of Sweyhat's project directors agree that the site was occupied from around 3050BCE to around 1950 or 1900BCE. They disagree over how to delineate some of the periods in the middle, however. In 2007, Danti and Zettler published an article summarizing their work at Tell es-Sweyhat from the 1990s and early 2000s, which included a series of radiocarbon dates from both Hajji Ibrahim and various periods of occupation at Tell es-Sweyhat. The authors break Sweyhat's stratigraphy into six periods, and assign them absolute dates on the basis of these radiocarbon determinations.

Sweyhat Periods 1–2 date to roughly 3050-2900 and 2900-2700, respectively. The long one-sigma range for the latest radiocarbon date from period two makes its end date somewhat uncertain. Furthermore, no radiocarbon dates exist from Period 3, so its beginning and end dates depend on radiocarbon samples from other periods. Sweyhat Period 4, in contrast, has a number of carbon dates, recovered from grain and charcoal associated with the floor of an

Area IV building (Danti & Zettler, 2007: 175). On this basis, Sweyhat Period 4 begins around 2150BCE.

Holland's 2006 publication of the University of Chicago excavation data contradicts the above chronology. As Holland's report was published first, he did not have the benefit of all of the radiocarbon dates from Danti and Zettler's publication. Instead, he relies "more on the pottery assemblages and their comparative material than on the five Bronze Age and one Hellenistic radiocarbon dates that have been obtained for the charcoal and carbonized grain samples" (Holland, 2006: 18). Because of his distrust of some of the radiocarbon dates that were available at the time, Holland defines periods that coincide neatly with the Northern Mesopotamian Early Bronze chronology. He would place Sweyhat Periods 1 and 2 in roughly the same time span as Danti and Zettler. The end of Sweyhat 3 and the beginning of Sweyhat 4 is quite different between the two publications, however. While the radiocarbon dates Danti and Zettler rely on place the beginning of Sweyhat 4 occupation around 2150, Holland aligns it with the Early Bronze IVa period (2350-2250). He places Sweyhat 5 from 2250 to 2100, and Sweyhat 6 from 2100 to 1950.

These differences of a few hundred years impact the explanation of certain developments at Tell es-Sweyhat. Holland's chronology places the site's fluorescence in the time period when the Akkadian Empire dominated Southern Mesopotamia. This chronology has allowed Holland to argue that the construction of the Inner City Wall was necessitated by a direct threat of violence from

the Akkadian empire to the south. According to Holland, “This initial destruction of the upper town may have been related to Sargon’s expeditions to the west at some time between 2334 and 2279 BC” (Holland, 2006: 384). This chronology would also align the decline in settlement at Sweyhat between Periods 4 and 5 at the time of the Akkadian collapse. Just as a more refined chronology of local developments erodes the traditional explanation of the first period of urbanization as triggered by southern incursions, so does the traditional explanation of the second period of urban fluorescence. Danti and Zettler’s chronology places Sweyhat’s fluorescence at a time of drought and decline in the Khabur region. For the purposes of this study, I rely on Danti and Zettler’s site-specific chronology, since it is tied to absolute dates, rather than the notoriously long-lived ceramic forms of the Euphrates Early Bronze Age.

Phasing

In order to discuss the southwestern sector of the Low Inner City as a coherent unit, I use a single series of phases from the earliest levels of the Operation 150 sounding, to the Seleucid/Late Roman graveyard. Generally, throughout this dissertation, I use the word “phase” to refer to a cohesive collection of Locus/Lots that create a larger stratigraphic unit. A series of superimposed plastered floors, each with its own Locus/Lot designation, might constitute Phase 5a, for example. Danti and Zettler refer to the major building phases at Sweyhat—collections of these smaller phases or subdivisions of Sweyhat’s

local chronology—as “phases” as well in their 2007 publication. To avoid confusion between Sweyhat’s Phase 3 and the stratigraphic Phase 3 of the SWLIC, I instead refer to the larger subdivisions as “Periods.” See Table 2 for brief descriptions of the relationships between phases, architectural phases, and Sweyhat Periods (Table 2).

Soundings

In the earliest layers of the sounding through the city wall in Operation 150, the water from the irrigation of the surrounding cotton fields raised the water table, which began to seep into the sediments, indicating that preservation of any earlier levels had probably suffered. In spite of the poor preservation of these lower levels, we recovered some evidence of two phases of occupation that predate the city wall.

In phase 1, a degraded mudbrick structure appeared about 155cm below the surface of the tell (Figure 9). On the western side of this structure, layers of ash alternated with degraded mudbrick, indicating collapsed walls and roof material (Figure 10, 11). A large pit in the Northwest corner of the sounding interrupted the plan of this building, so very little of its architectural form can be discerned. Few artifactual clues to the purpose of this building existed either. The only two small finds uncovered from this area are a small unfired clay fragment—possibly the head of a clay animal figurine (TSW2010.2297, measuring 1.5x1.4cm)—and a small bead recovered from a flotation sample (16-TSW-

Table 2. Stratigraphic Phases of the Southwestern Sector.

Phase	Description	Sweyhat Period
10	Seleucid/Late Roman Cemetery	
9	Construction Debris	
8b	Modifications and Pits	6
8a	Late Phase Architecture	6
7b	Large pits dug into room debris	5
7a	Debris, construction fill from abandoned Op 101	5
6	Later features in Op 101, semi-circular oven, etc. Infant burial ground in Op 102.	5
5b	Subsequent tamped-earth surfaces in Main Phase buildings	4
5a	City wall and contemporary buildings, initial occupation layers	4
4	Original surface containing pit for buried cooking pot from 151, leveled for Inner City wall construction	3/4
3	Plastered bin, Early Phase architecture, holemouth jar from Op 102	3
2	Intrusive pits in Op 150	2
1	Early mudbrick structure in 150 sounding	2

0083). These finds may suggest that a grave lay somewhere nearby, since they are comparable to finds from the adult grave in Operation 151. This is not enough evidence to make any firm declaration, however. The ceramics recovered from the architectural debris included three jars: two with collars and everted rims. One of these jars has a folded rim that is consistent with Sweyhat Early Period 2 forms (Figure 14)(Danti & Zettler, 2007: 172).

In phase 2, after this early mudbrick structure was abandoned and collapsed in on itself, two large pits were dug into the surface in this area, one in the northwest (Locus 106, dug into the Locus 104, Lot 3 surface), and another in the east (Locus 105, cut into the Locus 103, Lot 3/4 surface). Ceramics from

the western pit, stratigraphically the earlier of the two pits, included a small plain cup, the rim of a jar or bowl, and a pierced sherd (Figure 15). The cup is plain, with no beading on the rim, which is also consistent with Sweyhat Early Period 2 forms (Danti & Zettler, 2007: 172). Finds from the pits were limited to ceramics, bone, and chipped stone. The eastern pit contained rim fragments from a jar and a shallow bowl (Figure 16). The indentation on the inner surface jar's rim is a feature common to other jars from Sweyhat Early Period 2(Danti & Zettler, 2007). The groove would have presumably held a lid in place.

After these two pits were filled in and closed, the southeastern corner of the trench was home to a heavily-plastered bin that was tinged green, potentially from repeated high-heat burning events (Phase 3, Figure 12). This bin contained

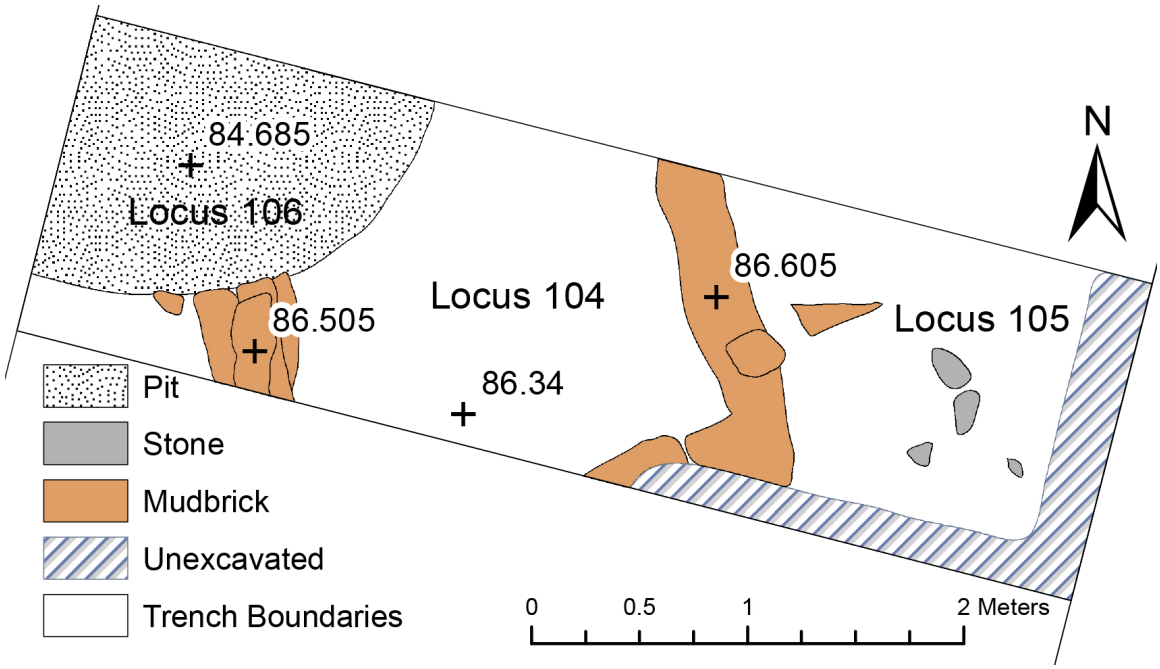


Figure 9. Plan of Operation 150 Sounding, Phase 1.

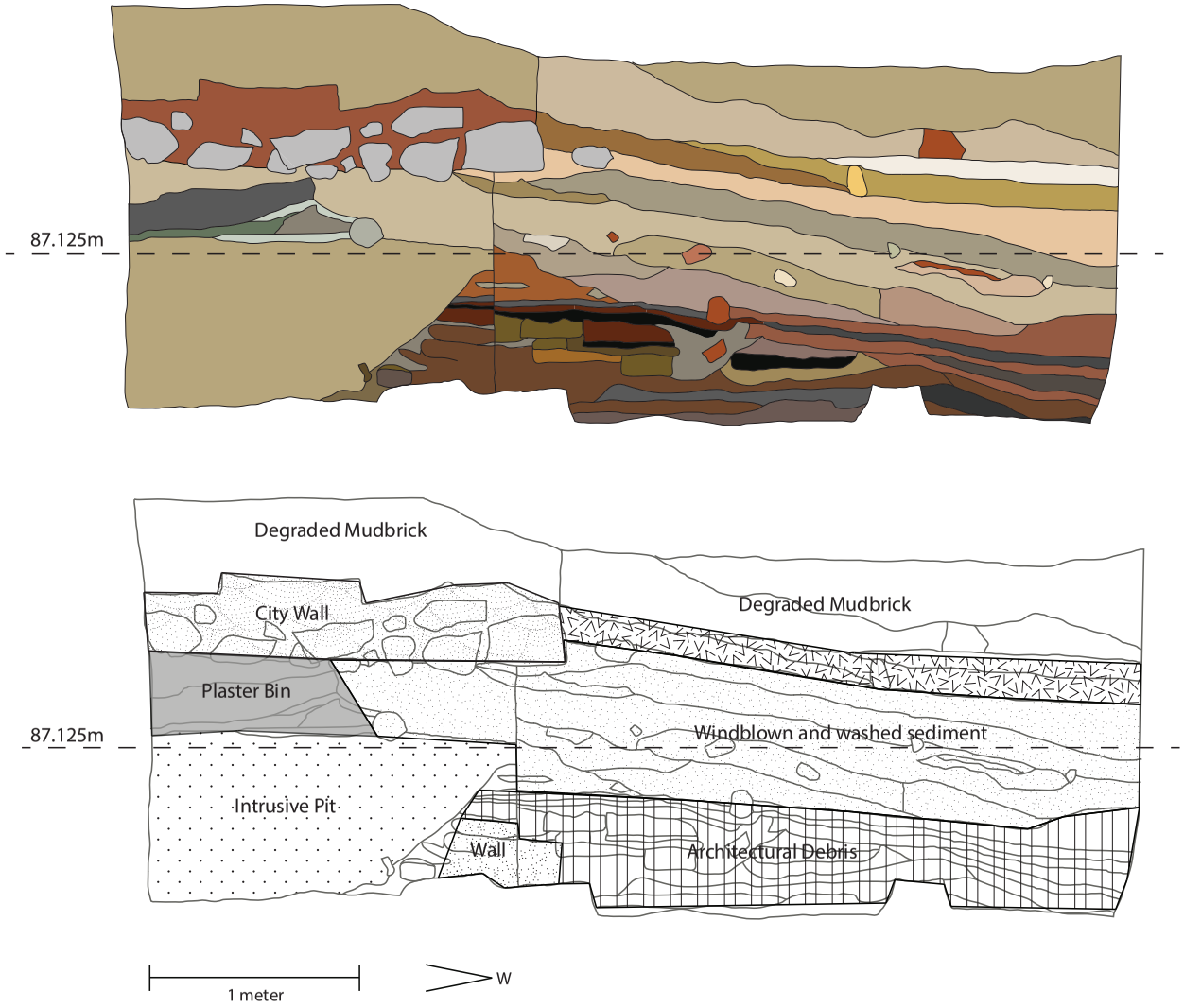


Figure 10. Southern Profile of Operation 150 sounding.

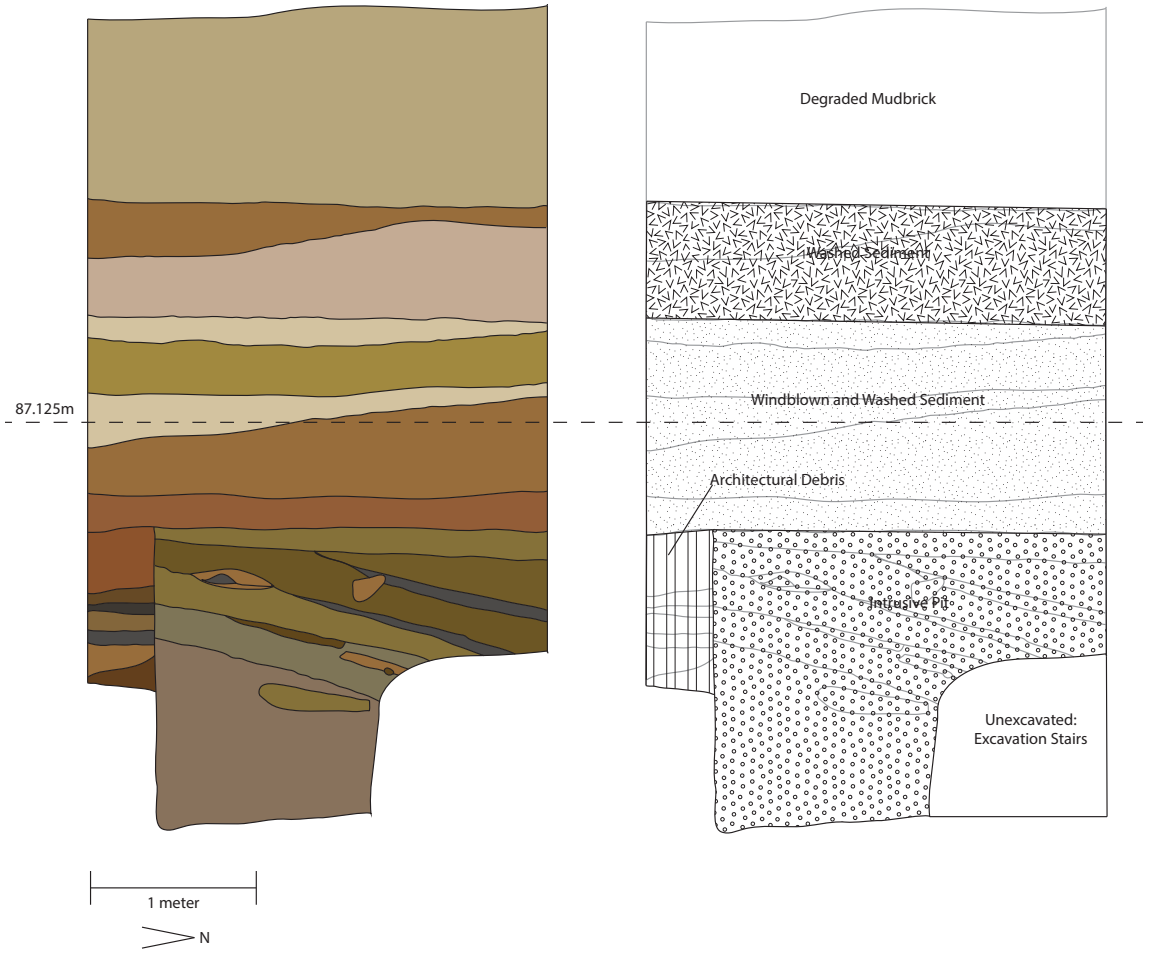


Figure 11. Western Profile of Operation 150 Sounding.

a thick layer of black ash or organic material. It was surrounded and eventually covered over with silty sand rather than construction debris, so it was most likely in a courtyard or other open space. The ceramics from this level include bowls ranging in size from 8 to 20cm in diameter (Figure 17). Each bowl uncovered from this context had a beaded rim, which is consistent with Sweyhat Period 3 ceramics uncovered in the western trenches (Operations 1, 12, and 20) in the

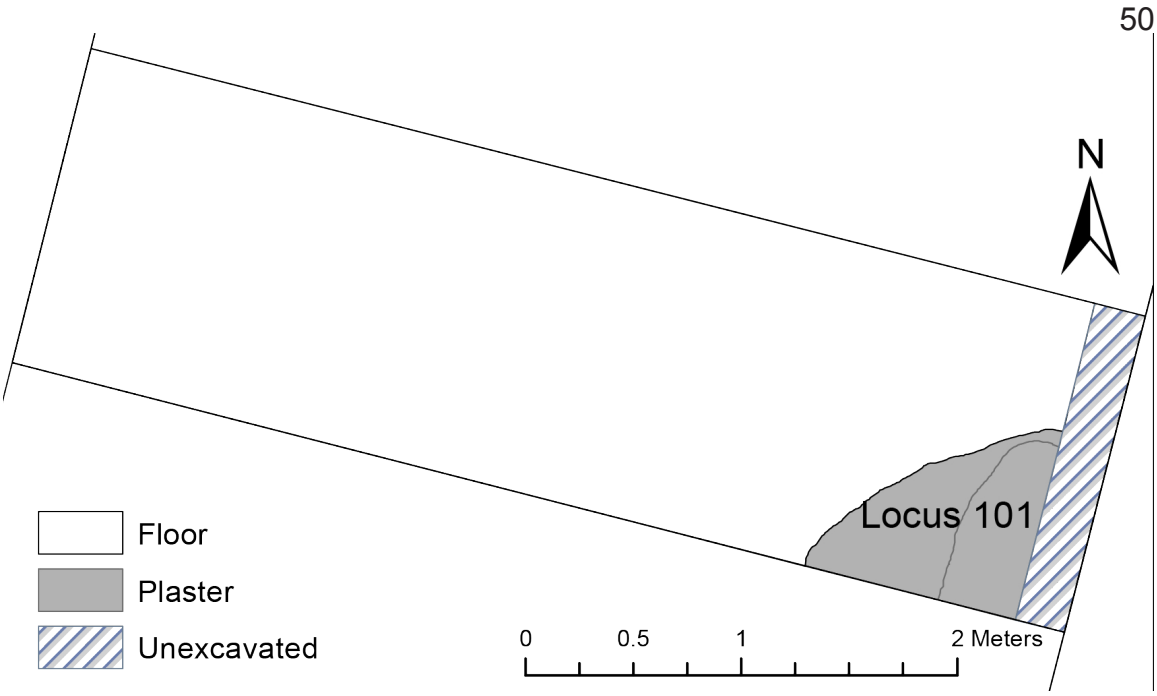


Figure 12. Plan of Operation 150 Sounding, Phase 3.

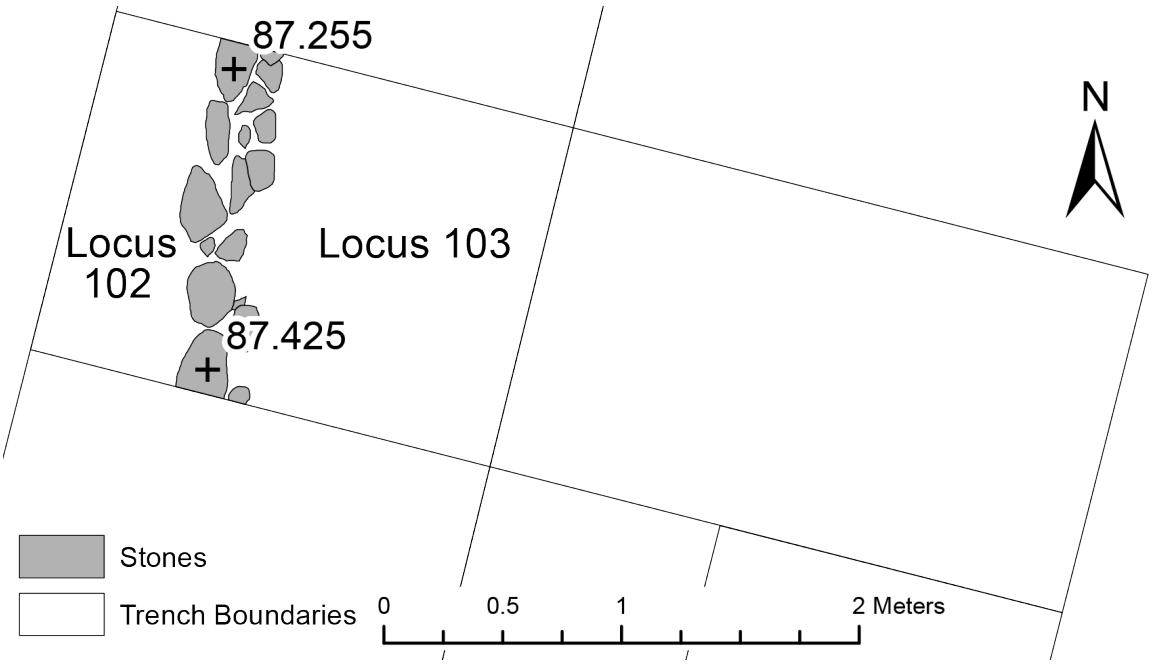
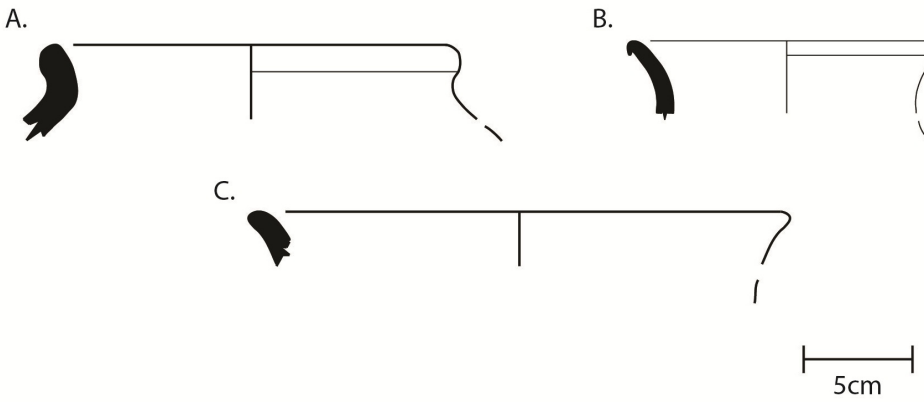
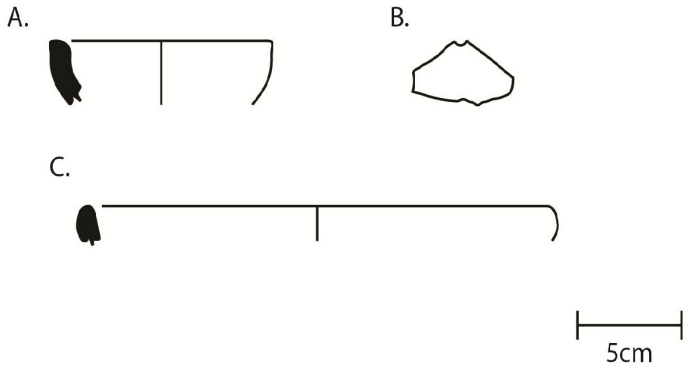


Figure 13. Plan of Operation 151 Sounding, Phase 3.



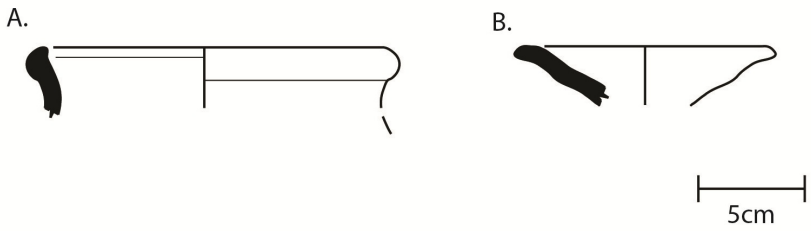
A. TSW2010.2293.02; Context: 150/104/01; Greenish Buff; Plain Simple Ware; Diameter: 18cm
B. TSW2010.2293.01; Context: 150/104/01; Greenish Gray; Plain Simple Ware; Diameter: 14cm
C. TSW2010.2293.03; Context: 150/104/03; Pink core fading to greenish buff exterior, top centimeter of rim is blackened; Plain Simple Ware; Diameter: 24cm

Figure 14. Ceramics from the mudbrick structure in Operation 150, Phase 1.



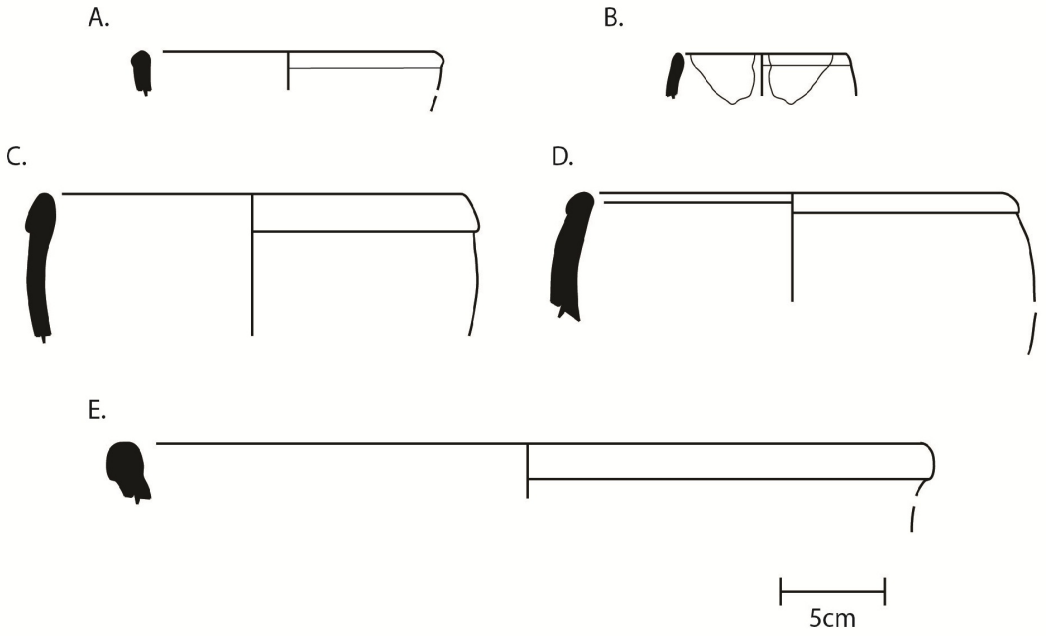
A. TSW2010.2460.01; Context: 150/106/02; brown beige; Orange Ware; Diameter: 10cm
B. TSW2010.2460.03; Context: 150/106/02; blackened brown exterior, gray beige interior; Plain Simple Ware; perforated sherd
C. TSW2010.2460.02; Context: 150/106/02; greenish brown exterior, greenish gray interior; Plain Simple Ware; Diameter: 22cm

Figure 15. Ceramics from the Phase 2 western pit in the Operation 150 sounding.



A. TSW2010.2294.01; Context: 150/105/01; Pinkish orange fabric with cream slipped exterior and interior; Slipped Orange Ware; Diameter: 16cm
B. TSW2010.2294.02; 150/105/01; Yellow beige fabric; Plain Simple Ware; Diameter: 10cm

Figure 16. Ceramics from the Phase 2 eastern pit in the Operation 150 sounding.



A. TSW2010.2253.03; Context: 150/102/02; yellowish buff; Plain Simple Ware; Diameter: 14cm
B. TSW2010.2015.02; Context: 150/101/01; greenish yellow; Plain Simple Ware; Diameter: 8cm
C. TSW2010.2015.03; Context: 150/101/01; red orange fabric with grayish cream slip, surface marked with 1-3mm burned spots; Slipped Orange Ware; Diameter: 22cm
D. TSW2010.2015.01; Context: 150/101/01; yellow green fabric, some blackening on inner surface; Plain Simple Ware; Diameter: 20cm
E. TSW2010.2253.01; Context: 150/102/02; greenish gray; Plain Simple Ware; Diameter: 38cm

Figure 17. Ceramics from the Phase 3 plastered bin in the Operation 150 sounding.

1990s. The jar had a club rim, also consistent with Sweyhat Period 3 ceramics (Danti & Zettler, 2007: 173).

This bin is similar to those uncovered at Jerablus Tahtani in Area IIIB within the site's EBA fortification wall, which dates to the second phase of EB occupation, beginning sometime in the mid third millennium (Peltenburg *et al.*, 2000: 60, Figure 8). The Outer Town excavations at Tell es-Sweyhat also revealed a similar bin in Operation 9. This bin dates to roughly the EBIV period.

The bin was eventually abandoned and silted over. This area does not appear to have contained any architecture that had to be leveled for the construc-

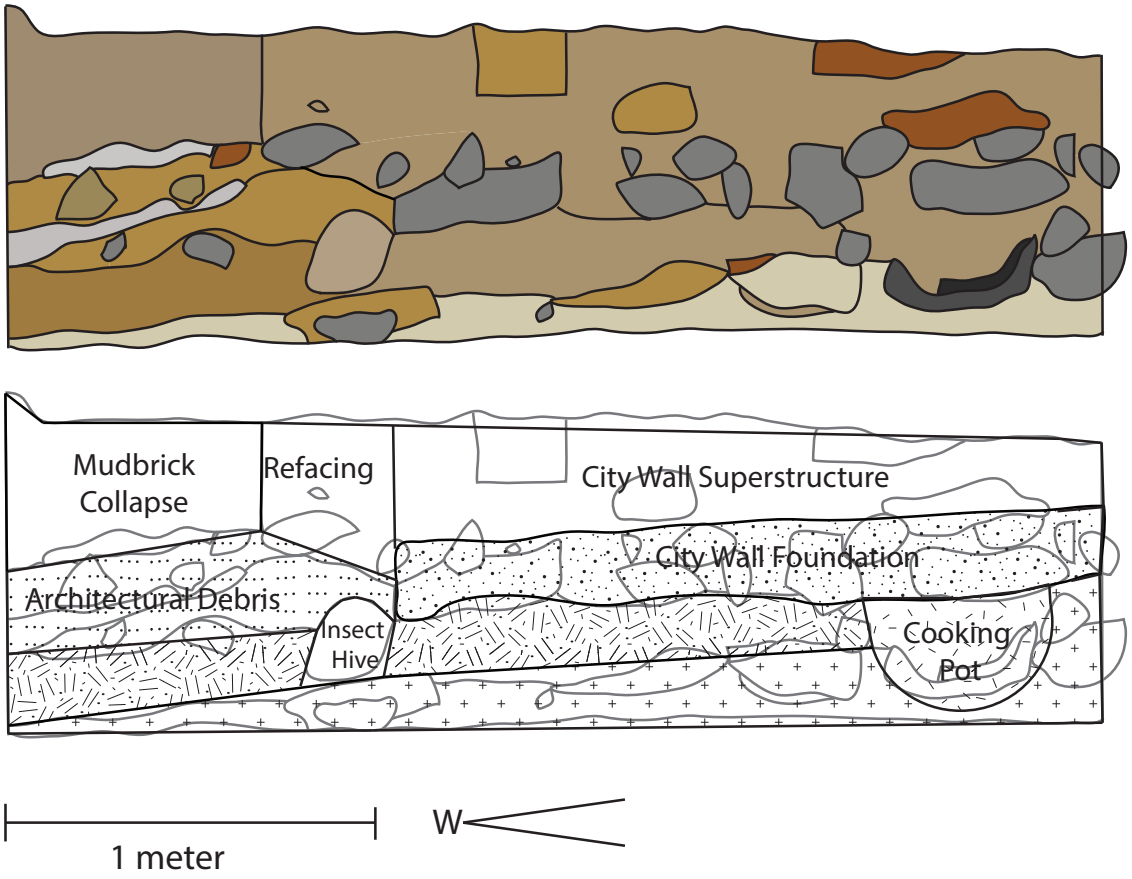
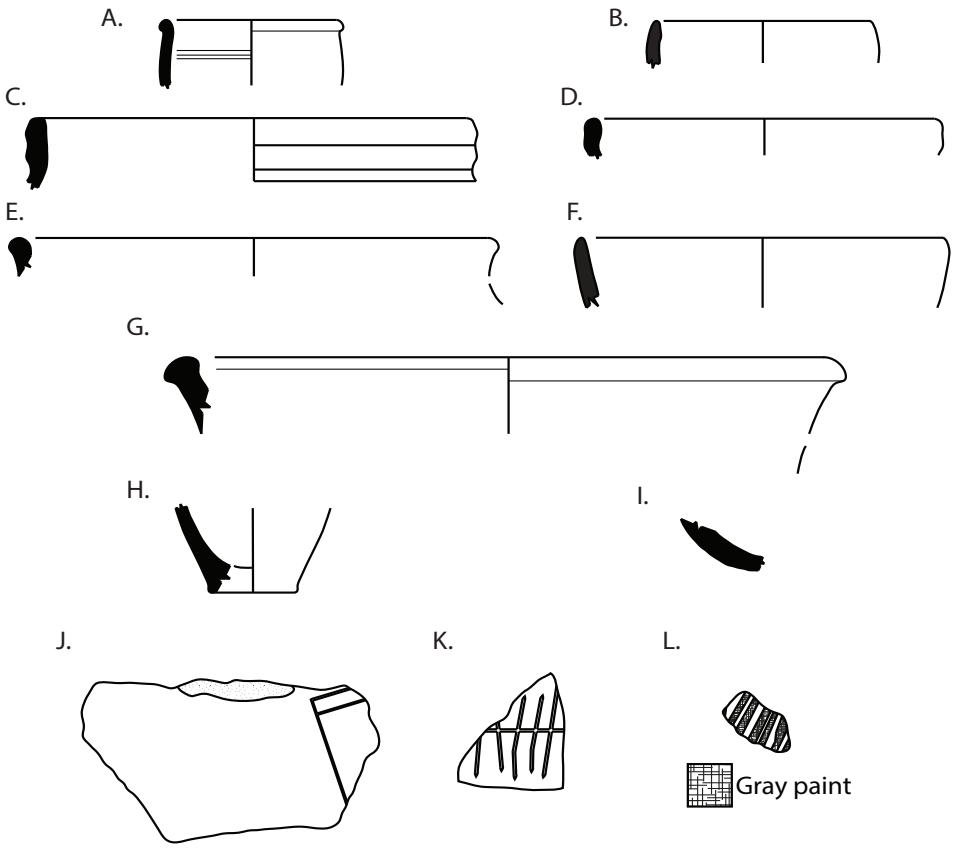


Figure 18. Northern Profile, Operation 151 Sounding.

tion of the Inner City wall. Other than the bead and clay fragment mentioned above, finds from the three pre-wall phases of the sounding were limited to ceramics, chipped stone, and bone. These finds tended to be scattered throughout the layers of sediment, with no artifact concentrations.

Excavations in Operation 151 sounding were shallower than those in Operation 150, reaching only phase 3 remains. The Op. 150 sounding was 2.2m below the tell surface, and the Op 151 sounding reached 1.1m below the tell surface. The Operation 151 phase 3 remains consist of a small line of stones that presumably once constituted the footings of a dividing wall or bin (Figure 13). After this area had been covered with sediment, a small pit was dug into a since-destroyed surface, and a round-bottomed cooking pot was set into the pit (Figure 18, 19). This no-longer extant surface and the cooking pot pit consti-

Figure 19. Operation 151 Sounding. Round Cooking Pot Set into Ash Pit. Phase 4



A. TSW2010.2034.02; Context: 151/103/01; Slipped Orange Ware; Pink orange interior, cream slipped exterior; Diameter: 8cm
B. TSW2010.2040.01; Context: 151/100/02; Slipped Orange Ware; Red orange fabric, cream slip; Diameter: 10cm
C. TSW2010.2026.03; Context: 151/102/01; Plain Simple Are; Pink buff fabric; Diameter: 20cm
D. TSW2010.2031.01; Context: 151/102/02; Slipped Orange Ware; Light brown fabric, cream slip; Diameter: 16cm
E. TSW2010.2025.01; Context: 151/101/02; Cooking Pot Ware; red gray interior, blackened exterior; Diameter: 22cm
F. TSW2010.2034.03; Context: 151/103/01; Slipped Orange Ware; Red orange fabric with gray cream slipped exterior; Diameter: 17cm
G. TSW2010.2034.01; Context: 151/103/01; Orange Ware; Pink orange fabric with possible degraded cream slip; Diameter: 30cm
H. TSW2010.2034.04; Context: 151/103/01; Plain Simple Ware; yellow buff fabric; base diameter: 4cm
I. TSW2010.2034.05; Context: 151/103/01; ????Gray fabric with black banded paint or slip; round bottom, diameter not measurable
J. TSW2010.2026.01; Context: 151/102/01; Coarse Plain Simple Ware; greenish buff fabric with an incised pattern
K. TSW2010.2034.07; Context: 151/103/01; Plain Simple Ware; greenish buff fabric with deeply incised pattern
L. TSW2010.2034.06; Context: 151/103/01; Orange Ware; orange fabric with gray banded paint on exterior; stanced based on exterior striations

Figure 20. Ceramics from the 151 Sounding, Phase 3.

tute our only evidence of Phase 4. Leveling for the Inner City wall construction destroyed this surface and cut the vessel in half.

These Phase 3 level from the Op 151 sounding contained a remarkable number of diagnostic sherds (Figure 20). Ceramic vessels include a lipped cup, a collared jar with a clubbed rim, and a jar with a multiple-grooved rim. The form with multiple grooves on the rim is typical of Sweyhat Periods 3 to 6. The number of grooves increases over time from two to three, to many more. This form is also called a "screw top jar." Each of the ceramic forms discussed above is consistent with ceramic forms of Sweyhat Period 3. Two body sherds with potter's marks were recovered from these contexts. The mark on sherd K is most similar to the "trellis-like design with three parallel vertical lines crossed with one horizontal line," examples of which are found from Sweyhat Period 3 to early MBA contexts (Holland, 2006: 324, 325). The mark on sherd J is unlike other examples from Holland 2007. Many ceramics at Tell es-Sweyhat are similarly marked. Some have suggested that these markings may have played a role in the late 3rd millennium tribute system that was paid to Mari and Ebla by smaller regional centers like Tell es-Sweyhat to communicate the quality or type of goods produced for shipment to the palace at Ebla (Mazzoni, 1985: 241). The finds from this context predate the fluorescence of Ebla and Mari, so it must have grown from a system that was already in place—perhaps with Tell es-Sweyhat collecting goods produced elsewhere and adding value through the processing that was occurring in the SWLIC buildings.

Sweyhat Period 3 Architecture

We excavated below the Sweyhat Period 4 building in one area of Operation 102 for a broader exposure of the earlier level. These excavations, to the east of the Operation 151 sounding, revealed layer upon layer of thinly laminated surfaces sloping to the west, most likely a an exterior dirt floor repeatedly impacted by rain. In this area, a round-bottomed holemouth jar sat upright on a layer of clay that was set into one of these surfaces, and remained in place as the earth in the courtyard built up around it. The footings of the Sweyhat Period 4 building ran directly above the jar, and had to be removed in order to excavate it fully. Although the jar broke apart almost as soon as we moved it into its own

Figure 21. Operation 102 Early Phase Curved Western Wall.

bucket, we were able to retrieve an uncontaminated sample for flotation. The only artifact contained within the vessel was a small chunk of burned mudbrick.

Sweyhat Period 3 architecture is only preserved in one small area in Operation 102, as the curved stone footings of a corner (Figure 21). The western wall curves slightly. The curved wall turns a corner underneath of the later wall footings, and continues to the east (visible in the upper right side of Figure 21, just to the left of the later east/west wall). These footings consist of two rows of large round rocks, with cobble-sized stones in the center. This corner is set at a distinct angle from the buildings of the later phases, indicating that the architecture in this area was radically redesigned when the fortification wall was constructed. This structure was so damaged that its function remains unclear. The slight curve of the western side of the wall indicates that it may have had some kind of storage function rather than a domestic one.

The plaster bin feature from the Operation 150 sounding, the cooking pot set in the ash pit in the Operation 151 sounding, the rounded structure, and the spouted vessel from under the footings of the Operation 102 building are roughly contemporary. Taken together, these four contexts indicate that the SWLIC was used as an outdoor work area before the fortification wall was constructed and the neighborhood was densely occupied.

Under the footings of the back wall of the Sweyhat Period 4 building from Operation 102 lay the simple inhumation of a 20–35 year old woman, and an infant burial in a “screw top jar” (Phenice, 1969; Acsadi & Nemeskeri, 1970;

Brooks & Suchey, 1990)[6]. These burials will be described and discussed in greater detail in Chapter 4.

Sweyhat Period 4 Architecture

In the soundings through Operations 150 and 151, we uncovered the limestone footings of the Inner City Fortification wall (Figure 22, 23). These stones were made of unworked limestone and ranged from about 15 to 50cm in length. All were of roughly uniform thickness of about 15cm. The footings consist primarily of a single wide course of these stones, with an outer facing of smaller stones to the west. In Operation 150, the footings reveal the traces of a tower structure with a buttressed corner, projecting at a right angle from the outer side of the wall. The wall appears to have been refaced over time, with

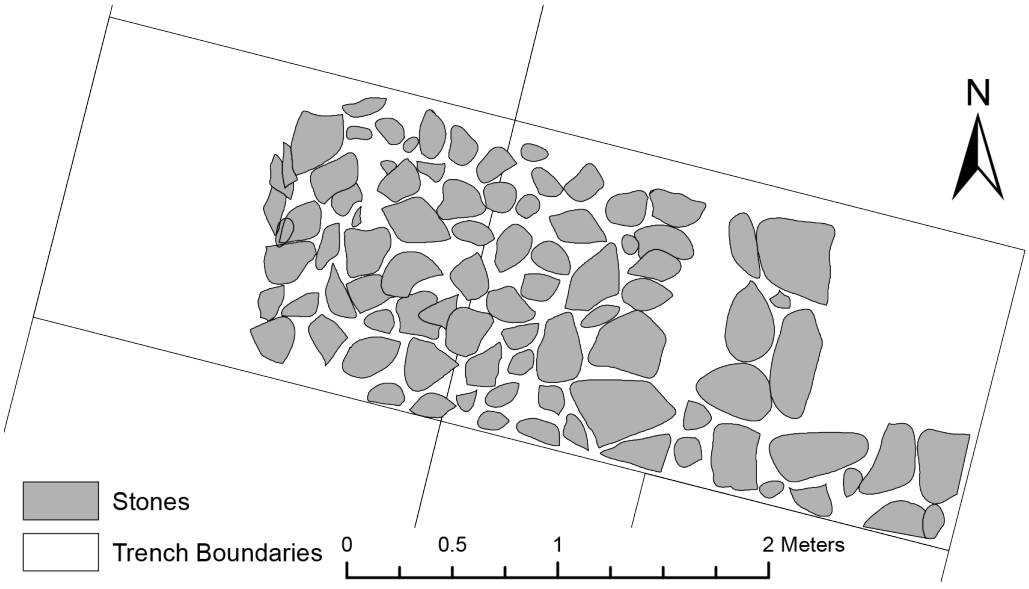


Figure 22. Operation 151 Sounding. City Wall Foundation Stones.

6 Statures and ages at death assessed by Veronica Joseph, an osteological specialist and a Ph.D. candidate at Boston University.

other unworked limestone rocks lining the outside edge of the wall over the entire exposure. Only two courses of the mudbrick superstructure itself were still extant in Operation 150. The brick in this southwestern area was very degraded, and contained inclusions of burned charcoal and mud.

The buildings contemporary with the city wall are divided into regularly sized rooms of about 2.5 by 2.5m, aligned with the wall (Figure 24). In contrast with those of the Sweyhat Period 3 architectural phase, most of the stone footings consist of twin lines of long narrow stones with no cobble fill in the

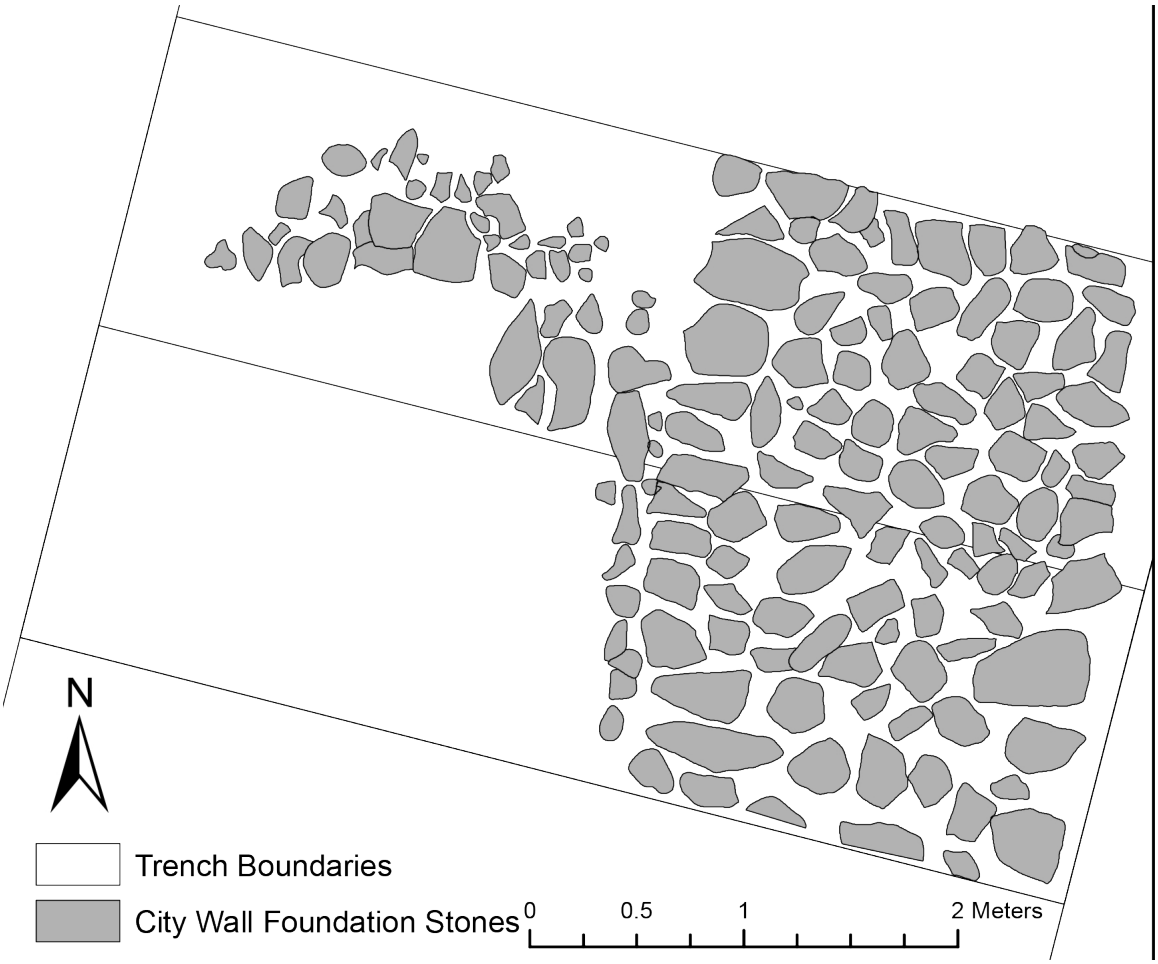


Figure 23. Operation 150 Sounding. City Wall Foundation Stones.

Figure 24. Sweyhat 4 buildings in the southwestern sector.

center. In contrast, the “back walls,” by which I mean the western walls directly abutting the city wall, of the buildings in Operation 102 consist of a cobble fill with the eastern side edged with larger stones. These stone footings abut the footings of the city wall with a narrow intervening gap that was filled with rubble. The distinctions in construction style, coupled with the unusual wall joins that may have covered burials, indicate that the rooms in Operation 102 were likely added to the pre-existing buildings in Operations 101 and 103, filling in open work spaces over time. The SWLIC rooms described below belonged to at least two, but more likely three, buildings. A double wall in operation 103 clearly indicates the separation between two contemporary structures. In operation 102, some of the walls articulate at uneven angles and levels, which likely indicate that these buildings had been separate at one point, but were later integrated with some secondary construction. The small wall dividing rooms 1 and 2 was also a later addition. Although at first glance, the layout of these buildings looks very regular and planned, close inspection of the phasing indicates that they were erected in a more ad hoc manner. Unlike in some of the buildings in Area IV, no plastered stone benches line the western side of the buildings in this area (Holland, 2006: 57).

The mudbrick superstructures were not preserved in the southern half of Operation 102, or parts of Operation 103. This means that the internal spatial organization of these rooms is not always discernible, as the stone footings do not reflect doorways. In the northern area, the preserved doorways presumably

opened from the back rooms to the east, and not into each other, but the sections where the doorways most likely stood were interrupted by large intrusive pits. Doorways in the southern walls of rooms 5 and 6 that were later blocked opened the other direction.

The rooms in Operation 102 appear to have been abandoned and filled in rapidly, probably as the result of a fire, as evidenced by areas of burnt sherds in Rooms 9 and 11 and pushed over walls in rooms 6 and 7. Because of this rapid abandonment, many features and artifacts were preserved that help us to reconstruct the function of each room. These areas were not rebuilt in the Late EBA/ Early MBA phase of architecture, but were filled in and left as open spaces.

Room 1 – Room 1 was nearly clean of artifacts on its original plastered floor. Later tamped-earth surfaces contained a mixture of fine, medium, and coarse ceramic sherds, and some animal bone. A smooth rounded stone, tentatively identified as a sling bullet, was also found on one of the dirt floors.

Room 2 – The earliest levels within this room consisted of a thick gray green ash deposit that may have been a dump from the tanur in room 4. This ash dump was leveled and plastered over as a formal floor associated with the thin mudbrick wall that was erected as a divider between rooms 1 and 2 in this secondary use phase of this building. As in room 1, subsequent floors of room 2 were surfaces of compacted mudbrick collapse, except for the latest floor, which was lightly plastered. Tanur fragments—distinctive red-orange burned clay with small pebble inclusions—were found on one of these tamped earth

surfaces, indicating that the tanur from the next room was likely still in use when this surface was prepared. A trash pit was cut into the latest plastered surface. This pit contained sherds of jars, cups, loaf-shaped grinders, and, most notably, jar sealings (15-TSW-0046, 15-TSW-0068,15-TSW-0067). These plain clay jar sealings indicate that some stored substance was opened nearby, perhaps in the neighboring room 4. The pit also contained some charcoal, which could tie it to the tanur in that room.

Room 3 –The earliest floor was a relatively poorly preserved plastered surface with a handful of ceramic body sherds, some bone, and shell. A later tamped-earth surface contained no artifacts.

Room 4 – One of the earliest floor levels in this room had a partly preserved plaster coating in the western side of the room. Most of the excavated area of this room was occupied by the remains of a collapsed dome-shaped oven that protruded from the eastern baulk.

Room 5 – The surface contemporary with the western wall was not plastered and produced a large number of artifacts. This surface also had a "burned circular feature" and a door socket. Several bags of animal bone were also recovered from this context, as were ceramic sherds that included rim fragments from jars, bowls, and at least one cup. There was also a *tanur*, or small round oven, in the northeastern corner of this room partially constructed from ceramic sherds. The doorway between this room and room 6, to the south, had been blocked. The door between room 5 and the room to the east, however,

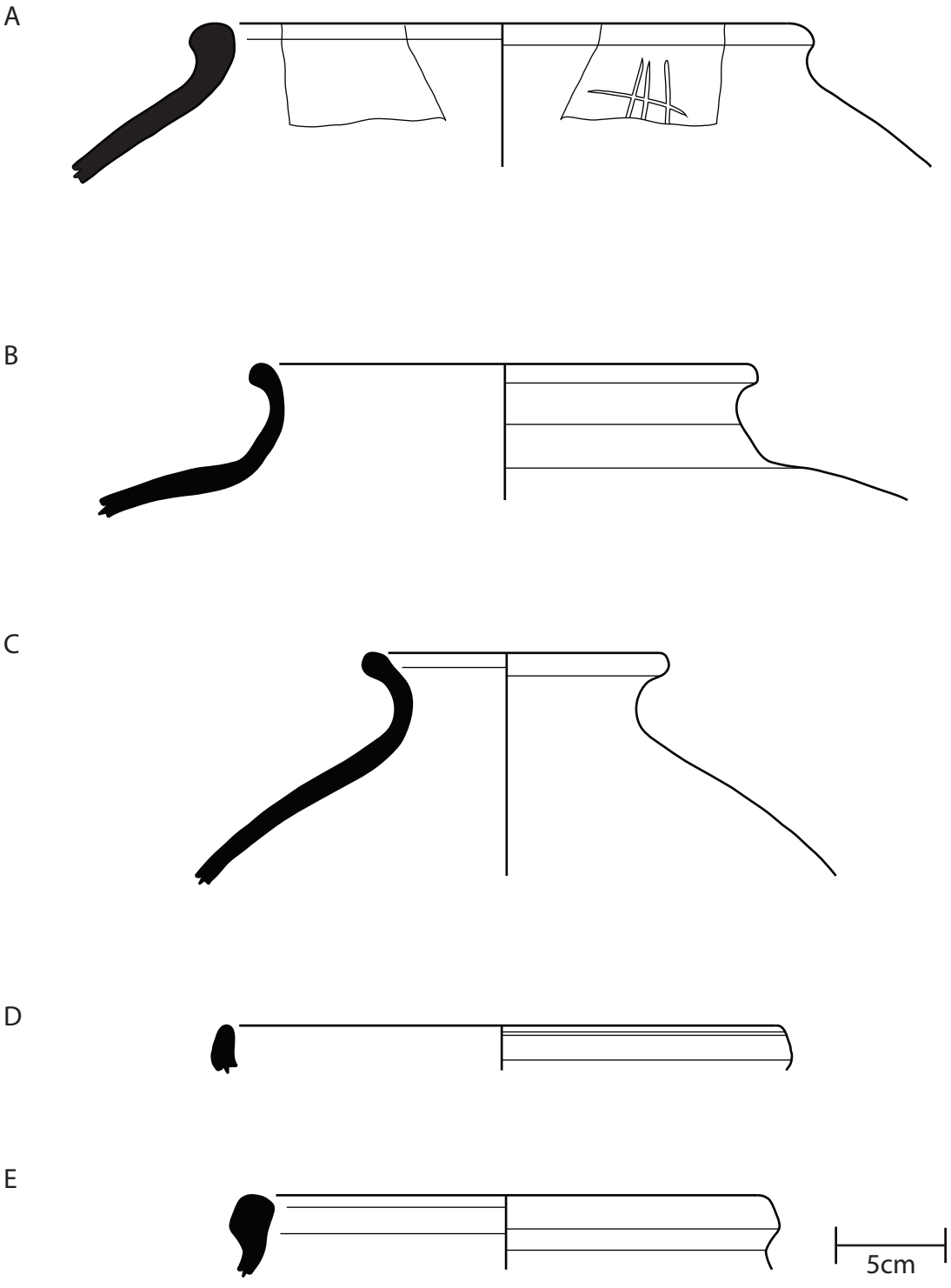
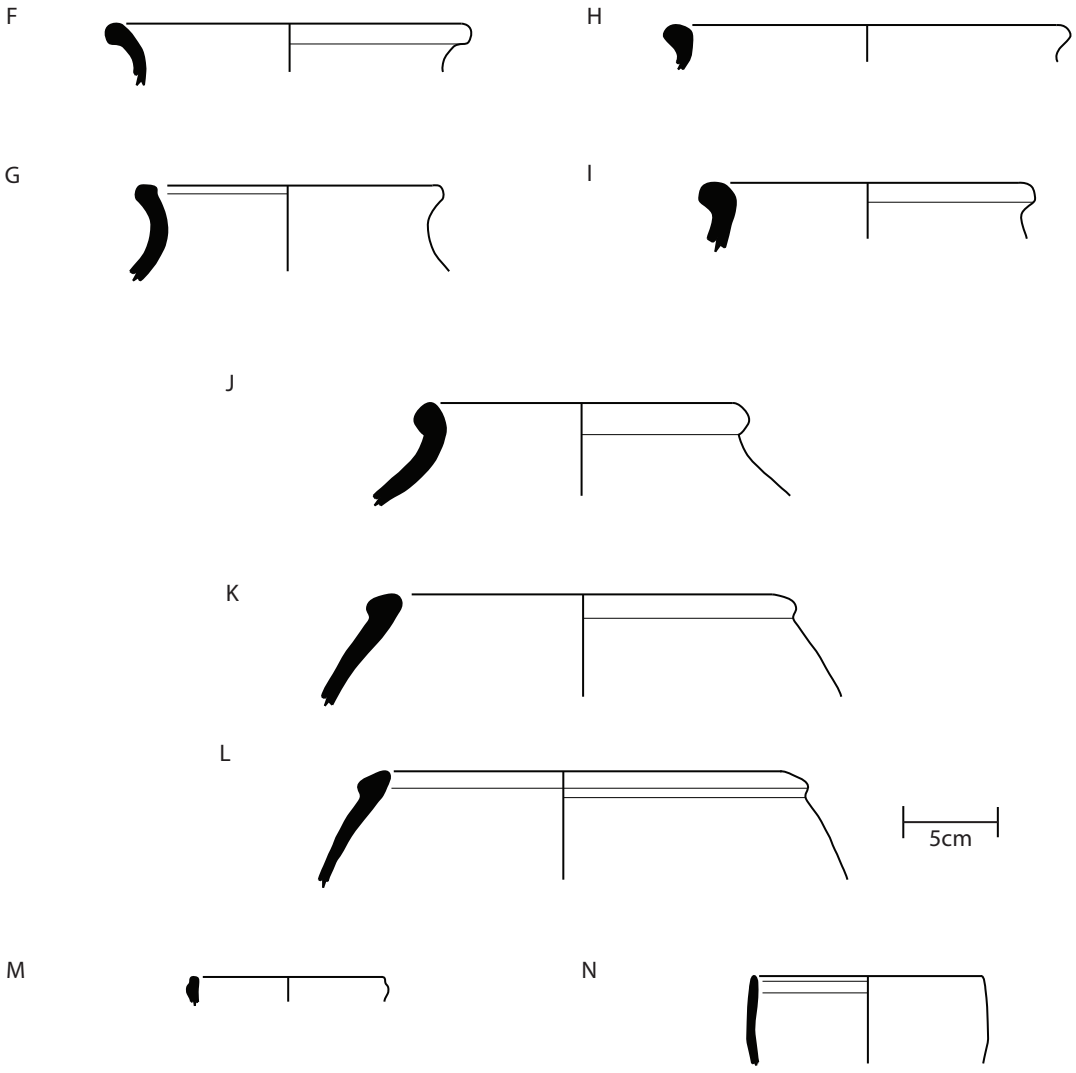
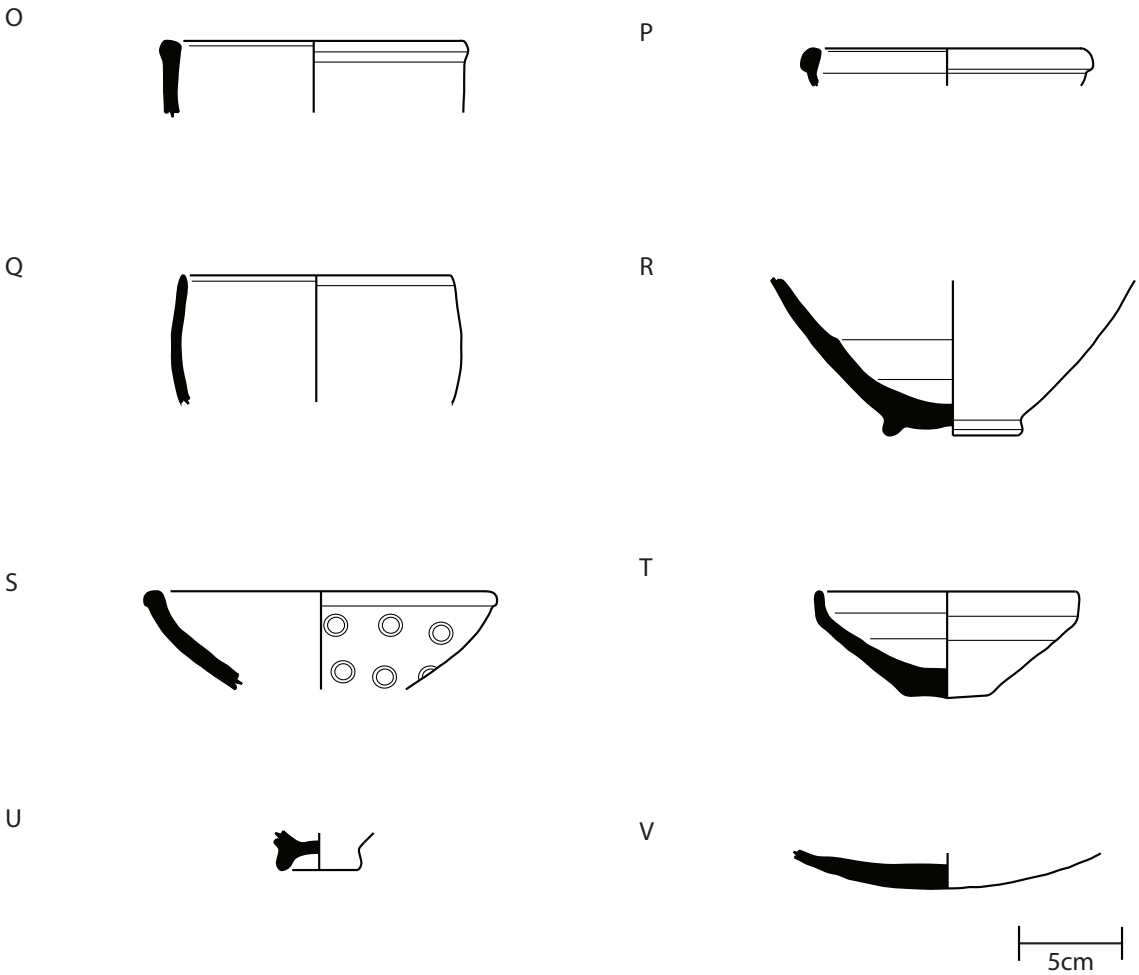


Figure 25. Main Phase Room 6 Ceramics.



F. 08.1079.19; Red Orange Fabric; Gray cream slipped interior and exterior
G. 08.1079.04; Plain Simple Ware; Greenish buff interior and exterior
H. 08.1079.06; Cooking Pot Ware; Blackened exterior, grayish brown interior
I. 08.1079.27; Slipped Orange Ware; Red orange fabric, gray cream slip on exterior and inner rim
J. 08.1079.18; Slipped Orange Ware; Red orange Fabric, cream slip
K. 08.1079.09; Slipped Orange Ware; Greenish gray exterior, greenish orange interior
L. 08.1079.21; Slipped Orange Ware; Red orange fabric; green gray slipped exterior and interior
M. 08.1079.08; Plain Simple Ware; Greenish buff exterior, greenish gray interior
N. 08.1079.26; Cooking Pot Ware; Pale reddish brown fabric, fire blackened surface

Figure 26. Main Phase Room 6 Ceramics.



O. 08.1079.05; Orange Ware; Greenish yellow interior and exterior
P. 08.1079.03; Orange Ware; Red orange exterior and interior
Q. 08.1079.20; Slipped Orange Ware; Grayish orange fabric, gray cream slip
R. 08.1079.22; Slipped Orange Ware; Red orange fabric, green gray slip
S. 08.1079.30; Slipped Orange Ware; Red orange fabric, tan cream slip
T. 08.1079.24; Slipped Orange Ware; grayish orange fabric, greenish gray slip
U. 08.1079.07; Slipped Orange Ware; Greenish cream slipped interior and exterior
V. 08.1079.17; Plain Simple Ware

Figure 27. Main Phase Room 6 Ceramics.

had remained in use. Some chipped stone was found on this surface, and one small spherical stone "token" was also found here (15-TSW-0037).

Room 6 – A mudbrick podium plastered with a layer of mud rested on the original floor of this room. On this floor was a mud jar sealing, a fragment of a vessel decorated with an appliqué lion (14-TSW-0120), a large number of

ceramics (although not all ceramics were processed, 42.25 kg of ceramics were processed), and a basalt mortar. A rectangular quartz bead, decorated with small, inscribed concentric circle motifs on each corner, was also found in this area (TSW2008.1056). A bronze pin was recovered within the sealed doorway that originally lead from room 6 to room 7. Ceramic forms included rims from a number of large storage vessels, many of which had restricted necks that could have been sealed with the kind of mud sealings recovered from this room (Figure 25, 26, 27, 14-TSW-0107). One of the large storage jars was marked near the rim with an incised pattern resembling three tallies with a slash through the middle. Serving and food preparation ceramic forms were also were recovered here, including fragments of several small bowls and a colander.

Room 7 – Only the southern part of room 7 was fully excavated, because most of the room lay underneath the unexcavated baulk. The floor was paved with small pebbles in some areas, and similar small pebbles were found throughout the room debris. A tanur was uncovered in the southwestern corner of this room. Low fired clay and pebble fragments of this tanur were found throughout the room debris. Most ceramic sherds were found in the vicinity of the tanur, and some sherds apparently were used in the construction of the oven itself. The only small find from this area was a fragment of an animal figurine—probably the rear end of a sheep, judging by the fat tail (15-TSW-0011).

Room 8 – Unlike contemporary rooms nearby, Room 8 lacked a plaster floor. I believe it was an unroofed courtyard, with thin, finely laminated surfaces

of dirt floors that had been created by rain. This room contained a scatter of burned animal bone next to a large pit that appeared to link two drains. The pit contained dark ashy organic matter, animal bone, and ceramic artifacts. One whole bowl with a 10cm rim diameter was uncovered here (14-TSW-0100). Small finds from this room include three stone spindle whorls, as well as a ceramic "chariot wheel" that was most likely also used as a spindle whorl, given the amount of other weaving equipment found in this room (Spindle whorls: 14-TSW-0076, 14-TSW-0077, 14-TSW-0079, Chariot wheel: 15-TSW-0022). See Chapter 5 for a discussion of spindle whorls and chariot wheels. A square stone bead was also found in this room (14-TSW-0080).

Room 9 – Enough of the mudbrick superstructure of Room 9 was preserved to show that a doorway linked it to Room 7, and that no doorway existed in the southern wall. There may have been another door between Rooms 8 and 9, however, since the mudbrick superstructure had eroded away in this area. Furthermore, the easternmost extent of Room 9 was not reached in this operation, so the room may also have opened into the street or into another room to the east. Room 9 contained a number of superimposed plastered floor levels, the earliest of which was contemporary with a set of two mudbrick pedestals that protruded from the eastern wall and held up two large limestone saddle-shaped querns. Between these querns was a circular pit that had a limestone slab at the bottom filled with ashy debris, including chunks of mudbrick, half of a loaf-shaped grinder, and ceramic sherds. A large ceramic vessel was set into

this pit. Charred wheat and barley seeds were scattered across the floor, as were flakes of chipped flint, which were likely used as expedient cutting tools. A set of three bronze pins had been hidden under a footing stone of the northern wall in antiquity, in a small cache that was contemporary with the earliest plastered floor (15-TSW-0025). Two vessels had also been set into the floor near the south-western corner of the room.

A later plastered floor yielded large amounts of bone, ceramics, and chipped stone, and another subsequent plastered floor contained a fragment of a calcite vessel. The debris left in this room at the time of its abandonment consisted of large number of grinding implements, including loaf-shaped grinders that would presumably have been used with the saddle-shaped querns, and a small black basalt grinder with four feet.

Room 10 –The floor of Room 10 was tamped earth similar to that of Room 8 and was littered with a thick layer of coarse ceramic storage vessels that were smashed in place. Some charred seeds recovered from the floor of this room indicate that at least some of these vessels stored grain. One large whole storage jar survived in this room. In addition to the storage jars, this room contained two pierced stone objects that, considering their proximity to the weaving equipment of the next room, were probably used in spinning thread or weaving, particularly since these two rooms were connected by a doorway (14-TSW-0102, 14-TSW-0105). Some animal bone was also uncovered from the debris within this room.

Room 11 – This room was almost certainly destroyed by fire, since the plastered floor was burned and covered in ash. Various artifacts recovered from this floor were exposed to high temperatures, and some ceramic sherds were vitrified and warped from extreme heat. The main features in this room were vessels set into the burned plaster floor, a tanur in the northeastern corner of the room, and most notably, a small oblong area of the floor that was coated in bitumen. Considering that the room was destroyed in a conflagration, the bitumen feature could potentially have been a basket lined with bitumen or another bitumen object that melted into a puddle. If this spot on the floor was intentionally covered with bitumen, it may have been used as a work area for an activity involving liquids.

Room 12 – most of this room was unexcavated, since it lay underneath the 2m baulk that separated Operations 102 and 103. The southern part of the room contained a large volume of storage vessel sherds, indicating that it may have been functionally similar to Room 10, just to the north.

Room 13 – This room was most likely small and trapezoidal, but most of its walls and most of the floor area lay under the baulk between Operations 102 and 103, so its exact layout is unclear. Only ceramic sherds were collected in this room.[7]

Room 14 – Excavations in room 14 were so restricted in area that they were discontinued before the floor levels were reached.

7 Unfortunately, we were unable to process the ceramics from Operations 103 and 104 before the civil war broke out in Syria early in 2011. References to specific forms are either from complete vessels that were entered as small finds, or from descriptions recorded in field notes.

Room 15 – This room contains few clues as to its primary function. It contained a loaf-shaped grinder, ceramic sherds including a nearly complete cup, and some animal bone.

Room 16 – In the center of this room, just beneath one of the Seleucid/ Late Roman graves, lay a large (61cm long) saddle-shaped quern made of white basalt, very similar to those found in Room 9. At least two loaf-shaped grinders accompanied this quern, as did a basalt object originally identified as a door socket, which may have been used as a mortar, since it was not found in position in a doorway. A small dark "counting stone" was also uncovered in this room (14-TSW-0048). Lots of black ash or organic matter was found along the southern wall of this room.

A ceramic vessel containing an infant burial was resting upright in the southwestern corner of this room. This burial came from a layer above the main floors of this building, but no grave cut was apparent.

Room 17 – This room was perhaps the most striking of those uncovered in Operation 103. Located in the southern building, the earliest phases of this room included buttresses in the middle of the northern and southern walls defining this area. These buttresses could have supported a cross beam that would have supported a roof over part of the room. The earliest floor layers uncovered produced a fragment of a lion pot and a small basalt quern (14-TSW-0063).

After the two buttresses were no longer in use, a large circular two tiered stone feature was constructed in the middle of this room (Figure 28). This

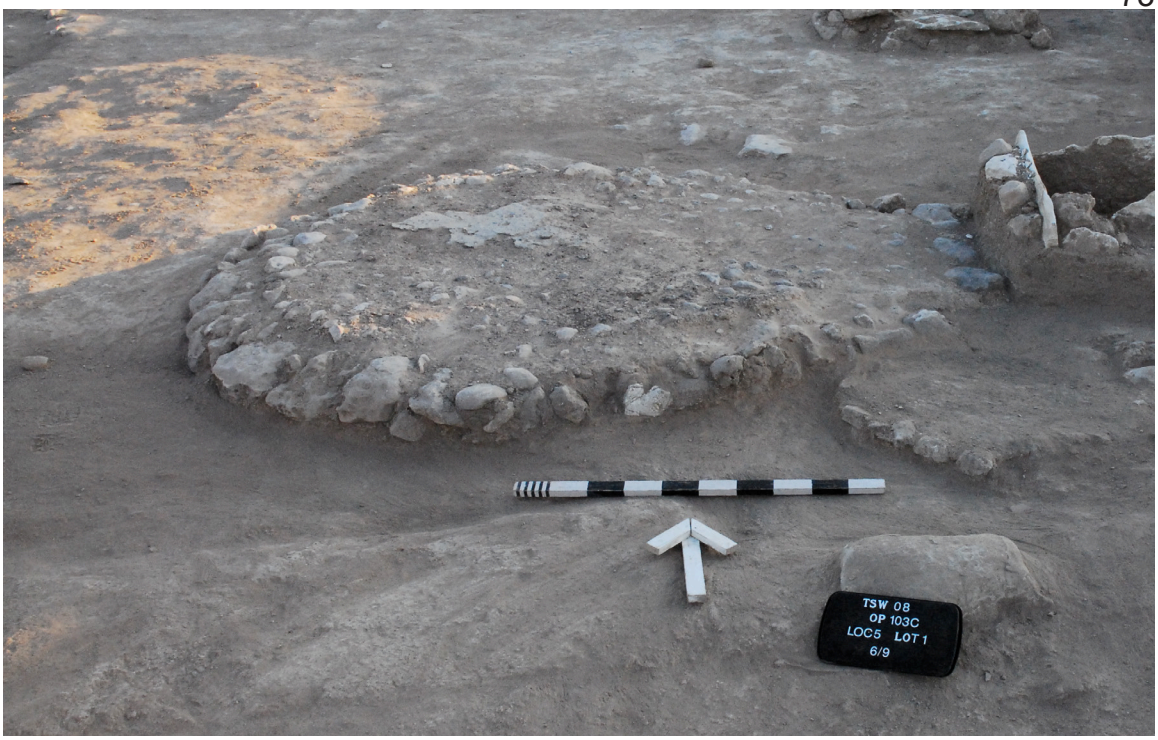


Figure 28. Main Phase Room 17 Plastered Stone Platform. Intrusive Seleucid/ Late Roman Grave to the East.

feature covered the majority of the floor area of room 17. It was topped with small river pebbles, and then plastered. A small extension to the east in the form of blue-black basalt stones served as the approach to this platform. Black splotches of ash or organic matter cover the surface. This feature was originally identified in the field notes as a large tanur, but it is more likely a work area such as a threshing surface, since an oven of that size would have produced a large volume of the distinctive broken hard-fired clay and black pebble material that would have made up the sides and top of the feature.

A smaller circular feature lies in the southeastern corner of this room. The burnt material within this feature indicates that it was a hearth or other fire feature, although it looks very different from the tanurs in the northern building.

Intermediate Levels

The fire in Room 11 of the Sweyhat Period 4 phase of architecture marks the end of use of these rooms. The northern rooms, however, continued to be used. Later levels of Room 2 contained a semi-circular oven that backed into the city wall (Phase 6). This oven was lined with stones, sherds, and broken grinding stone fragments. The sediment between the stone and ceramic lining was baked into hard orange-red sediment. Upper levels of Room 5 contained a sherd-lined feature that does not appear to have been used as a fire feature. Instead, some activity involving water may have taken place here (Phase 6).

Late EBA/MBA Occupation

After the Sweyhat Period 4 architecture had been abandoned and used as a refuse pit and infant burial ground, two buildings were constructed in this area along the same orientation (Figure 29). This phase of architecture only survives above operation 101. The construction method differed between this phase and the Sweyhat Period 3 architecture. In the later architectural phase, the stone footings consisted of multiple courses of cobbles. Presumably, a mudbrick superstructure would have topped these substantial footings. This superstructure did not survive, however. Although the construction method differed, the building plan was very similar to that of the previous phase. The east-west walls completely overlay the earlier mudbrick walls, albeit with a thick layer of silty sand in between.

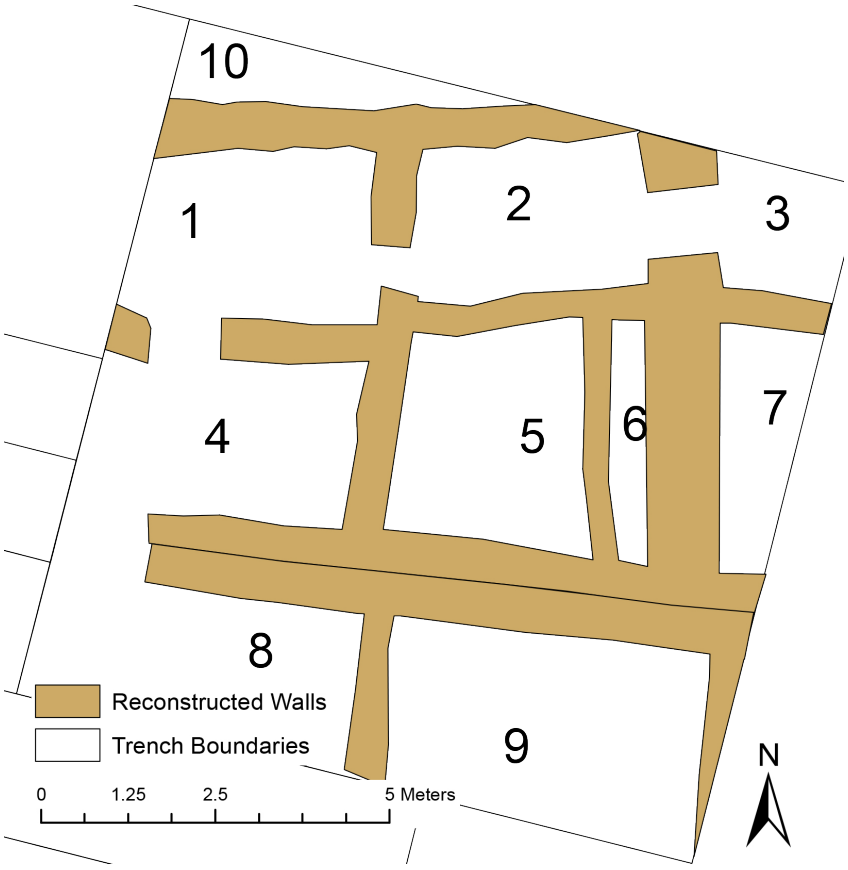


Figure 29. Late Phase of architecture, Operation 101.

Unlike the Sweyhat Period 4 structure, this new structure did not appear to have a back wall, but rather backed up to the city wall directly. As in the Sweyhat Period 4 architecture, this phase was modified after its construction with the addition of a wall between rooms 6 and 7. A double wall running east/ west separates the northern building from a southern one. These two structures appear to have been erected nearly simultaneously. The southern structure only survives to one room wide, and it is unclear how much of this is because of preservation problems or whether this was close to the original breadth of the southern building. The northern wall in this phase of architecture seems to

demarcate the edge of this building, since none of the north/south walls continue to the north.

Northern Building

Room 1 – A gravel and stone surface ran along the northern edge of this room. The primary occupation level (Phase 8), contained grinding stones, a couple of jars, some fine ware vessels with pot marks, along with assorted ceramics, some of which were coarse wares, and a whole colander (14-TSW-0054). Generally, the equipment found in this room would suggest that generalized cooking, plant processing, and storage was carried out here.

Room 2 – The remains in Room 2 were similar to those in Room 1. It contained some animal bone, some grinding stones, and some shell, in addition to assorted ceramic sherds. A few of the grinding stones were lying flat on a surface in the southern portion of the room.

Room 4 – This room did not contain any particular features, and the floor was not plastered. Room 4 was remarkably free of artifacts, with only a single grinding stone lying on the floor of this phase of architecture.

Room 5 – The earliest primary use level of Room 5 was plastered and nearly devoid of artifacts. A later tamped earth surface, however, was replete with specialized artifacts that indicate that the ancient residents processed plants here. Like other rooms in this building, Room 5 contained several artifacts for grinding substances. It contained a common loaf-shaped grinder and a pestle,

which is more unusual, and would have been used for grinding or smashing smaller amounts of a substance. In terms of ceramics, the room contained several complete or nearly complete vessels, including a small jar and a perforated sherd disc (14-TSW-0026). This room also contained personal ornaments, including a delicate bronze pin—much smaller than those typically used for clothing—and a bronze bracelet with a diameter of 16.7cm (14-TSW-0039, 14-TSW-0053). Other unusual specialized artifacts include a "counting stone" and two "sling stones." (14-TSW-0045) These three stones are roughly the same size, with diameters ranging from 2.2 to 2.5cm. The largest stone, the one termed a "counting stone" is white. The two "sling stones" are dark, and one is smooth and one is knobby. Later, the construction fill had a pit cut into it in the southern half of the room.

Room 6 – Room 6 is shaped oddly, since it is truncated in its later phases by a thick wall only about 50cm from the original north/south wall. The intact primary surface from this room would have extended to the east and would have been combined with Room 7. This primary floor of room 6 contained a loaf-shaped grinder. This area also contained some animal bone. The debris that had collected between the original western wall of this room and secondary eastern wall contained some ceramics and a figurine.

Room 7 – This room contained a tanur in its southwestern corner in its secondary phase, postdating the construction of the thick secondary wall. The earliest floor was left relatively clean, with only ceramic sherds and animal bones.

Artifacts from this room include large storage jar fragments and loaf-shaped grinders. The upper layers of fill material from either this room or Room 19 produced basalt loom weights. The upper layers of topsoil associated with the platform also contained a stone mortar.

Room 18 – Assuming this room was about the same average size as the fully exposed rooms from these buildings, about one third to one half of Room 18 was excavated during the 2008 season. One animal figurine was uncovered in the debris within this room (14-TSW-0078). No distinctive features or finds indicate the use of this room.

Room 19 – This room similarly contained few clues as to its original use. In the lower layers of room debris, the stone leg of an object was discovered, but too little of it remains to identify the artifact.

Rooms 20 and 21 – Such small exposures of these rooms were excavated that the original floors were not reached. The construction debris in room 20 was very bricky, much like that of room 7, as though the walls were pushed over suddenly at the time this building was abandoned.

Infant Burials

After the burning and collapse of the Sweyhat Period 4 buildings, several infants were placed in pots and buried within the fill of the building collapse. These burials will also be described and discussed in Chapter 4.

The construction debris from Room 7 contained animal bones in some ashy deposits and another bronze pin, and a fragment of a figurine base (14-TSW-0064, 14-TSW-0117).

Southern Building

Room 8 – Room 8 contained a figurine fragment in its construction debris (14-TSW-0044). This debris also contained a variety of ceramic serving forms including jars, bowls, and a sherd disk, which may have been used as a lid.

Room 9 – Room 9, the eastern room in the southern building, contained features that mark it as an exterior or partially roofed space used for mixed work purposes. A tanur was located in the northwestern corner of this room, with ashy or organic deposits spilling out around its crushed base. The hard gray green plaster floor was pierced with small post holes about a 10cm in diameter. These posts could have secured a lean-to or small shade to the side of the building. A surface made of plastered pebbles was located on the western side of the room. The primary use levels contained few artifactual clues the activities that ancient residents may have undertaken in this space. The construction debris in room 9 contained a number of storage vessel sherds, and a stone mortar. Phase 8 of this room had a pit cut into the original floor.

Later Phases

After this final Bronze Age occupation was abandoned, the area was later used as a refuse area (Phase 9) until it was completely silted over, and then finally used as a burial ground during the Seleucid/Late Roman period. Because the Seleucid/Late Roman burials intrude into the building collapse deposits not only in Operation 101, but also in 102 and 103, the EB/MB transitional occupation only extended over Operation 101. For this reason, I believe that the abrupt termination of the EB/MB buildings at the southern baulk of Operation 101 is most likely not simply because of erosion.

Several levels of occupation survive above the EBIV buildings—the original occupation layer and subsequent minor modifications (Phase 8), collapse and abandonment deposits (Phase 9), and finally, the Seleucid/Late Roman burial ground (Phase 10). Tell es-Sweyhat was likely not completely abandoned and unused after the Operation 101 buildings went into disuse, because some whole vessels were discovered in the Phase 9 deposits. These were not associated with architectural remains or recognizable primary floor deposits, so most likely the two vessels—a cooking pot and a plain simple ware vessel—were used in some kind of ad hoc outdoor activity.

Late Roman Period

This area was used as a cemetery during the Late Roman Period. Seven burials were uncovered in this area, all single primary burials. Burial types include pits, cists, and a larnyx.

Chapter 3: Occupation at Tell es-Sweyhat

Tell es-Sweyhat has been excavated by a number of different projects over the decades, and has been published in a number of articles, preliminary reports, and a multi-volume final report. Since excavations and publications have all been overseen and directed by several scholars with diverse viewpoints and research interests, the ultimate effect is rather scattered. Here, I synthesize the data available from previous publications on Tell es-Sweyhat and unpublished recent excavation data into a diachronic settlement history of the ancient city and its immediate surroundings. This synthesis will provide the foundation for the following analysis of the change from town to city.

Sweyhat Period 1

At the end of the fourth millennium, Hajji Ibrahim had already been settled for more than a century. At least two other small sites were also occupied at this time (Figure 30). Sites 30 and 25, as identified by Wilkinson in his survey of the embayment, were flat short-lived sites that also dated to the end of the fourth millennium (Wilkinson, 2004: 134). These sites lay along the edge of the western bank of the Euphrates, nearer to Tell Hadidi than to Tell es-Sweyhat.

At Tell es-Sweyhat itself, traces of late fourth millennium activity were limited to a “well-constructed storage pit” on the southern edge of the mound

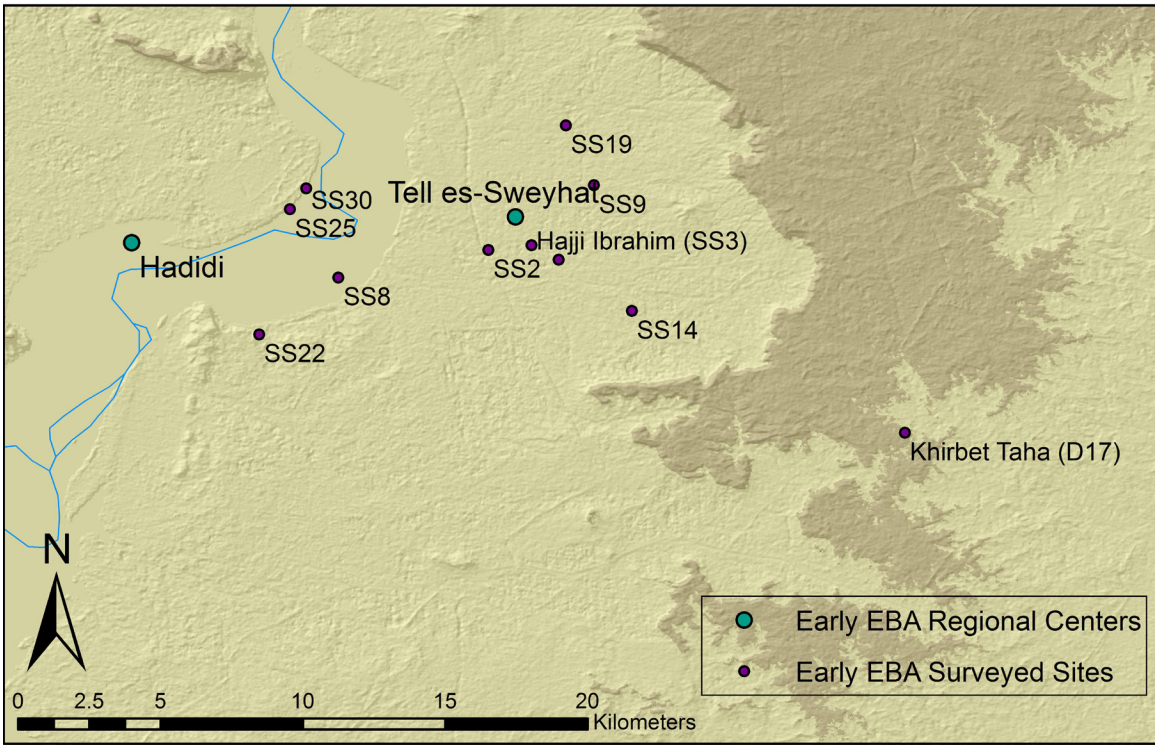


Figure 30. Early EBA sites. Sites marked SS are from Wilkinson 2004, those marked D are from Danti 2000.

(IC), which contained the remains of barley (Holland, 2006: 379). Holland is not entirely convinced of the dating of this feature, and states that its date may have to be revised to the beginning of the EBA.

Occupation had certainly begun at Sweyhat by the beginning of the third millennium, when a cluster of 4 other sites joined Hajji Ibrahim in surrounding the future regional center, all within a 3-4km radius. SS9, a pair of small mounds to the northeast of Sweyhat, may have been a fortified farmstead similar to that at Hajji Ibrahim, on the basis of the site morphology (Wilkinson, 2004: 137). In the uplands, Khirbet Taha, a 3ha site, was founded at roughly this same time period, indicating that residents of the embayment were likely already relying partially on the pastureland in the uplands (Danti, 2000: 273).

The southern edge of the main mound at Tell es-Sweyhat (Area IC), was home to a mudbrick building that contained a large room, and had a work area with a mortar and cooking pot just outside the building. The building contained a typical domestic assemblage, including small bowls and large storage jars, some with potter's marks. The western edge of the town center (IIA, phases 1-3) was also occupied during this time period, with two phases of architecture. The earliest building here contained a number of animal bones, and also bowls and

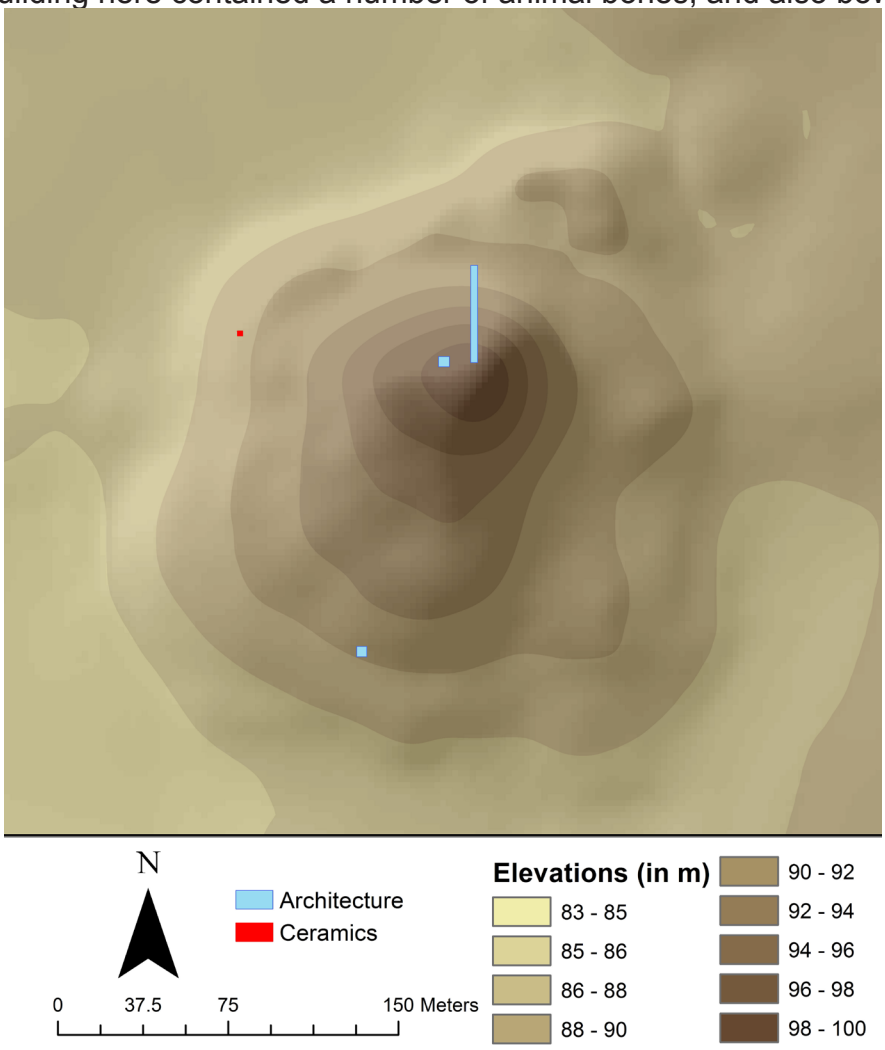


Figure 31. Locations of trenches with cultural remains that show the extent of Sweyhat 1 activities.

storage jars. A later phase of this building increased the size of one of the rooms. After this building was destroyed by fire, it was rebuilt along very different lines with retaining walls and a courtyard area (Holland, 2006: 380). The western side of the mound was relatively open during this time period, with no architecture and only a circular pit with the typical household assemblage with bowls of various sizes and jars (Holland, 2006; IVM and Op 1, Danti & Zettler, 2007: 169).

The presence of architectural remains in both Areas V and I indicate that Period I settlement must have been relatively large (Holland, 2006: 380). Unfortunately, excavating beneath the High Inner City would be nearly impossible, so we have no way of knowing whether occupation was continuous over the site at that time, or if it was clustered in one or two areas that grew together over time. Although little evidence of earlier occupation exists, Sweyhat was apparently already at least a 2ha settlement, since the Sweyhat 1 layers near the town center were already well above the level of the surrounding plain (Figure 31) (based on Holland, 2006: 170).

Sweyhat Period 2

Evidence of Sweyhat Period 2 occupation was uncovered in all excavated areas on the main mound, except for the northern area (Area III), where excavations were not deep enough (Figure 32) (Holland, 2006: 381). This phase was only exposed in a few small soundings in the excavation areas, however. In the southern part of the main mound (Operation 5 and Area I), a single wall and

some associated architectural debris were uncovered. House walls appeared in IC. The central mound also contained some architecture (Area II). The remains of a building lay in this area. The building contained a small bowl, two collared jars, and 3 storage jars (Holland, 2006: 381). One sherd was marked with a potters' mark. The step trench on the northern side of the high mound contained a wall and an associated stone paving (Area V).

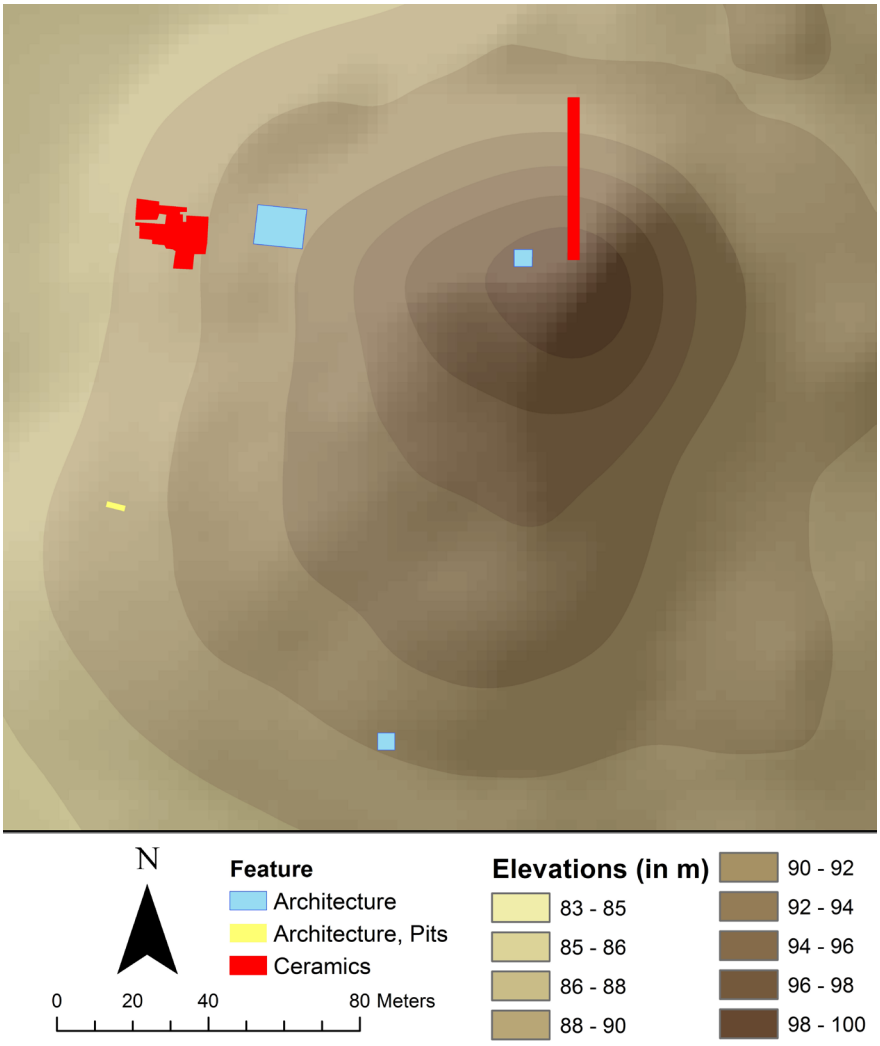


Figure 32. Locations of trenches with cultural remains that show the extent of Sweyhat 2 activities..

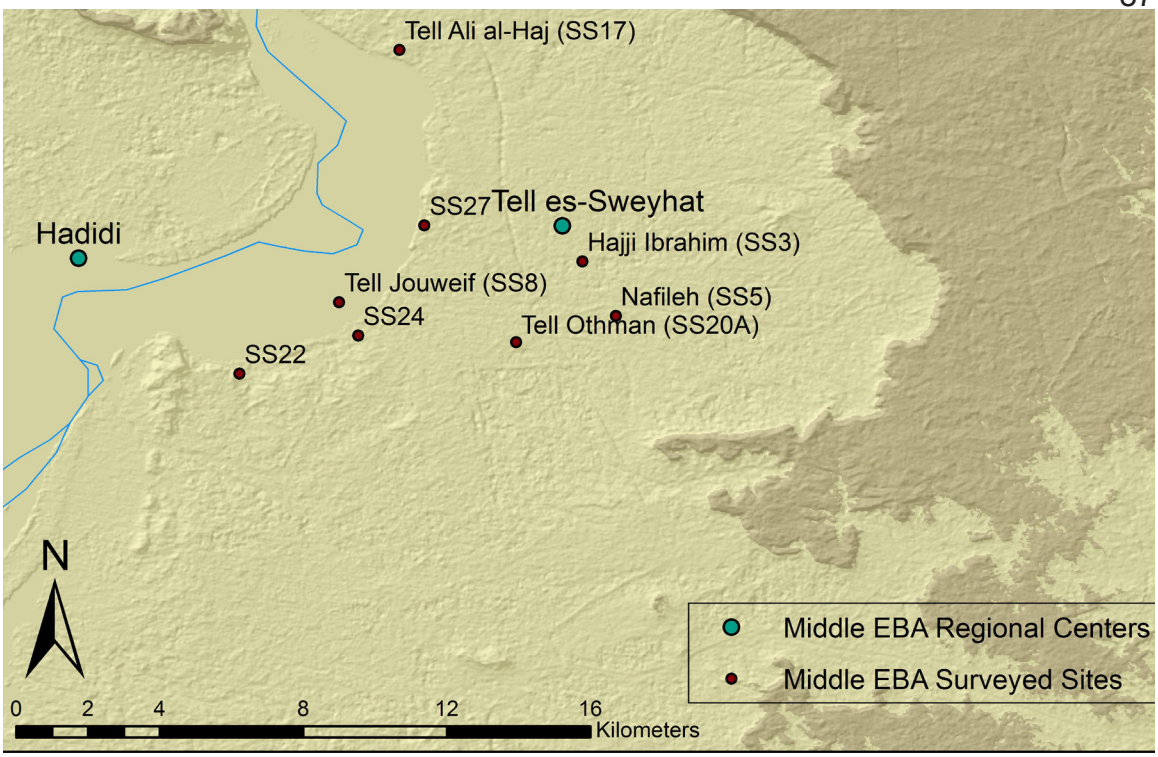


Figure 33. Occupation of the embayment in the middle of the Early Bronze Age.

The western mound was home to an oval-shaped pit house and two other rectilinear structures (Danti & Zettler, 2007). The pit house is perhaps the most notable architectural form found in these early levels, since pit houses often signal semi-sedentary occupants (Danti & Zettler, 2007: 170). It was a short-lived semi-subterranean structure, about 4.5 by 6.5m in size. The building contained medium to large jars with ledged rims for lids, a ceramic chariot wheel, chipped stone, bones, and a shell. The pit house continued to be used after it collapsed, possibly as an animal pen.

The other two buildings, called the NE and NW buildings, were longer used structures. The NW building was continuously used unaltered throughout the Sweyhat Period 2 phases, while the NE building was later subdivided. The

latter contained a fire pit, and several storage jars set into holes in the plastered floor (Danti & Zettler, 2007: 171). The ash within these jars contained the remains of wild grasses, which could represent hearth sweepings (Miller, 1997b). Alternatively, these jars might have stored the dried dung for fuel.

Smaller soundings to the west of these larger structures also possessed trace remains of some architecture (IVZ phase 1B contained stone wall footings), but the contents of most areas comprised only ceramics. These ceramic assemblages included the typical domestic assortment of bowls, collared jars, and storage vessels. Two unusual finds include a sherd with a reed-impressed decoration, and a bowl pierced with two holes (Holland, 2006: 381, Figure 57).

The southwestern mound was also occupied at this time, with a small sector of a mudbrick building visible in the western edge of a small sounding. As in most other Sweyhat Period 2 exposures, too little of this structure was uncovered to reconstruct the building plan. Few artifacts betray the function of this building, but it contained at least 3 jars (See Appendix A, 150 Sounding, Phase 1). After this structure was abandoned, the area was left open, and two phases of pits were dug into the ground. These two pits contained assorted bowls and jars (Appendix A, 150 sounding, phase 2).

Towards the end of Sweyhat Period 2, the residents erected a thick walled (roughly 5m) building at the edge of what would become the High Inner City. The outer wall was later widened to nearly 10m in thickness, then further fortified and decorated with a rounded buttress (Danti & Zettler, 2007: 179). The southern

trenches (Operations 30 and 31) exposed what originally appeared to be a large round platform. This feature was found to be the southern edge of the same large fortified building. Because the thickness of the wall implies that the structure is at least partially defensive in function, it is referred to as “the fortress.” This fortress constitutes the earliest evidence of public architecture within the city center.

By the end of this era, the town covered the area of the main mound. Residential and public architecture lay in the center and to the south, while open work areas lay around the settlement’s edges.

Sweyhat Period 3

During this period, Sweyhat expanded into the Outer City. At roughly the same time, Hadidi, located directly across the Euphrates from Sweyhat, was also expanding. Some of the smaller Sweyhat Period 2 satellite sites were abandoned (Figure 33, SS2 and SS9), while Hajji Ibrahim’s occupation continued. During this period, Hajji Ibrahim became the site of large storage silos for grain storage (Danti, 2000). Other larger sites were founded along the embayment, including Nafileh (SS5), a small site about 2km southeast of Sweyhat, and Tell Othmann, a larger site about 3km southwest of Sweyhat. Slightly further afield, occupation at Tell Jouweif (SS8) continued to the southwest of Sweyhat along the Euphrates floodplain, and Tell Ali al-Haj (SS17) was founded to the north along the floodplain. These two sites may have filled the needs that had

been previously met by SS2 and SS9, and also served as destinations along the trade route, as evidenced by the “hollow ways” radiating from the small sites (Wilkinson, 2004: 138).

Surveys have shown that the uplands continued to be an important resource in the mid third millennium. Tell al-Hassan was a short-lived 5-10ha site that was occupied in the mid third-millennium (Figure 34). Tell Shayeer was a slightly smaller site with a 2-3ha mounded area and a lower mound. Joub esh-Shayeer was slightly unusual, as it consisted of a collection of several 0.25ha mounds (Danti, 2000: 276).

The plan of Tell es-Sweyhat during Period 3 has been somewhat difficult to define, partly because of limited exposures, and partly because in some areas

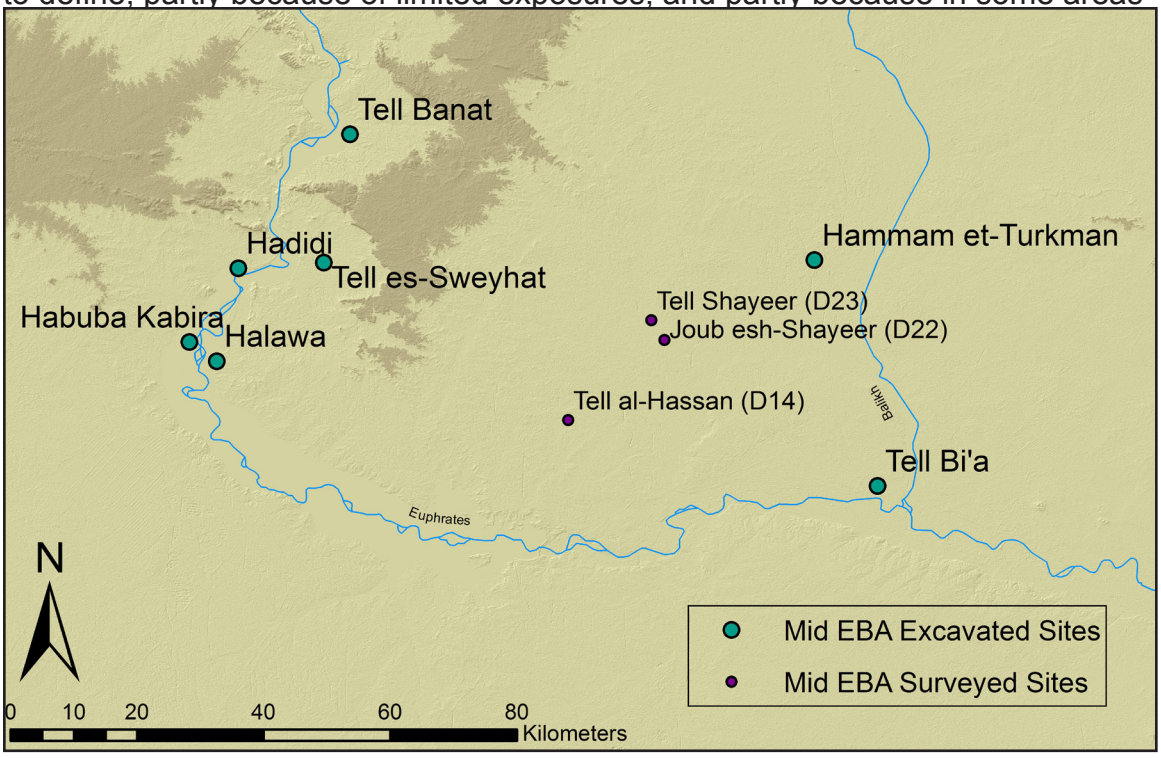


Figure 34. Upland Sites in the middle of the EBA (From Danti 2000).

later construction activities eliminated these earlier levels. Several excavated areas have Sweyhat 4 remains directly overlying those of Sweyhat 2 in the north-eastern sector of the site (Area III). Furthermore, no architecture was extant in the soundings on the western side of the mound (Area IV), and the northern side (Area V), although Sweyhat 3 ceramic assemblages were recovered in both areas (Figure 35). At the northern end of the mound, some Sweyhat 3 ceramics were mixed into pits containing Sweyhat 2 and 4 ceramics, indicating

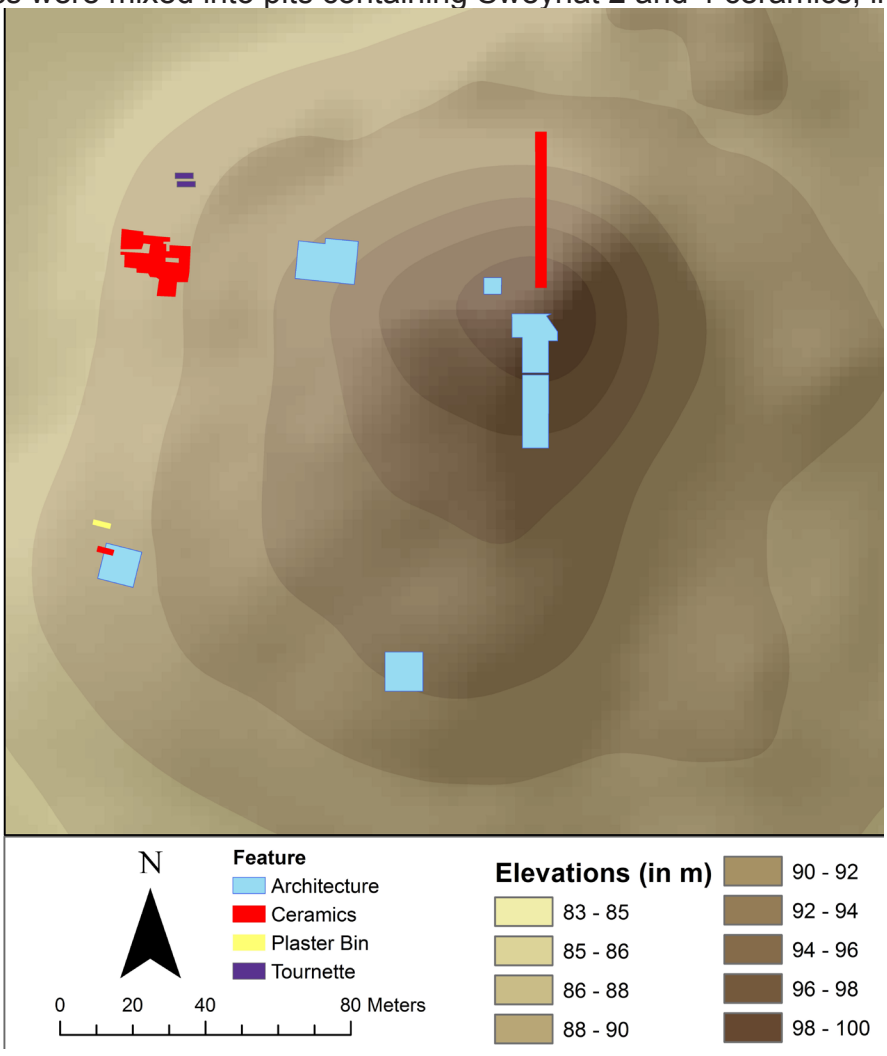


Figure 35. Locations of trenches with cultural remains that show the extent of Sweyhat 3 activities.

that any Sweyhat 3 intact layers had been destroyed by later modifications there (Holland, 2006: 382). A bit more survived in the northwestern sector of the lower mound, with a potter's tournette base recovered from that area (Area XA, Op 11). This base, if found in a primary context, could indicate that potters were throwing ceramics in this area of the site.

The most complete domestic architecture uncovered from Sweyhat period 3 was located near the center of the mound (IIA, phase 6). Several rooms were uncovered in this area containing a ceramic assemblage of bowls and jars, and the hindquarters of a terracotta bovine figurine (Holland, 2006: 382).

The entire center of the city was still covered by the large, thick-walled fortress erected late in the Sweyhat 2 period. This structure could have covered an estimated 0.25ha area in the center of the city. In the first phase, the corners were at right angles, indicating a rectangular plan. This early phase of the building had buttresses at the corner. This corner was later covered over in a massive construction of a rounded corner that gave the appearance of a tower, with large boulders for the footings and a number of preserved courses of mudbrick (Armstrong & Zettler, 1997; Danti, 1997). Excavations just to the south of the town center revealed another wall of this massive structure, with large arching buttresses jutting out, presumably helping to support the very thick walls.

It is unclear what relation the domestic structure discussed above had to the fortress, since a plan of the city at that time would indicate that the domestic building lay inside of the fortress. Some recent excavations below the Sweyhat

4 temple, which was later constructed on the enclosed remains of the fortress, revealed a domestic and work-related assemblage of material, including a large oven, a stone mortar, and a channel feature filled with charred grain (personal communication Hafford). This could indicate that the fortress was home to not only work activities and storage, like the building at Raqa'i, but also contained living areas.

The Sweyhat Period 3 southern mound (Operation 5) was home to a large buttressed building decorated with wall paintings (Holland, 2006: 76-77). This building was most likely some kind of public, possibly religious, building since it contained at least two paintings, which "illustrate human, animal, floral, and geometric forms" including a potentially religious scene of "a bovine with a suckling calf, standing on a mountain side." (Holland, 2006: 382) This structure was monumental in scale, with walls a meter thick. It was abandoned part way through the Sweyhat 3 period, and built over by a building with much smaller walls associated with a number of preserved floor levels. This later building was roughly contemporary with the tombs in the northwestern sector of the outer town (Holland, 2006: 382).

The southwestern sector of the site contained open work areas during this time. The only Sweyhat 3 architecture uncovered in this area was a rounded corner of a thick-walled building, potentially some kind of storage structure. To the northeast of this structure was a heavily plastered bin that was tinged green

and filled with ash or organic materials. Other extant Sweyhat 3 features were a cooking pot set into the ground and a hole-mouth jar lying *in situ* near the corner.

During the second half of the Sweyhat 3 period, or the third quarter of the third millennium, occupation at Sweyhat began to expand beyond the main mound into the Outer City. On the eastern side of the mound, a complex series of buildings was originally erected in the Sweyhat 3 period, and was later rebuilt in Sweyhat 4 or 5. The first two phases of the Operation 16 building date to the second half of Sweyhat Period 3, or the third quarter of the third millennium. The first phase survived only in short segments of walls, a stone-lined drain, refuse pits, and fire features (Armstrong & Zettler, 1997: 46). The second phase of construction in this area constitutes a building with a series of rooms that open onto an exterior space or open courtyard to the south. Another room to the north contained two storage jars set into a shallow niche, and the only room to be completely excavated—an uneven L-shaped room—contained a round fire feature in the northwestern corner in a later phase (Armstrong & Zettler, 1997: 47). It is unclear what sorts of activities may have been carried out in the early phases of the building.

The northeastern Outer City also was home to architecture during the third quarter of the third millennium. An early phase from this trench (Op 25) revealed the remains of two abutting buildings with plastered walls. Little evidence remains as to this building's purpose (Armstrong & Zettler, 1997: 49). The northern sector of the site (Op. 17) may have been occupied during the Sweyhat 3

period as well. No architecture was uncovered here, but a series of refuse pits contained Sweyhat 3 ceramics.

The excavation areas in the western side of the Outer City did not produce architecture from Sweyhat Period 3, possibly because that area was reserved for funerary uses. Several earth cut chamber tombs have been revealed in the northeast. This part of the cemetery was originally estimated to cover 1ha and to have contained 100 to 150 tombs (Zettler, 1997b: 51). In recent years, tombs have been discovered in other areas of the outer town as well, particularly in the south near and below the later fortifications, so the total area of the cemetery must have been much larger than the original estimate. These tombs will be discussed in more detail in Chapter 3.

During Sweyhat Period 3, areas outside of the fortress were sparsely settled. Outdoor workspaces characterize the southwestern side of the main mound, and settlement expanded to the Outer City. During this time period, residents began investing time and labor in a multigenerational shaft and chamber tomb cemetery at the northwestern edge of the Outer City. The town would have covered approximately 6ha, making it one of the embayment's largest mid third millennium settlements, next to Hadidi.

By Sweyhat Period 3, the site was already fortified, had a public building with a potentially religious function, and a sparsely settled outer town. This urban form served as a clear precursor to the double-walled "citadel city" form that the site would develop in the late third millennium (Cooper, 2006). Many of these

developments preceded the territorial fight between Mari and Ebla, and certainly preceded the late third millennium Akkadian incursions to the North, indicating that these specific threats of violent attack did not trigger the construction of fortifications at Tell es-Sweyhat. Instead,

Sweyhat Period 4

During the beginning of the Sweyhat 4 period, the residents undertook a number of construction projects that changed the urban landscape significantly. During this time, the fortress was buried and turned into a large terrace that would become home to a temple (the High Inner City). The mound was encircled by a city wall with towers or large buttresses (the Low Inner City), and the outer town was enclosed by a rampart and glacis (the Outer City). Eventually, settlement would spill to the south of the Outer City wall, creating a new district (Southern Extension) (Danti, 2010: 149).

High Inner City

Shortly after the fortress was turned into a 3m high terrace, a temple complex was erected on this newly created platform. The long temple was niched and buttressed on the outside, and consisted of a single large room with a raised platform at the northern end. This platform was separated from the temple by small curtain walls, and was reached by a couple of steps. Large grain storage pits were dug into the floor in the southern end early in the temple's

existence. A tri-lobed podium, which presumably held some kind of idol, rested in the center of the platform. Access was gained through a door in the western end of the southern wall, in a bent-axis configuration (Danti, 2010). The temple was part of a larger religious complex, which included an enclosure wall and a series of small heavily-plastered mudbrick structures with low roofs located immediately to the east. The doorways of these small structures were blocked. Unfortunately, few artifacts remained in these structures to provide clues as to their original purpose, but some prestige goods such as ostrich shell fragments indicate a cultic function (Danti, 2009: 5).

Fortifications

In addition to creating a brand new city center, the inhabitants of Sweyhat also delineated the edge of the mounded area with a city wall. This wall has been exposed through excavations in three main areas of the site—a large stretch in the western edge, another in the southwestern sector, and a smaller area in the northeast (Figure 36). Two towers were also uncovered—one in the western and one in the southwestern sectors.

The city wall was roughly 2.8m wide, and was preserved to a height of 2m in some areas (Holland, 2006: 57). In the western sector, indentations on the inner face originally described as “niches” may have provided access to the top of the tower, presumably with stairs or ladders (Holland, 2006: 57). The thick city wall is pierced by a gateway and street about 3m wide about 20m south of

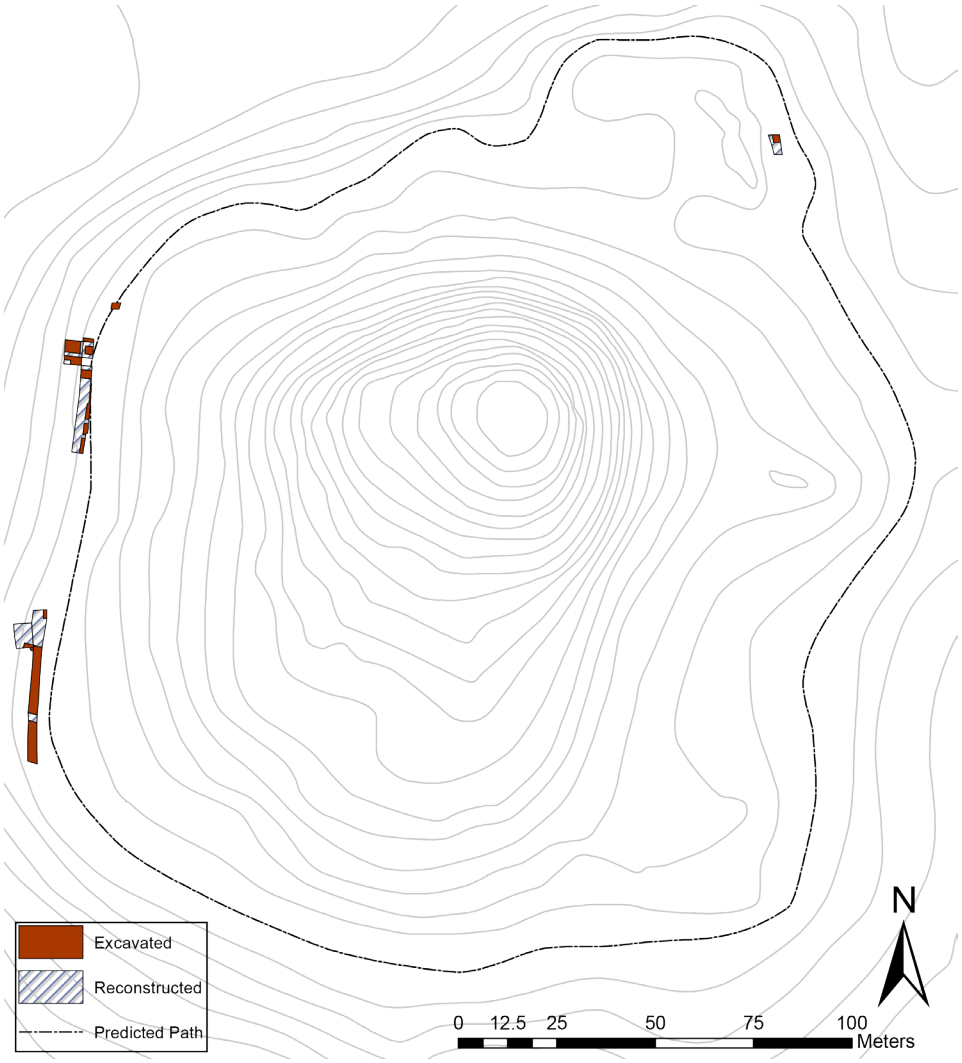


Figure 36. Inner City Wall, Two Towers, and the Path of the Wall as Predicted in Zettler 1997.

the tower structure in the western sector (Area IV). The street was paved in pebbles, and was interrupted by two irregularly shaped rooms on its northern side. Holland interpreted these rooms as potential guard towers (Holland, 2006: 67). Few artifacts were recovered from the gateway contexts, so little inference can be made as to what activities may have been performed in this gateway.

In the southwestern sector, the largest stretch of the city wall was exposed (Figure 37). Here, excavations uncovered a long stretch of the city wall in three

10m segments. While the wall is similar in width to the section from Area IV, its mudbrick superstructure survived only to two courses. Furthermore, the mudbrick material in this newly excavated stretch contains burnt chunks of dirt and charcoal. The fortification wall mudbrick composition was not described in detail in Holland's publication, but the burnt chunks in the southwestern sector

Figure 37. Inner City Wall, Sectioned in Foreground.

were so distinctive that it is probably safe to assume that these inclusions were not present in the western trenches (Areas IV and IX). In the southwestern sector, the residents used long unworked limestone rocks to shore up the edge of the wall over time. These facing stones were also used on the tower that jutted out of the city wall in the northern end of the southwestern section of the wall. In some areas, these facing stones were starting to tumble down the hill, but in most other areas, they were embedded in the base of the city wall in a straight line. In the southwestern sector at least, the mudbrick of the city walls rested on a stone footing of unworked limestone. These stones ranged in size from 20 to 50 centimeters.

A large earthen rampart with a glacis enclosed the Outer City. This earth-work is clearly visible in aerial photographs, high resolution satellite images, and in the topographic map and hillshades. The Outer City wall survived to a width of 20 to 35m and a height of 4 to 5m (Holland, 2006: 28). Excavations have revealed that the construction method of this rampart varied significantly across the site. Trenches in the northwestern section of the wall produced evidence of a possible casemate construction (Zettler, 1997b: 49). A small trench just to the south of this sector uncovered evidence of a core wall within an earthen rampart (Area VIII, Holland, 2006: 31). A slit trench cutting through the entire feature in the eastern section of the wall, revealed an earthen rampart faced with a stone revetment on the outer face, and lined with a retaining wall (Zettler, 1997b: 49).

The casemate construction in the northwestern sector of the Outer City wall lay directly on top of the Sweyhat 3 tombs in that area, indicating that the cemetery had gone out of use by this time. The western rampart was constructed on the remains of the earlier architecture there (Zettler, 1997b: 49).

Low Inner City

During the Sweyhat 4 period, the area between the Inner City wall and the High Inner City terrace began to be filled in with buildings. Most appear to be domestic in nature, but with an emphasis on production of some kind.

The western sector has a nearly complete exposure of buildings running from the city wall up to the High Inner City Terrace (Figure 38). Directly against the City wall was a large building with two courtyards surrounded by a number of smaller roughly rectangular rooms (henceforth called “the Area IV building”). This building extends from the city wall about 13.5m to the east, where it ends at a wide street (Holland, 2006: 55). Features and artifacts found throughout this structure indicate that small-scale workshops of different types were located throughout both the smaller interior rooms and the larger courtyards. Room 9, a large courtyard, was lined by benches on its northern and eastern walls. The northeast corner appears to have been used for weaving, as it contained several loom weights and the remains of a wooden loom. The rooms on the western side of this building appear to have been used primarily for grain storage and grain processing. Rooms 2, 4, and 5, are interconnected, and run from the largest to

Figure 38. Sweyhat 4 buildings in the western sector.

the smallest from north to south. The least accessible room was used as a grain storage bin, and the middle room was used as a storage area. Finally, room 2, which opens onto the rest of the building, contained a cooking pot resting on a bench. Later phases of this room contained metal working equipment. Oddly, the building does not appear to contain many ovens. A single hearth appears in the northwestern corner of Room 17, which opens onto the large courtyard, but otherwise, fire features are strangely lacking, until a larger horseshoe-shaped oven was constructed in Room 9 (the courtyard) in a later phase. Cooper has identified this structure as a large public building, but the artifact assemblages indicate that it is more likely a domestic area with storage and work spaces. The buildings in the western sector incorporate the city wall into their structure (Area IV). Holland reports that the east/west walls of the smaller rooms next to the city wall run directly into it, using the fortification as the back wall. In some areas, small plastered stone benches line the city wall.

Across the street from the Area IV building to the east lay another large building replete with work surfaces and cooking installations dubbed “the kitchen building” (Danti & Zettler, 2007: 176). This building was one of three exposed in these trenches. The eastern buildings run directly up against the retaining wall that enclosed the new High Inner City terrace. Some leveling had been undertaken in this area to create a more level surface for such a large building. The kitchen building consisted of an L-shaped courtyard flanked by two eastern and two western rooms. This structure was later rebuilt on the same lines, but

without the cooking installations, so its later phase use is unclear (Danti & Zettler, 2007: 176).

These western buildings appear to have been houses with specialized work areas. The ancient residents were adding value to farmed or herded raw materials such as grains, milk, and wool through grinding, cheese-making, and weaving, among other activities. The size of the storage rooms and the volume of materials stored within suggest that while much of these end products may have been for familial consumption, some of it may have been resold to support the household. The fortification walls and their corresponding gate areas may have provided a central area for these bakers and weavers to sell their finished goods.

To the south of this area, a similar complex lined the Inner City wall. Excavations did not reveal the eastern extent of the buildings, so their plans are incomplete. The buildings are directly pressed together, with a double wall distinguishing between a northern complex and a smaller southern building. The southeastern portion of this building had been mostly destroyed by large intrusive pits, so much of the plan is approximate. This area has a narrow alleyway, hallway, or corridor in this area, perhaps running between buildings. The idealized plan above of the northern building complex makes it look like it consists of regularly-sized and shaped rooms, perhaps planned and constructed all at once. This is not the case, however. Rooms 1 and 2, for example, had been a single long room before a narrow dividing wall was erected between them. Rooms

8 to 11 appear to have been open spaces between buildings that were filled in gradually. As a greater need for space within these buildings arose, the residents added and subdivided until they reached some minimal space requirement.

These buildings appear to have functioned in much the same way as the Area IV building. The contents of some of the rooms indicated that grain processing and cooking was emphasized in these structures. A large saddle-shaped quern dominated the center of room 16, and room 9 contained two mudbrick podia with similar saddle-shaped querns that flanked a circular ash pit with an inset storage vessel. Room 9 also contained a large number of loaf-shaped grinding stones for use with the querns, and a smaller black basalt quern with four feet, for grinding smaller amounts of material, possibly herbs or spices. Also indicating a focus on grain processing was a large heavily-plastered circular feature that was constructed during a later phase in the middle of Room 17. Rooms 10 and 12 provided the storage space for the grain, as evidenced by the large numbers of storage vessels recovered from these contexts. Room 11 was destroyed by fire and contained a bitumen feature on its plaster floor. Since it was destroyed in a conflagration, the bitumen feature could have been either a prepared waterproof surface, or the charred remains of a bitumen-lined basket.

One of the rooms appears to have had a cultic rather than work function. Room 6, dubbed “the podium room,” contained a square mudbrick podium, along with a number of specialized artifacts, such as a lion pot and fragments of decorated calcite vessels. Towards the end of the use of this building, a cooking

pot containing an infant burial was set into the northwestern corner of this room, before the building was flattened for the next phase of construction. The room to the south, Room 8, contained a single adult burial underneath the back wall of the building, in an area that jutted out into the room. This room contained few artifacts, and was most likely a small courtyard or work-space.

After room 11 was destroyed by fire, much of this building was abandoned and closed in. Infant burials were deposited in certain rooms, including the podium room, and the building was filled in with collapsed mudbrick walls and other debris. The northern building continued to be used, however. Work areas including a large semicircular oven and a laid sherd surface were installed in this area. Later, this building would be torn down for the construction of a very similar building of nearly the same layout, possibly after the building could no longer be repaired effectively.

On the northern edge of the Low Inner City, the Sweyhat 4 period is the first major architectural phase in this area (Holland, 2006: 74). The earliest phase of construction maintains open spaces between buildings. In the north-east, at least, these buildings appear to have been domestic in nature, with a hearth and cooking pot set into the floor of one partially excavated room (Trench IIIE). At least one building in this phase was destroyed by fire. These buildings were quickly rebuilt and expanded to create a much denser plan (Area III phase 4).

A large building complex similar to the Area IV building or the southwestern sector was constructed in the northern sector as well. Two distinct buildings existed in this area—the eastern building was several rooms wide and was centered on a courtyard (Room 11A). The room to the north, which does not appear to have opened into the courtyard, contained a mixed domestic and work assemblage, including a spindle whorl, ceramic sherds, and a stone mortar. Another courtyard or open area borders an area identified as an alleyway by excavators.

To the east of this alleyway, and to the west of the exposed area of the city wall lay another narrower building. It is unclear how this structure articulated with the city wall, since the joint between the two was not fully excavated to the level of this Sweyhat 4 building. This building appears to have been used for similar purposes to the other northern building, since one of the rooms contained a workbench and platform area, grinding stones, and various pins.

In the later phase, one of the rooms in this area appears to be cultic in function, much like Room 6, or "the Podium Room," from the Southwestern sector. A flat stone, once part of a table, leaned up against a wall. A workbench with grinding stones on it was located in this room. Holland points to the presence of a baby burial in a cooking pot just to the south of this room as evidence of its cultic function (Holland, 2006: 74).

The Eastern mound follows a similar pattern, but the final plan does not seem to be as dense and regular as the final plan of the Southwestern Low

Inner City (hereafter SWLIC). This area was apparently constructed on top of the remains of a lot of previous occupation, considering that the northernmost room was much higher than the smaller room to the south, which was accessible via several steps. The buildings are preserved to a much higher level, probably because of the uneven topography. In order for the Seleucid/Late Roman period inhabitants to build on this area, they leveled it by bringing in rubble that preserved the lower-lying EBA buildings. Stairs and a retaining wall connect a workroom to the neighboring buildings, and a retaining wall likely held back the sediment from encroaching on an exterior work space. While there were a couple of administrative artifacts—a cylinder seal and a stamp seal—in some of the debris layers, the floor deposits indicate that some rooms were used for very similar purposes to those of the SWLIC. A bead workshop likely existed in one of the rooms as well, as evidenced by some finished and unfinished beads strewn throughout the area.

Excavations in the Low Inner City reveal variations in construction practices. The fabric of the city wall varies across the site. Integration of buildings with the city wall also varies both across the site and between construction phases. The evenly sized rooms in an idealized plan of the buildings create the illusion of a well-planned neighborhood. Close examination of the phasing reveals that the SWLIC contained at least three buildings that appear to have been built as distinct entities that were joined through later rebuilds and additions. Larger rooms were divided into smaller ones. Exterior spaces were

divided. In one area in this exposed stretch, a clear double wall indicates that the two adjacent structures were built at roughly the same time. In Operation 102, however, unusual joins between walls indicate that the structure was not built in a single phase, but that some exterior spaces were enclosed over time. The east/west wall between the Sweyhat Period 4 building rooms 1 and 2, for example, was a later addition. Ultimately, inhabitants divided spaces until they arrived at some minimum desired dimensions. Partly as a result of their cramped location pressed up against the wall, they were not organized around spacious courtyards. Instead, they had small, evenly sized rooms, some of which were roofed and some of which were not. The plan of the Inner City buildings resembles that of the buildings lining the city walls at Tell Rad Saqra, and Tell Halawa A (Orthmann & Boessneck, 1989: Beilage 8; Pfälzner, 2001).

The destruction pattern of the Sweyhat Period 4 architecture also varies across the site. While burning appears to have been widespread and devastating in the Area IV building and the temple, only one room in the SWLIC appears to have been destroyed by fire. Furthermore, while the burned room in the southwestern sector filled in quickly, the northern building was used for longer, as evidenced by the semi-circular oven and the sherd-paved surface features in this northern building.

Outer City

Occupation in the Outer City during this time was less dense than the contemporary occupation of the Inner City. The area was home to several large, sprawling domestic and industrial structures with smaller rooms surrounding larger courtyards (Peregrine *et al.*, 1997; Zettler, 1997b). Two areas excavated in the northeastern sector of the Outer City revealed the plans of "several building episodes in a single, short occupation phase" (Zettler, 1997b: 43). The architectural remains from the northern of these two excavation areas (Operation 4) were well-preserved and provides an excellent point of comparison to the buildings in the SWLIC. The northern operation (operation 9) contained the remains of several buildings, but was much more poorly preserved because of intrusive pits (Zettler, 1997b: 45).

In the Operation 4 building, a double wall demarcates the end of one building and the beginning of its neighbor. Then, extending from that back wall is a row of regularly-sized rooms, each about 3m wide. Thick walls and occasional buttresses could have supported an upper story or roof activities. The length of these rooms is about 6m, so the roofing materials must have run from east to west. In the northern room, buttresses were added to the walls at regular intervals of about 2-3m intervals, which also likely supported a roof or second story (Zettler, 1997a: 41). These were built contemporary with the walls. Just to the west of these long narrow rooms was a series of larger rooms that appear to have been unroofed courtyard spaces, since they were quite wide and have no

other means of supporting roofing material. These spaces contained several superimposed floor levels, and their architecture had been built up and subdivided over the life of the building (Holland, 2006: 41). At times, these rebuilds created unusual corners and joins between walls.

The similarity between the rebuilds and unusual wall joins between the buildings in Operation 4 and those of the SWLIC hints at the agglomeration and rebuilding in both areas. This complicates the interpretation, since the SWLIC buildings likely started out looking rather similar to the house in the outer town. Then, throughout time, the rooms were divided and exterior spaces were enclosed, until the building appeared to have the regular cell structure. The rooms of the outer town building were not as subdivided as those of the SWLIC, perhaps reflecting the higher occupation density at the city core. Furthermore, the city wall itself would have inhibited expansion in any direction except inward—rather than building out-buildings, as the residents of the more spacious outer town might have, the Inner City residents enclosed porches and courtyards, eventually creating smaller rooms.

Operation 9 occupation began with a level of pits and jars with no architectural remains, indicating that much like the Southwestern sector of the Low Inner City, the area began as an open work space. In the second level, three buildings were constructed, along with a covered drainage system that bisected the excavation area (Zettler, 1997b: 42). The walls were fragmentary in some areas, so it is difficult to imagine what the plan of this area might have looked like

in antiquity. The south building at least seems to have centered on a large open area, but the other two buildings only had their corners exposed through excavation. The latest phase of occupation in this area contained work-related features such as plaster basins similar to that from the Sweyhat 3 level in the southwestern sector of the LIC. These basins may have been used for wine production (Zettler, 1997b: 46).

The eastern side of the Outer City was home to similar structures. This side seems to have focused on ceramic production, at least in the later phases of occupation. Two small excavation areas were opened up on this side of the Outer City, operation 16 in the north, and operation 23 to the south. After an early phase of occupation with a few abandoned walls and a stone-lined water conduit, most likely dating to the Sweyhat 3 period, a second more extensive phase of architecture was constructed around an L-shaped room or courtyard. This central room opened onto a large open work area to the south and east. In the last phase of occupation, which dates to the Sweyhat 4 period, two large kilns were constructed in the open area. The ceramic wasters found in association with these kilns indicates that they were used for firing pottery. Operation 23 contained little architecture, but did contain another kiln, indicating that this neighborhood may have specialized in ceramic production (Zettler, 1997b: 47).

Several excavation areas on the very edge of the Outer City also revealed architecture that was contemporary with the outer fortification wall. In the southeast and northeastern areas of the outer rampart (Areas VI and VII), short-lived

architecture containing domestic assemblages of artifacts were uncovered. It is unclear how the architecture of these two areas related to the outer rampart. That relationship is clearer in Area VIII, which included a section straight through the outer rampart. The architecture here was built right up against the rampart (Holland, 2006: 30, 31). Another slit trench through the Outer City wall in the west reveals a slightly different construction pattern to the wall itself, with a wall shoring up the inner face of the rampart. Later, buildings were constructed against the inner face of this section of the wall as well (Zettler, 1997b: 51).

The microgravity survey helped the team identify tomb chambers of the mid-third millennium cemetery, discussed in Chapter 3. Due west of Operation 16, the team identified a break in the lower town wall as a probable gate, and a linear feature running west to east as a road (Peregrine *et al.*, 1997). The northwestern quadrant of the outer town was used as a cemetery with rock-cut chamber tombs in the mid third millennium. Excavations have shown that these tombs were used for several generations before the cemetery was closed. The outer town wall was constructed through the middle of the cemetery (Zettler, 1997b).

The survey units that returned the highest densities of ceramic sherds were in the North, East-southeast, and western areas, indicating that these areas may have been occupied either the longest, or the most densely (Figure 39). When the outer town was occupied in the late third millennium, the sector appears to have contained workshops of different kinds. In the northwest, a

high concentration of chipped stone signals a stone working area. In the east, a large number of kiln wasters, coupled with very high geomagnetic readings that ground-truthing revealed as kilns, points to a ceramic production area. The

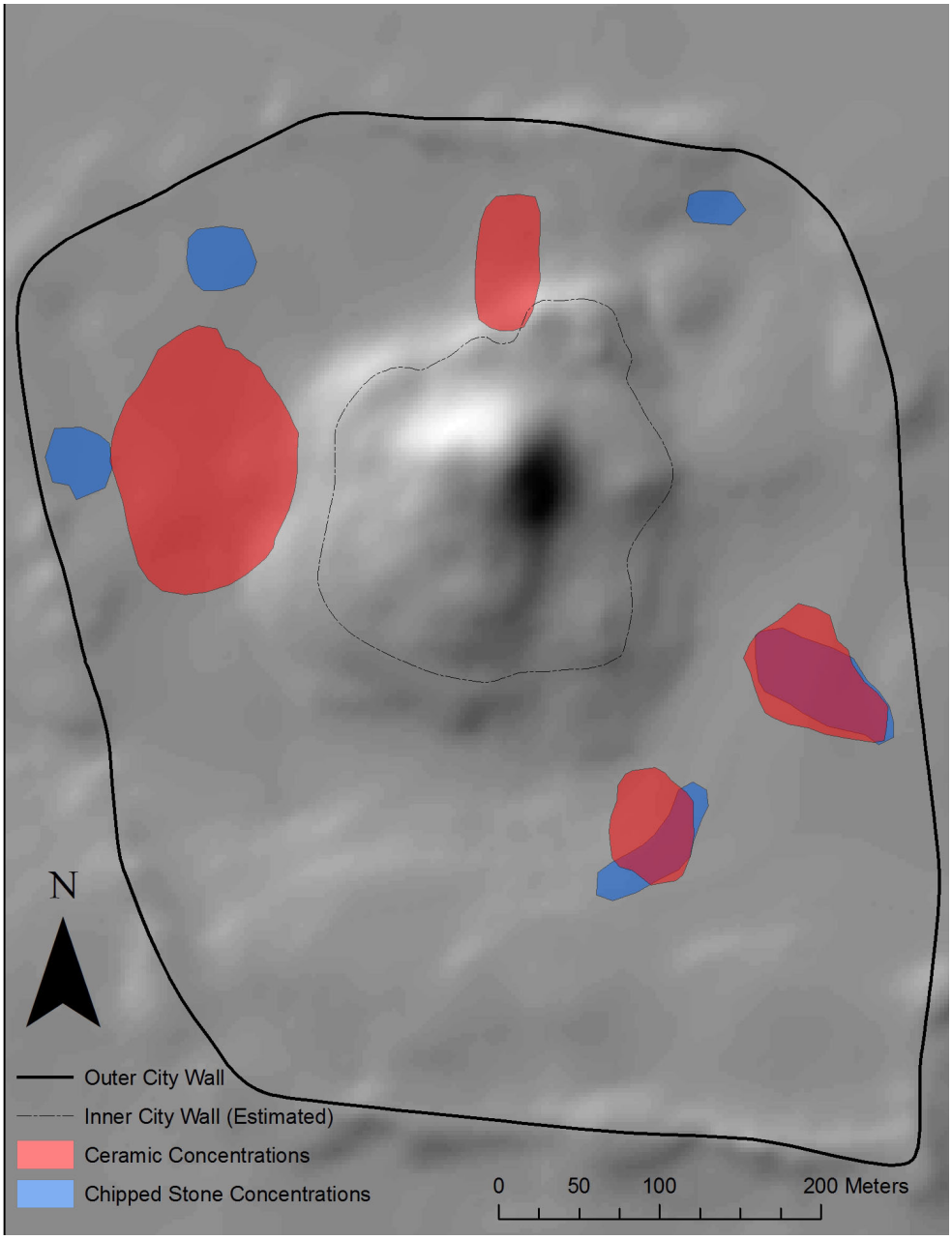


Figure 39. Outer Town Artifact Concentrations. Adapted from Zettler 1997, Figures 3.2 and 3.3.

southeastern sector of the Outer City contained high concentrations of both chipped stone and ceramics, so it may have contained a particularly densely occupied domestic area (Zettler, 1997b). Most of these areas were likely used only towards the end of the site's occupation.

Early Bronze Age /Middle Bronze Age Transition

Rebuilding after the Sweyhat Period 4 building was abandoned was patchy across the site. Holland described the rebuild as follows: "After the initial destruction of the inner town by fire during Period F, the town was almost immediately reoccupied as most of the stone footings for new buildings were laid directly on the remains of the mudbrick superstructures of the original buildings constructed against the town wall" (Holland, 2006: 67). New excavation evidence shows that this only holds true for Area IV. In the SWLIC, Operation 101 was most likely reoccupied after some longer period of time, since we see additional features such as the semicircular oven and laid sherd surface survive past the collapse of the Operation 102 buildings. Furthermore, a thick layer of silty sand lay on top of the debris of the Sweyhat Period 4 buildings and underneath of the EB/MB transitional buildings. Despite this thick layer of silty sand, and the long period of disuse, some of the later east/west running walls were built directly on top of the Sweyhat Period 4 walls as Holland observed, while the north/south running walls do not. The resulting plan of the later building was quite similar to that of the earlier EBA building.

These differences could be explained in several ways: 1) the conflagrations in Operations 102 and Area IV occurred as part of the same burning event. Area IV was rebuilt immediately while Operation 101 was not destroyed by fire, so it remained in use, and was rebuilt at a later date. 2) The Operation 102 fire occurred first, then the fire in Area IV occurred around the time that the sherd paving and semi-circular oven were in use in the northern building of the southwestern sector, then the later phase of architecture was erected in both Area IV and Operation 101 at the same time. Or 3) neither the fires nor the later construction were contemporary. The sheer number of burning events in the Sweyhat 4 architecture across the site might indicate a single catastrophic burning event (Chapter 5), possibly as the result of a violent attack. This would make scenario 1 the most likely. Since the burned areas of the site are not contiguous, we have no way of testing whether the fires were part of a single event, or occurred over the course of years or decades, however.

Seleucid/ Late Roman

Occupation of Tell es-Sweyhat ended after the beginning of the second millennium, to begin again after a long hiatus in the Seleucid or Late Roman period. Remains from the architecture of this period were visible on the surface of the mound when excavations began in the 1970s. Excavations in 2008 clarified the plan of a large fortified building complex immediately to the north of a retaining wall or a defensive wall. This building complex was remarkably clear

of artifacts, so few clues remain as to its original purpose. This building complex extended to the south down the slope of the mound. The eastern and western sides of the mound served as burial grounds in this time period.

Discussion

This chapter has provided the starting point for understanding early urbanism in the Middle Euphrates through the lens of Tell es-Sweyhat, one of the region's largest and most important urban centers. The decentralized nature of the excavation history at this site makes it a challenge for scholars to work through the literature to gain a clear understanding of developments at the settlement over time. This chapter addresses that problem with a review of all available published material, coupled with more recent unpublished excavation data. Now that I have synthesized the available material on Tell es-Sweyhat, I will address the central questions of the dissertation, namely the nature of the cultural changes that accompanied the population expansion between Sweyhat 3 and Sweyhat 4. I begin in the next chapter evaluating the shift in the mortuary landscape, then continue by assessing the evidence for defense over time, and finally tackle the changes in urban planning practices at the site.

Chapter 4: Burial

At the end of Sweyhat period 3, the multi-generational cemetery of earth-cut tombs went out of use (Figure 40). Until recently, it was nearly unknown how the dead were treated during the Sweyhat 4 period and later. Excavations in the southwestern sector of the Low Inner City may have answered that question. A simple single-inhumation adult pit grave was uncovered underneath a bump in the wall of one of the Sweyhat 4 buildings. This single burial is the only evidence we have about the treatment of deceased adults in this period, but similar architectural features nearby could mark the positions of other burials. Infant burials in jars and cooking pots are much more common, appearing in the rubble of certain rooms in the southwestern sector and in the northern trenches. This chapter scrutinizes the change in burial practices between the two time periods, outlining the important features of the shift within the context of EBA Northern Mesopotamian burial practices, and positing some of the reasoning behind the shift.

During the middle of the third millennium, villages throughout the Euphrates region of Syria and across Northern Mesopotamia swelled. As a part of this increase in the urban population, villagers at a number of regional centers surrounded their settlements with thick mudbrick fortification walls over the course of several centuries. In contrast to this relatively common change in urban plan adopted throughout the region, ancient Middle Euphrates residents

buried their dead in an array of grave types during the EBA.[8] Within a single cemetery, such as Gre Virike near Carchemish, mourners may have constructed and maintained pit graves, pithos burials, cist graves, chamber tombs, and dolmens (Ökse, 2006; Cooper, 2007). These grave types represent burials not only in distinct containers and architectural forms, but also include individual and group burials, as well as primary and secondary burials. Monumental burial tumuli and mortuary complexes that cropped up at sites scattered throughout the region further confuse the narrative of mortuary developments in the EBA.

Several seminal articles assessing trends in burial practices in the Euphrates region focus primarily on establishing and refining architectural typologies of graves (Orthmann, 1977; Carter & Parker, 1995; Cooper, 2007). This preoccupation with typologies may be misguided, however. "Splitting" rather than "lumping" burial types has led to a series of presence/absence maps that reveal only the broadest north/south gradient of burial type differences. Cooper's analysis, for example, revealed that shaft-and-chamber tombs exist primarily in the area from Tell Banat south, whereas cist graves are prevalent in the north, and in only three sites from Banat south (Cooper, 2007: 64). This absence of cist graves in the south may be misleading, however, since new evidence reveals that Tell es-Sweyhat has cist graves as well as shaft graves. The same may be true of other sites in the south. I am more convinced that the shaft graves are not present at sites in the north, since these larger graves tend to be targeted by

8 The types of walls erected throughout the EBA are quite varied, however. These variations will be examined in Chapter 4.

illicit excavations, so archaeologists working in the area would likely have heard of looting activities, if not seen evidence of the grave chambers when they open up into sinkholes.

Instead of searching for order in the details of grave architecture, we should perhaps reframe grave types as a representation of a stage in the burial ritual. These grave architecture typologies may be missing the mark by focusing on features that may prove to be superficial. While the final remains of the burial may not stand for the entire funeral rite, they provide a snapshot of one stage of the ritual (Alekshin *et al.*, 1983; Brown, 1995). The type of burial architecture may have carried less cultural meaning to the ancient mourners than their spatial context within or around the associated city. For example, pit graves and cist graves are both simple single inhumations. Cist graves are lined with stone, while pit graves are not. This minor difference in burial architecture may not be culturally important, particularly if both types appear in the same context, such as a formal cemetery. A pit grave in a formal cemetery might carry a much different cultural meaning from a pit grave under the floors of a house, however. The cist graves surrounding the large collective tombs in the Early to Middle EBA cemetery at Titriş Höyük, for example, have been interpreted as a first stage in a multi-part mortuary tradition (Laneri, 2007: 250). The mourners would have placed individuals in these cist graves, and later removed some or all of them for entry into the collective burial. In contrast, cist graves under foundation walls at the same site from the Late EBA more likely constituted the last stop for the

deceased. These cist graves were left open and reused—when a new body was laid in the tomb, the skeletal remains of other members were cast aside or discarded (Laneri, 2007: 252).

Using the burial data from Tell es-Sweyhat and comparisons from other recent excavations, I propose that a shift in burial practices accompanies the transition from unwalled town to fortified city at several locations. Unwalled early to mid-third millennium towns in the Middle Euphrates usually had formal cemeteries on their peripheries, while the mid to late walled cities kept their dead closer, under floors, walls, and courtyards. These burials should be thought of not only as individual pit burials, but also as a kind of foundation deposit, because of their placement under foundations and within construction fill. They were likely interred not only to dispose of the dead, but also to either consecrate a new building or "close" an abandoned one. The treatment of deceased infants in cooking pots and jars supports this interpretation of burials in the Sweyhat 4 period as ritual deposits.

Mortuary Landscapes

Perhaps because experiencing a death in the community is such a visceral and disruptive experience, archaeologists have long acknowledged that death rituals are special events that provide opportunities for the surviving mourners to express multifaceted cultural conceptions of this final stage of life. Mortuary archaeology has therefore sparked a rich body of theory encompass-

ing disparate social aspects of life such as wealth, warfare, and gender, among many others. Spatial context of burial, one of many possible lenses for examining these social phenomena, has been a particularly fruitful area of inquiry with a number of distinct subtopics, including rural and urban mortuary landscapes, location of formal cemeteries, and the situation of graves within cemeteries.

Since the 1970s, archaeologists have built, tested, and reworked hypotheses explaining the positions of monumental burials within rural landscapes. Scholars generally agree that a group of mourners would construct monumental burials, rather than a more modest or unmarked interment, at least in part as territorial markers (Renfrew, 1976; Chapman & Randsborg, 1981; Charles & Buikstra, 1983; Chapman, 1995; Goldstein, 1995; Rakita *et al.*, 2005). Diverse pre-urban cultures, such as those of Meso- and Neolithic Europe, the Khirigsuur and Kurgan cultures of Eurasia, and various Native American societies, cultivated strong traditions of monumental burial outside of settlements or formal cemeteries (Alekshin *et al.*, 1983; Levy, 1989). Whether the placement of these monuments would have been central or peripheral to the territories has been debated, as has the social organization of the monument builders. Generally, however, archaeologists agree that such highly visible mortuary architecture must have been intended to lay claim to the landscape that they modify.

Mourners may communicate by constructing highly visible mortuary monuments not only in rural landscapes, but also either within or near ancient cities (Porter, 2002; Schwartz *et al.*, 2012). In the EBA of the Euphrates area,

highly visible tombs fall into two categories: 1) semi-subterranean tombs as part of larger mortuary complexes, and 2) singular monumental tombs. According to Schwartz, the monumental mortuary complex at the center of the acropolis at Umm el-Marra was likely also used as a symbol. Because of the position and visibility of these tombs, Schwartz attributes an elite or perhaps even royal status to them (Schwartz *et al.*, 2012: 116). This complex of graves and cultic installations, dating to the EBIII to EBIVb periods, took center stage at the Umm el-Marra acropolis—the position traditionally thought of as reserved for the palace and temple at Bronze Age cities. The modern re-excavation of the Til Barsib hypogeum, which also dates to the EBIII/IV, revealed that it too was only semi- rather than fully subterranean, at least during its first two use-phases, which indicates that it too was meant to serve as a visible memorial (Roobaert & Bunnens, 1999: 165). Although its tombs were nearly completely destroyed by robbers, Tell Hadidi also contained “built tombs” that would have been partially visible from the surface, in addition to its shaft-and-chamber tombs that were dug into the stony outcrop that was home to the site (Dornemann, 1979: 117).

Monumental mortuary architecture can be used to reinforce intra-group social bonds as well. At Tell Banat, Porter posits that the White Monument, a large tumulus constructed around 2450 BCE, creates and enshrines ancestors. Much like the pre-urban mortuary monuments described above, this structure actively legitimizes and reaffirms the link between the builders and the urban landscape and surrounding rural territory (Porter, 2002).

Jerablus Tahtani also boasts a monumental tomb (Tomb 302), constructed during the EBIII, or the mid third millennium (Peltenburg, 1999: 429). The placement of this tomb, in contrast to the monumental burial complex at Umm el-Marra, was outside the fortification wall. This would increase the visibility of the monument for those outside the city walls, but would obscure it for those inside the walls. The monument at Jerablus is probably the most similar to the White Monument at Banat, both in terms of its placement, and in terms of aesthetics. Peltenburg reports that the surface of this monument was most likely corrugated (Peltenburg, 1999: 431). It is also likely a single stage in the burial ritual, since the remains of the dead had been disturbed, with adult skulls wedged into corners (Peltenburg, 1999: 432). The excavator interprets this development in the mortuary landscape at Jerablus as "part of a wider strategy in which ascendant elites sought to enhance their status in the emerging political order by identifying themselves with elite behavior elsewhere" (Peltenburg, 1999: 429).

Within urban mortuary landscapes, whether or not the dead are sequestered in formal cemeteries or are incorporated into dwellings is often meaningful as well. Parker Pearson (2001), drawing on a wide range of ethnographic and archaeological examples from modern English tradition to ancient Jutland, touts the significance of changing the location of the dead from outside of the settlement to closer in. The dead may be restricted to a particular area in an overt effort to separate the living from the dead (Parker Pearson 2001: 125). In

contrast, burial within the home rather than in formal cemeteries tends to be attributed to ancestor veneration (Porter, 2002; Schwartz *et al.*, 2012).

While the spatial contexts of graves within urban or rural landscapes have become key focus areas, spatial relationships between graves within cemeteries are perhaps more often discussed. Within a formal cemetery, mourners may use location in addition to grave goods to convey and reinforce messages. The Western tradition of grouping family members within cemeteries is well known, and is also common in ancient cultures worldwide. On a related note, the situation of the body or bodies within the grave is also generally seen as symbolically important, particularly in terms of primary vs. secondary burial or individual vs. collective burial. In the first case, secondary burial may be a step in creating ancestors, or as Parker Pearson notes, "the disaggregation of the body may be an ideological imperative by which the individual is denied and the collective asserted" (Parker Pearson, 2001). Collective burial is often attributed to kinship groups reaffirming their family identity.

EBA Middle Euphrates Mortuary Practices

Typologies

Since the 1970s, several scholars have attempted to explain variation in Early Bronze Age burial practices in the Euphrates region (Table 3). In the first major synthesis of known burial evidence, Orthmann compiled and reviewed

excavations of graves from early archaeological projects, such as the excavations at Carchemish in the early 1900s, and the Till Barsip hypogeum excavated in the 1930s (Orthmann, 1977). After the 1930s, the available burial data explodes, with the salvage operations centering on the Tabqa dam from the 60s and 70s producing a vast amount of excavation and survey data. Orthmann's synthesis includes data from Tabqa Dam projects that had been published or that he directed. In this article, he establishes a basic typology of grave architecture, and attempts to explain some of the variation. He posits that some of the variation is explained through chronological differences.

Table 3. Three Middle Euphrates Early Bronze Age Burial Typologies.

<table>
<tr><th>Orthmann</th><th colspan="3">Carter and Parker</th><th>Cooper</th></tr>
<tr><td>Plain Inhumations</td><td colspan="2">Pit
Earth Covered</td><td>Pit
Stone Covered</td><td>Pit Burials</td></tr>
<tr><td>Stone Cists</td><td colspan="3">Cists</td><td>Cist Graves</td></tr>
<tr><td rowspan="2"></td><td rowspan="2">Cooking Pot Burials</td><td>Pithos
Vertical</td><td rowspan="2">Cremation Urns</td><td rowspan="2">Pithos Burials</td></tr>
<tr><td>Pithos
Horizontal</td></tr>
<tr><td>Chamber Tombs
Dolmen Type</td><td colspan="2">Ditch/Gallery Graves</td><td>Stone Chamber Graves</td><td>Dolmen/Gallery Graves</td></tr>
<tr><td rowspan="2">Shaft and Chamber Graves</td><td colspan="3">Nodal Shaft Graves</td><td rowspan="2">Monumental Stone-built Shaft and Chamber Tombs</td></tr>
<tr><td colspan="2">Single-chambered Stone-built Shaft Tombs</td><td>Earth or Rock-cut Shaft Tombs</td></tr>
<tr><td></td><td colspan="3"></td><td>Monumental Burial Tumuli</td></tr>
</table>

Orthmann's typology is the simplest—his highest order distinction in burial types is individual vs. collective. Within the individual category, he distinguishes plain inhumations, or simple pits, from stone cists, or pits lined with flat slabs. He does not address jar burials in this article. Orthmann delineates the shaft and chamber grave from the "chamber tomb of dolmen type" (1977: 100). The shaft and chamber tomb type consists of a subterranean chamber carved out of bedrock or earth and accessed by a vertical shaft on one end. The dolmen type, in contrast, has a chamber with a larger opening that is then filled in with boulders, making it visible from the surface.

Carter and Parker (1995) revisited third-millennium burial architecture, this time to ascertain whether burial types and ceramic "cultures," such as the Caliciform ware horizon, were spatially correlated. In addition to the early excavations that Orthmann reviewed, they incorporated burial data published in the 80s and early 90s, primarily reports on the Tabqa Dam excavations published after Orthmann's article. The authors systematically define and describe their seven part typology of burial architecture, a modified version of Orthmann's, giving examples of each type. The spatial distribution of burial types did not coincide with the distribution of ceramic cultures. Since the authors operated under the perfectly reasonable assumption that "mortuary traditions are at least as accurate indicators of cultural groups as ceramic traditions," they delivered an important reminder that pots do not equal people (Carter & Parker, 1995: 100). The goal of

their study was not to understand mourning rituals, but instead to use typology to draw out and elucidate other potential cultural trends.

Carter and Parker created the most elaborate typology, in which many categories have sub-types (Table 3). They distinguish between pit graves that are covered with earth and those that are capped with stones. Stone-covered pit graves are still distinct from cist graves, since the burial chamber of a cist grave is also lined with vertically placed slabs. Carter and Parker also introduce pithos burials to the typology. These burials typically, but not exclusively, contain infants or subadults. The authors break the category down into three main subtypes—Cooking Pot Burials, Pithos burials, and Cremation Urns. The term "cooking pot burial" refers to the practice of burying infants in globular vessels of a low-fired, grit-tempered ware known as "cooking pot ware." Pithos burials refer to a burial in any other kind of vessel. Carter and Parker distinguish between pithos burials that are placed into the ground vertically versus those placed horizontally.

The authors break their "gallery grave" category, which corresponds to what Orthmann terms "dolmens," into two types—"ditch" and "dolmen." Ditch graves, or "large sub-rectangular pits with stone slab covers" appear only at Tawi (Orthmann, 1977; Carter & Parker, 1995: 107). Dolmens, in contrast to ditch graves, are lined with stone, and are a bit more common. Dolmens occur not only at Tawi, but also at Halawa and Tilmen. "Nodal shaft graves" or "a deep vertical shaft which leads to one or many chambers located laterally off the shaft," such as the multi-chambered tombs at Halawa, would not be distinguished

from other types of shaft and chamber tombs in either Orthmann's or Cooper's typologies. Finally, the authors divide shaft tombs into single-chambered stone-built ones such as the hypogeum at Til Barsip, and earth or rock-cut shaft tombs such as the kind found in the extramural cemetery at Sweyhat.

In contrast, Porter used the same evidence to understand burial in its own right, and concludes that some of the observed variation reflects an elaborate, ritualized process of creating ancestors. In direct response to the studies described above, she noted that "previous proposals that have concentrated on chronological, ethnic, or status differentiation as explanation of mortuary variability in the Euphrates River valley leave as many unexplained anomalies as they elucidate" (2002: 10). She proposes that monumental burials were used by pastoral groups to negotiate and reaffirm group cohesion and territories.

Cooper (2007) recently responded to Carter and Parker's typology with an updated map and a refined burial typology. I will use her terminology herein. In her study of ethnicity in the EBA Euphrates region, Cooper proposed that local elites created and affirmed their high status through monumental urban burials (2007: 62). According to Schwartz, the centrality and high visibility of the elite funerary complex at Umm el-Marra supports Cooper's view (Schwartz *et al.*, 2012: 158). Cooper's typology is much simpler than Carter and Parker's, as it does away with many of the sub-types. Her typology divides shaft and chamber tombs into two types based on visibility rather than subterranean architecture. She distinguishes "Earth or rock-cut shaft tombs" like those in the outer town at

Tell es-Sweyhat, from “Monumental Shaft and Chamber tombs,” like the “built tombs” that Dornemann describes in the mortuary complex at Tell Hadidi (1979: 117). She also accounts for some of the unusual burial monuments that had been recently uncovered, such as the White Monument at Tell Banat, by creating a category for “Monumental Burial Tumuli.” I use this typology because it is relatively simple, but includes pithos and monumental burials, thereby providing a vocabulary for discussing the entirety of mortuary traditions in the Middle Euphrates Early Bronze Age.

Chronology

Unfortunately, Northern Mesopotamian Early Bronze Age mortuary studies suffer from poor chronological control—the above seminal articles (often necessarily) lump together hundreds of years of burials, a practice that many eschew (Chapman, 2005). This dearth of solid dates is partly because many ceramic forms are long-used, and partly because most data are from salvage excavations with few radiocarbon dates (Jamieson 1993: 36). Nearly all studies that discuss mortuary archaeology in this culture area acknowledge and lament this problem (Orthmann, 1977; Laneri, 1999). We cannot establish a precise chronology of burial developments between sites, so we end up with reductive maps that lump together hundreds of years of burial practices. Porter combines all available chronological data on certain burial types at some major sites within the Euphrates region, but it leaves us with a chart with very low chronological resolution

riddled with question marks (Porter, 2002: 13). A more fruitful avenue for looking at burial practices may be to shift from inter-site comparisons toward intra-site changes. Using stratigraphy within a site, we can situate developments in the mortuary landscape in relation to other changes in the urban landscape.

At Titriş Höyük, a Middle EBA extramural cemetery was used prior to the city's fortification wall construction. Cist graves were clustered around shaft and chamber tombs—a pattern reported at a number of EBA sites throughout N. Mesopotamia (Laneri, 2007: 249). After the city center was ringed by a thick wall in the Late EBA, the townspeople tended to bury their dead within their homes instead. Late EBA contexts from within private dwellings in the lower and outer town have revealed three adult cist graves and one infant jar burial under the building footings (Laneri, 2007: 250). Within the inner town, nearly every house had a funerary chamber. As Laneri describes, "within this framework, the realm of ritual activities associated with funerary practices moved from a communal and centralized area (the extramural cemetery) to a more private one (the intra-mural tomb), while still maintaining the tradition of the use of stone-lined cist graves" (2007: 264). Although there is much less data available for analysis at Tell es-Sweyhat, a similar diachronic pattern in mortuary practices appears to be emerging.

Potential Sampling Bias

The burial evidence from Titriş Höyük, combined with new evidence from Tell es-Sweyhat, indicates that many simple intramural burials may have been overlooked at some sites. If we assume that our current available burial evidence is a representative sample of burials, we would think that nearly all mid-third millennium burials were in formal cemeteries, rather than within cities. But those graves would have been more highly visible, and are thus likely overrepresented. Most of the burials dating to the EBA are from salvage operations, which means that the data are skewed towards the most visible burial types and the smaller burials uncovered incidentally in the course of excavating the easily visible tombs. Many of the cemeteries originally discussed by Orthmann were uncovered because earth- and rock-cut shaft tombs can be easily identified in fields. The shafts often open up into sink holes when irrigation water causes the chamber or shaft to collapse. Farmers notice these depressions and often loot the tombs of valuables before archaeologists are able to salvage the rest. In the Halawa excavation report, for example, Orthmann laments the necessity of recording tombs that had already been looted in 1977, indicating that the shaft and chamber tombs of the extramural cemeteries were well-known and highly visible (Orthmann, 1981: 6). Often, smaller graves of the pit or cist type are discovered by archaeologists because they occur within the same cemetery as the more easily visible burial types, although in many cases, they occur in distinct clusters. Alternatively, the larger, above ground monumen-

tal complexes that can mark shaft and chamber cut tombs are clearly visible within the confines of the archaeological site.

Tawi, for example, has a very well-published record of rock cut shaft and chamber tombs near Halawa that was created when the area was threatened by the rising waters of Lake Assad. In this case, nearly the entire publication consists of recording looted burials in and around the modern village. On the basis of their excavations, the excavators point out that the clusters of robbed graves on hilltops give the impression that the mourners preferred high places as burial locations (Kampschulte & Orthmann, 1984: 7). They caution readers, however, to remember that they discovered these clusters because the modern people had already begun to rob them, meaning that the position of the recorded burials may have had more to do with the expectations of the modern people than with ancient burial ritual. Intramural burials may be underrepresented, since finding them requires not only excavating the buildings that contain them, but also removing those buildings and digging underneath, if those burials are not marked in some way that is obvious to excavators.

Infant Burial

The case of infant burial in the EBA of the Euphrates valley and surrounding areas is also curiously varied. In some cases, infants are buried in ceramic containers, which are either interred in individual pits, or are included within other burials (Schwartz *et al.*, 2006). In other cases, infant burials seem to be treated

more like grave goods or offerings like puppies and other animals (Schwartz, 2007).

The burial of infants in ceramic vessels, although only one of the many ways in which infants are treated after death, was relatively common throughout the ancient Near East. This practice was adopted in Mesopotamia around the end of the 4th millennium, and continued through the 2nd millennium. The practice is attested much earlier in the Levant, beginning in the Amuq region as early as the 6th millennium, after which it spread south into Lebanon and Israel (Bacvarov, 2008: 61). The concept of burying infants in ceramic vessels may have even traveled to Southeastern Europe from the Northern Levant as part of the Neolithic Package (Bacvarov, 2008: 66).

As many scholars have noted, subadults, specifically infants, are often at a stage of life that does not receive the same kind of death ritual as adults (Parker Pearson, 2001). It seems that such may be the case in the EBA of Northern Mesopotamia. Some infants are treated similarly to puppies—as offerings (Schwartz *et al.*, 2012). In other cases, the difference in burial between adult and infants may be more similar. Some of the mid EBA tombs with multiple burials contain both adults and infants, indicating that these infants were deemed people deserving of full funerary rites.

Infants are buried in jars at a number of EBA sites in the Euphrates region. The practice appears to be very widespread, with little to no variation and without

the geographical trends seen with the earth- or rock-cut shaft graves (Cooper, 2007).

The mortuary landscape at Tell es-Sweyhat

Extramural Cemetery

At Tell es-Sweyhat, only a few burial types are represented in the Early Bronze Age occupation. In the mid third millennium, residents buried their dead in formal cemeteries at the edge of town. At this time, Tell es-Sweyhat was a moderately sized village dominated by a large thick-walled fortress at its center. Most occupation centered on this fortress, with some sparse settlement in the area that would later be the outer town. The cemetery was out of use by the time the outer fortifications were constructed, since part of the wall ran directly over top of the cemetery. The wall builders either did not remember the cemetery or were not concerned about building on top of it (Zettler, 1997a: 56).

Most formal excavations of these tombs have been conducted as salvage operations. In the 1990s, the tombs in this area were pointed out to the archaeologists by the site guard, who had noticed that "looters from the nearby village of Hajji Hasan, northeast of Tell es-Sweyhat, had recently been down [into the tomb shafts]" (Zettler, 1997a: 38). The team conducted salvage excavations on two of the tombs, and a complete excavation of a third previously undisturbed tomb. The team estimated that the northwest cemetery may have covered an area of 1

ha, with as many as 100-150 tombs (Zettler, 1997a: 51). Since the 1990s, other tombs were found on the southern and eastern edges of the Outer Town as well, all dating to roughly the same time period, so this initial estimate is likely too low.

Tombs 1 and 5 were earth cut shaft and chamber tombs with roughly circular layouts and hemispherical roofs. The tomb shafts were cylindrical and funnel-shaped, respectively, and each ended in a narrow ledge. Tomb 1 had two steps leading into the chamber, but mourners from tomb 5 may have either jumped, or backfilled the chamber a bit and walked down a dirt ramp. The entrances to the chambers of these tombs would have been sealed with large stone slabs (Zettler, 1997a: 52, 54).

Tomb 5 perhaps provides the most insight into the funerary ritual, since it was undisturbed by looters when it was excavated. The tomb chamber contained two articulated skeletons lying on the floor in the western end of the chamber nearer to the shaft. In the northeastern quadrant of the chamber, six other human skulls were scattered in with a jumble of other human bones and grave goods. Both articulated skeletons appeared to have been female. One had no grave goods directly associated with it, but the other was adorned with personal ornaments such as pins and beads. This woman was also associated with two fragmentary human skulls (Zettler, 1997a: 54). Various animal remains, including sheep/goat, pig, and bird remains were also scattered about the tomb floor and in some of the jars and bowls. The excavators hypothesize that the

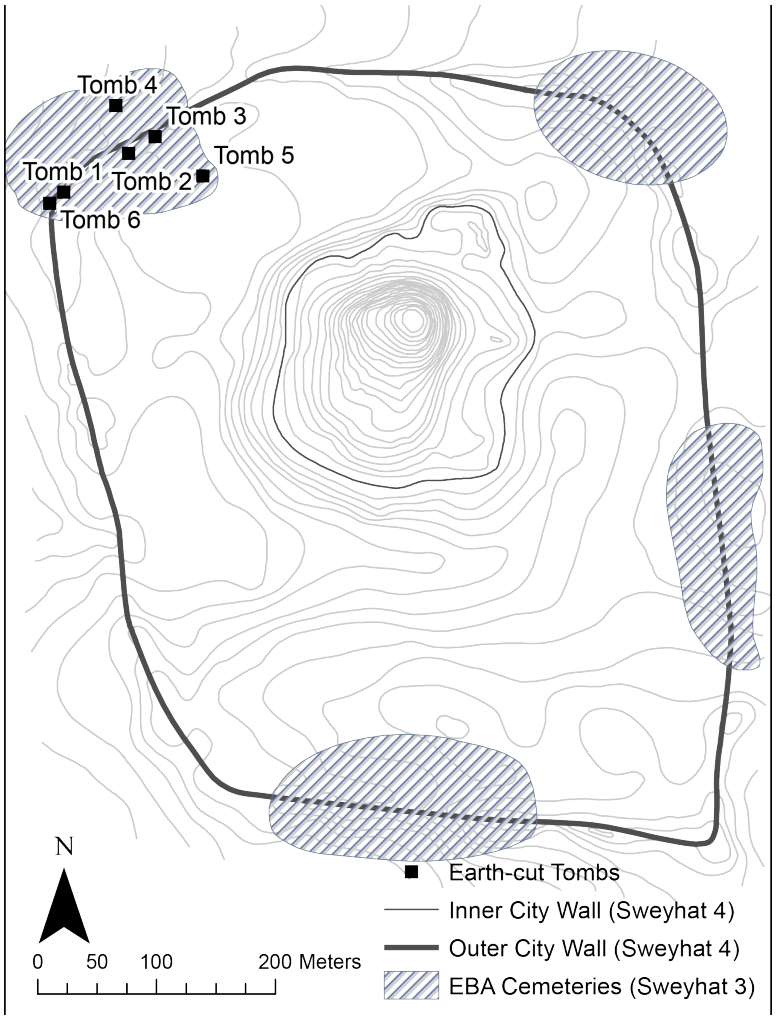


Figure 40. Early Bronze Age Cemeteries at Tell es-Sweyhat.

articulated deceased individuals were partially covered with dirt after placement in the tomb, and that animal offerings were placed on top of one burial.

Ceramic grave goods included spouted vessels and large jars, along with smaller serving vessels such as goblets, cups, and bowls (Zettler, 1997a: 56). The assemblage resembles those from other burial contexts throughout Northern Mesopotamia, and likely represent either provisions for the deceased for the afterlife, and/or the remains of a feasting ritual that involves pouring liquids (Schwartz, 2007: 49, 50).

Periodically, the entrances to the shaft tombs collapse into sinkholes because of the inundation from modern irrigation practices. When a new tomb opens, the Tell es-Sweyhat excavation attempts to conduct salvage excavations of these tombs, with special permission from the Department of Antiquities. The most recent such salvage excavation, in a tomb that opened up on the eastern edge of the Outer Town, was too waterlogged to complete, however. This does not bode well for the preservation of any other tombs in the Outer Town.

Hajji Ibrahim

The third millennium mortuary landscape at Tell es-Sweyhat continued not only over the Outer Town, but also extended to the satellite mound of Hajji Ibrahim. By the mid-third millennium, the fortified farmstead was no longer occupied, but was instead used as the location for burials (Danti, 2000: 141). The material remains of these shallow burials included ceramics of the same types as those found in the shaft-and-chamber tombs around Tell es-Sweyhat, along with scattered small skeletal elements (Danti, 2000: 142). The remaining fragile skeletal elements—the occasional rib or vertebra—indicate that these simple cist graves were likely the first stage in a more complicated burial ritual (Danti, 2000: 142). This small mound was a dedicated burial site during this time period. The steepness of the mound could have even made it mimic a burial tumulus, such as the White Monument.

Intramural Burials

Adult Burial

Excavations conducted just inside the Late EBA inner fortification wall at Tell es-Sweyhat from 2008 to 2010 revealed several infant burials and a single adult burial. The adult burial is stratigraphically the earliest of the three burials, since she was discovered underneath the footings of the late EBA building that was contemporary with the city wall (Figure 41). The footings for the back wall of the building served as capstones for the burial where the wall bumps out into the room in order to cover the entire burial. This dog-leg appears intentional, and would have served as a constant reminder of the presence of this burial (Figure 42). This is an interesting choice, since earlier shaft-and-chamber tombs were obscured by the outer fortification wall in such a way that they appear to have been forgotten. Presumably, the larger fortification wall was erected first, and then buildings cropped up alongside it soon after its erection. The architecture in this part of the building appears to have been constructed a bit later than the walls to the north and the south. The footings of the building wall in this area consist of small cobbles abutting the city wall, with the inside layer of stones the more typical loaf grinder shape and size. The wall of this room was built out with an additional row of loaf grinder footings over the burial only, so the burial jutted into the room as a buttress. It's possible that the mudbrick of this section of the wall did not go up the entire height of the wall, but rather ended with a ledge or

shelf for offerings. The brick is not preserved high enough in this area for us to confirm or deny that possibility.

The location of the adult burial appears related to the cultic function of the associated room. Two of the three infants were buried in the rubble of the cultic structure. The potential connection between veneration of the house gods and the small cultic installation at Tell es-Sweyhat is tantalizing. In the Late Bronze

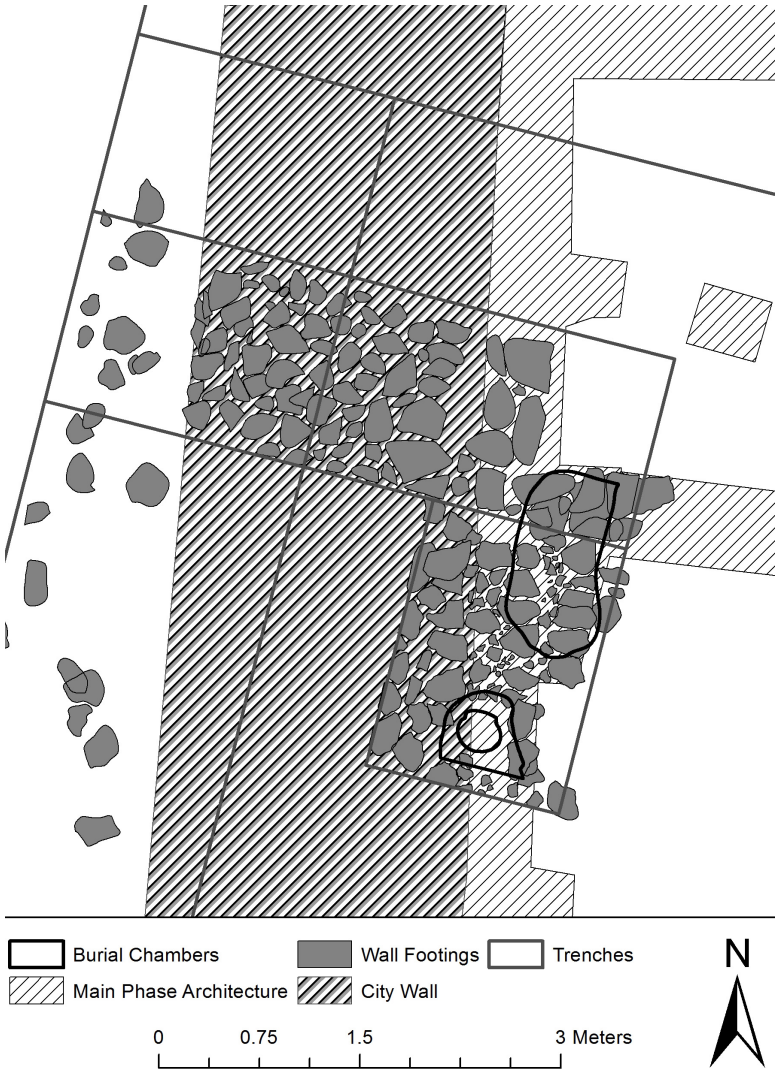


Figure 41. Relative Positions of Adult and Infant Burials.

Age, the so-called “domestic cult” is well-attested in the archives at ancient Emar (modern Tell Meskene) across the Euphrates from Tell es-Sweyhat in the Big Bend area. In addition to more traditional references to gods, such as in curses, the phrase “the gods and the dead” is repeated in reference to inheritance documents. The context of this phrase reveals that it refers to a particular conception of gods that dwell within a family’s household. The heir to the house,

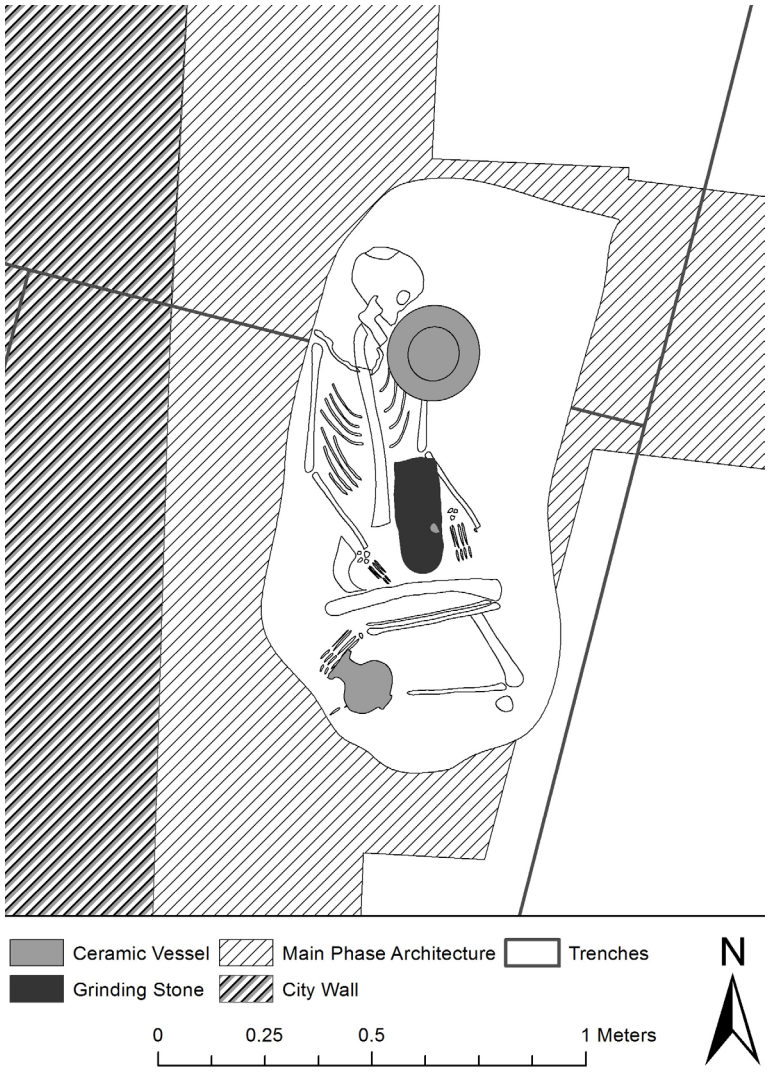


Figure 42. Adult Burial in Operation 151B.

usually the oldest son, would be granted ownership of his family home, but this honor would be accompanied by the burden of pleasing these house gods. Van der Toorn and Karel describe these “gods belonging to the house” as ancestors as we commonly understand them (1995: 38).

The grave was a simple unlined pit inhumation that we uncovered while excavating a small sounding through the inner city wall footings. We revealed the back of the skull in the original trench, and then extended it to recover the remainder of the skeleton. We had also cut a sounding through the city wall in one other area, but no graves were uncovered in that sounding. We excavated through the EBA building footings only in two small areas, so there could be similar graves under some of the other unusual wall joins or buttressed corners in this building.

This pit grave contained the remains of a 20 to 35 year old woman, who would have stood about 1.75m (5’1”) high (based on humerus length measured in situ)[9]. She was oriented roughly north/south, and was resting on her left side, facing east (Figure 43). Her legs were flexed, and her arms were by her side with her hands resting on her pelvis. Perhaps most notably, some evidence of pathology was discovered inside of her ribcage where her right lung was. A calcareous inclusion several centimeters long indicates that she suffered from a lung infection in her lifetime, which eventually healed and calcified. Gravity and animal action caused some minor disturbance of the remains, including a patella that was out of place, and a few toe bones that migrated into the small ceramic

9 Age and height were assessed by Veronica Joseph, a Ph.D. Candidate at Boston University.

jar that had been placed at her feet. Otherwise, the grave appeared undisturbed and in relatively good condition.

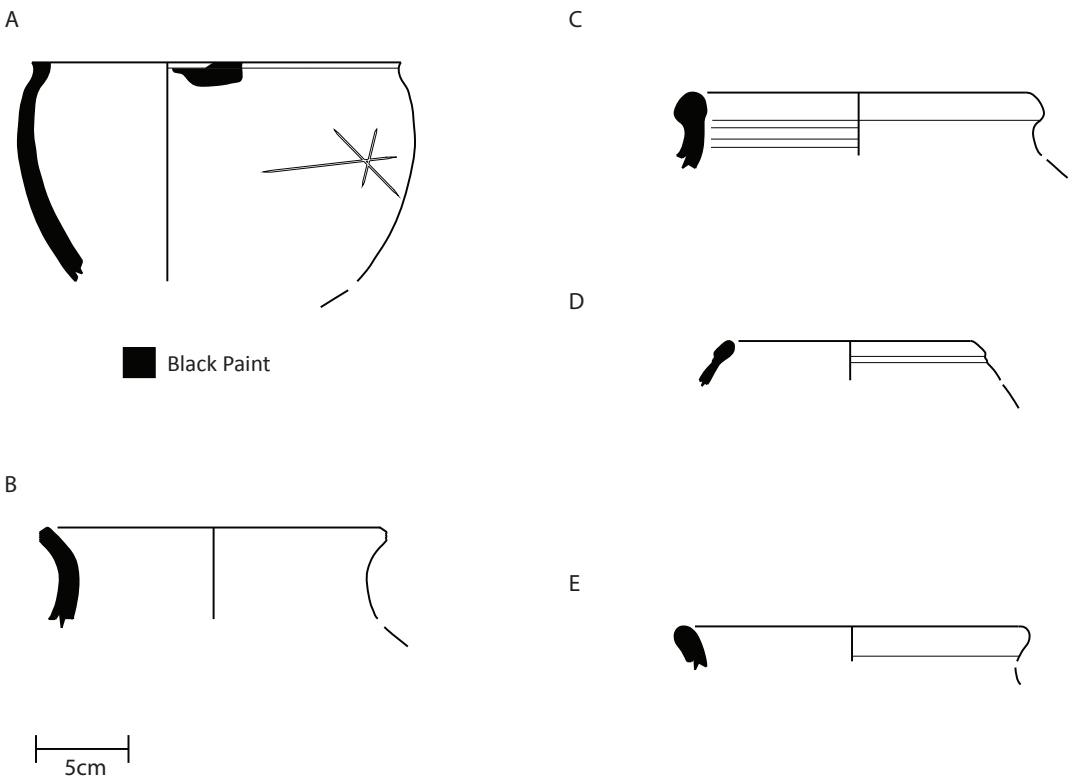
The matrix in the fill of the upper part of the pit grave contained a number of ceramic artifacts, mostly serving vessels, such as shallow bowls (Figure 44). All of these vessels were fragmentary, but enough diagnostic sherds remained to create reconstructions of five vessels. Three (B, C, and E) are from the necks

Figure 43. Adult Burial in Operation 151B.

of jars with everted rims, similar to the ceramic vessels found inside the grave. The club rim of vessel C is common in Sweyhat 3 contexts, and continues into Sweyhat 4 levels (Danti and Zettler, 2007: 173; compare to Holland 2006; Fig 22.9, 64.9, and 72, 12-17). Vessel D is the inverted rim of a globular vessel. The rim and side of a large deep bowl was also found here (Vessel A). This bowl was inscribed with a star-shaped potter's mark, and retained a splotch of black paint at the rim. This bowl rim sherd is consistent with the Painted Simple Ware defined by Braidwood and Braidwood. This ware type was in use in the Amuq I and J periods. It mostly appears in jars, bottles, pitchers, and goblets in the earlier phase, and bowls became more common in the Phase J (Braidwood, Braidwood & Haines, 1960: 414, 444). The greenish hue to this sherd is also more commonly seen in Plain Simple Ware vessels later in the EBA.

Several small animal figures made of unfired clay were also included in this matrix, as was a lump of pure gray clay with orange flecks that likely constituted the source material of these figurines (Figure 45). Three pieces of chipped flint were also uncovered in the upper layers of the burial. Stratigraphically, the burial certainly predates the wall that was constructed to run right over its top. The footing stones for the wall serve as the capstones for the burial. Based on this feature, I argue that the burial immediately predates the construction of the building.

Within the burial chamber itself, a large jar was placed upright next to her face. Inside this jar was a small cup (Figure 46). A loaf grinder was placed



A. TSW10.2276.01; Context: 151B/104/02; Slipped Orange Ware; Incised Design
B. TSW10.2275.01; Plain Simple Ware
C. TSW10.2251.01; Context: 151B/105/03; Plain Simple Ware
D. TSW10.2251.02; Context: 151B/105/03; Plain Simple Ware
E. TSW10.2251.03; Context: 151B/105/03; Slipped Orange Ware

Figure 44. Ceramics from Adult Burial in Operation 151B.

Figure 45. Clay Animal Figurines from Upper Layers of Adult Grave in Operation 151B.

alongside the body next to the abdomen, and a small Euphrates Banded Ware jar was resting on its side next to her feet. Other examples of Euphrates Banded Ware at Sweyhat are found nearly exclusively in Sweyhat 3 contexts. At Sweyhat and throughout the Euphrates region, this ware type is almost always found in mortuary contexts, however. Since all of the grave goods uncovered at Sweyhat so far date to the Sweyhat 3 period, we would not expect to have any Euphrates Banded Ware from Sweyhat 4 contexts. Porter reports a similar situation at Banat (Porter, 2007: 7). Some examples from tombs at Hadidi may push

Figure 46. Ceramic Vessels found within Adult Grave in Operation 151B. Left: Cup Found Within Large Vessel at Head. Right: Small Collared Jar Found at Foot.

Figure 47. Beads found within Adult Grave in Operation 151B.

were they resting within recognizable burial pits. These two globular cooking pots were located within rooms. The surrounding sediment was not distinct from the other collapsed mudbrick and ash rubble that filled the rooms. Instead, most likely, these pots were placed upright in the fire-damaged remains of the Late EBA houses, which the residents then filled in and leveled off with more rubble that would then create a new living and working surface above the old one.

One other infant cooking pot burial has been published at Tell es-Sweyhat, from Area III, in the northern part of the Low Inner City. This burial lies in the edge of a room just inside the inner fortification wall, which "appears to have been surrounded by a stone wall for the express purpose of a burial" (Holland, 2006: 74). This burial was located in phase 4, which Holland dates to the Early Bronze IVb. Provided that the fortification wall was erected around the entire site in a single construction event, this burial would be roughly contemporaneous with the other cooking pot infant burials from the Southwestern Low Inner City.

A curious typological distinction appears in Carter and Parker's article concerning the pithos burials. The authors describe three main types of pithos burial: Cooking-pot Burials, Horizontal and Vertical Pithos Burials, and Cremation Urns. The cooking-pot burials, so named for the globular vessels of friable coarse-tempered material, they say, "contain the remains of infants or young children and are located under house-floors (Carter & Parker, 1995: 106)." Based on the evidence at Tell es-Sweyhat, the distinction between vertical and horizontal placement may not have been particularly important at this city.

the dates of this ware type a bit later (Dornemann 1979: 122). The woman was most likely buried with a necklace or bracelet, and possibly a bronze pin that had degraded beyond recognition, since small copper fragments were found near the head, and nine small shell beads were recovered from a flotation sample of the grave fill (Figure 47).

Infant Burials

The earliest infant burial was found in a hole that had been dug into the cobble stones of the footings of the back wall of the Operation 102 building, that we first noticed by the conspicuous absence of the filler cobbles in that area around a very soft matrix of silty sand. The stratigraphy indicates that the infant was buried in this area after the adult was interred, and after this part of the building was no longer in use, since the burial pit punched through the back wall of the building and chipped into the fortification wall.[10]

This burial seems to defy Carter and Parker's typology. While it is quite similar to the form described as a vertical pithos burial at Titriş, since it is also of the "long-lived grooved rim jar type," but it was certainly laid into the burial pit horizontally (Figure 48) (Carter & Parker, 1995).

In the process of excavating to the main living floors of the Late EBA buildings, we uncovered two burials of infants inside of cooking pots. These pots were situated vertically, and were neither capped with sherds or flat stones, nor

10 Since infants have such small, unfused bones, we dry-sieved this burial in a 1mm screen. This turned up a number of charred seeds, which will be analyzed.

Figure 48. Infant burial. Operation 151B.

Furthermore, Carter and Parker describe cremation urns at Gedikli as contained within “nearly spherical pots with outward flaring rims made of a ‘brittle baked clay’ often called ‘cooking pot ware,” which also matches the description of two of the infant burials at Tell es-Sweyhat (Carter & Parker, 1995). These two infants were not cremated in the cooking pots, however, since the skeletons were still relatively well articulated.

Discussion

The shift in mortuary landscape at Tell es-Sweyhat, particularly when examined in conjunction with massive architectural alterations, indicates that an

important conceptual change occurs between the mid and late third millennium. Rather than sequestering the dead to a particular area outside of the city, at least some of the dead are kept close, under the floors and walls of new buildings inside the city center. Around the same time the earth-cut chamber tomb cemeteries ringing in the Outer Town are abandoned, Sweyhat residents appear to adopt a new burial ritual. Rather than maintaining large communal tombs with nearly a dozen successive burials, the mourners begin to focus instead on single, simple interments. Furthermore, from this positioning of the dead immediately under wall footings, one cannot help but see a Northern twist on the Mesopotamian tradition of foundation deposits as a way of placating "gods of the house" or ancestors. Other cultures, including ancient Greeks, Maya, and Inca, have been known to bury objects under houses or sacred buildings in an effort to consecrate the space (Osborne, 2004). Buried objects may be created especially for this purpose, as in the case of the Neo-Assyrian figurines, or may consist of common ornaments, weapons, or other valuables that were originally used for other purposes. In some cases, at Tiwanaku, for example, human bodies are buried in this way (Blom & Janusek, 2004).

Selenkahiye, a contemporary EBA site in the Middle Euphrates, provides a clear connection between the deposition of human figurines under foundations and the similar positioning of human burials. Human figurine foundation deposits of the "bird face" type were uncovered in several contexts at the site. Furthermore, van Loon reports that "hollowed out just below the house's foundations,

[he] found two circular graves separated by two mud bricks (van Loon, 1979)." This positioning could reflect a relationship between the Southern Mesopotamian tradition of placing small figurines representing gods at doorways and under foundations and the act of placing ancestors (possibly identified with house gods) in similar positions.

The case of Çatal Höyük, although it is an earlier site and much farther north than the area in question, provides a tantalizing point of comparison with the Tell es-Sweyhat infant burials. Infants at Çatal are often buried under building foundations, mostly in liminal spaces within the home, including under thresholds, or to commemorate a change in the use of the space (Moses, 2008). Some have suggested these infants were sacrificed for the express purpose of sanctifying a space or shoring up a collapsing wall (Moses, 2008). At Titriş, a similar practice is attested, with intramural graves found "clustered in specific sectors of the house, primarily in the back" (Laneri 2011: 124).

The treatment of dead infants appears to be different from the practice of burying adults as foundation deposits in the EBA Euphrates region. At Umm el-Marra, some infant burials seem to be located as foundation deposits. Schwartz describes a burial under the central part of the tomb 1 complex as having no "obvious mortuary character," but containing various dead puppies and an infant buried inside a wall (Schwartz *et al.*, 2012: 167). According to Schwartz, "The interment of puppies and other animals indicates a continuity of animal ritual from this period to that of the later equid installations, while the

interred infant recalls the babies found in the same installations." (Schwartz *et al.*, 2012: 164) The treatment of infants suggests that they may have been in some liminal position, having not quite reached personhood. Infants were often either included in tombs with the adults, or in the unusual cultic "installations" with puppies, donkeys, and other animal remains.

In the Late EBA at Tell es-Sweyhat, we see two related burial practices. First, an adult is buried as a foundation deposit, consecrating space in a courtyard. The covering for this burial jutted into the room later constructed on top of it, reminding those who used the space of the burials. Second, after these buildings were no longer used regularly, several infants in cooking pots and one in a jar were placed in the fire-damaged collapsing buildings, which were then filled in and leveled to make way for the next phase of architecture. In this case, the infant burials both closed an unused space, and re-consecrated the new building.

All of this activity was carried out in and around the "podium room," described in detail in Chapter 2. Unusual features and artifacts in this room indicate that it was likely used as a kind of chapel, which may have been part of an early iteration of the ritual attention to house gods or ancestors, a local custom referred to at Emar in the Late Bronze Age archives. This context is similar to another room in the northern sector of the Tell in Area III.

In terms of mortuary custom, the Sweyhat 3 to 4 transition appears to be accompanied by an increase in localization of the dead, and a new emphasis on keeping one's deceased within the home. Several infants and one adult

appear to be used by the living to consecrate spaces, either for new construction or to close an area. This new kind of use implies a possessiveness of the dead that was not evident in the large communal graves. This change in mortuary custom is directly related to the shift in defensive strategies at the site. Closing out the cemetery occurred as the outer rampart was constructed to enclose the outer town. As the dead were brought into the settlement so were the residents brought under the aegis of large fortifications.

Chapter 5: Defense

The construction of city walls was the most dramatic component of the reorganization event at the end of Sweyhat 3. In examining the nature of the Sweyhat 3 to 4 shift, the role of these fortifications must be considered. Perhaps the most obvious explanation for the sudden erection of these walls would be the introduction of a threatening new political entity in the region. Alternatively, the residents may have constructed these walls as a new response to the same basic threats that had always been present. I will evaluate these and other possibilities in this chapter.

The first half of this chapter constitutes a brief review of the history of archaeological thought on warfare, definitions and terminology pertaining to warfare, and the archaeological correlates of warfare. In the second part, I review each of those correlates and how they are visible in the Early Bronze Age of Mesopotamia, followed by how the evidence from Tell es-Sweyhat fits into that context. Finally, I discuss how the defensive strategy at Tell es-Sweyhat shifted when Sweyhat became a full-fledged city.

Warfare

Anthropologists neglected warfare studies from the inception of the field until around the middle of the 20th century for the simple reason that they did not

believe that the people they studied actually engaged in warfare. Many scholars in that era were committed to a model of social development that was directional—simple societies would become more complex over time. Those who lived in non-state societies must not have engaged in "real" warfare, since that was, by definition, too complex an activity for them (Keeley, 1996; Carman, 1997: 7; Otterbein, 1999). This myth affected the interpretations of material remains of the Mayan civilization in particular. Early archaeologists considered the Maya to be peaceful "pre-industrial flower power people" focused on religious practice rather than conflict (van Teurenhout, 2001: 129). During World War II, when war became foremost in everyone's minds, anthropologists began to address the topic, and eventually during the 1980s they began to examine warfare in non-industrial societies, attempting to understand its causes so that it could be avoided (Carman, 1997: 8, 9).

Archaeologists who pioneered the biblical and classical archaeological traditions did not suffer from the myth of the ancient "flower power people," because they were confronted with textual and iconographic evidence of warfare from the inception of the field (Thorpe, 2003: 146). The best-known early example is probably Heinrich Schliemann's interpretations of his excavations at Troy and Mycenae in the light of Homer's epic tale of the Trojan War (Trigger, 2006: 255). These projects were carried out in the 19th century, and constitute some of the earliest archaeological fieldwork. In Mesopotamia, some of the earliest ancient artifacts uncovered were Neo-Assyrian (Iron Age) wall reliefs at

the cities of Nineveh, Khorsabad, and Nimrud by Botta and Layard, again in the late 19th century (Trigger, 2006: 70). These massive bas-relief stone wall coverings, now mostly housed a special wing in the British Museum, depict acts of war, including cities under siege and the brutal treatment of prisoners of war. A very formal well-provisioned military is depicted, complete with chariots, cavalry, archers, and slingers (Reade, 1972: 103, 104). The reliefs recovered from Assurbanipal's palace at Nineveh show some particularly gruesome images of warfare (Bonatz, 2004). These images, particularly when coupled with the translated cuneiform inscriptions that ran across many of the bas-reliefs, sparked interest in warfare in Mesopotamia, and created a framework for its study. Thus, archaeological thought concerning the ancient near east has always considered warfare an important topic, even as earlier cultures and their corresponding art and archives were uncovered over the following decades.

Terminology

The Early Bronze Age is essentially a transitional period characterized by major societal shifts. This millennium marks the shift from illiterate to literate, from prehistoric to historic. Societies moved accordingly, from simpler to more complex. Warfare may have undergone a parallel shift during this millennium, from smaller scale ad hoc skirmishes to larger more organized battles. In the following section, I outline definitions for the various kinds of conflicts that may have occurred in this era. In doing so, I draw heavily on prehistoric studies so as

not to automatically preclude discussion of warfare in the earliest centuries of the EBA.

Prehistorians often accept the purposefully broad definition of warfare as “a state or period of armed hostility existing between politically autonomous communities,” in which the “state or period” can be any length of time, and the “communities” can be of any size (Lambert, 2002: 209). This definition, therefore, would include both the state-level engagements such as the World Wars, and also smaller-scale engagements such as raids by neighboring villages (Lambert, 2002: 209). For prehistorians, this lumping is necessary, since simpler societies engage in smaller-scale conflict by definition. Such societies do not possess the highly organized bureaucracies to create and maintain large standing armies. This inclusive definition of warfare is appropriate for the societal transitions of the Syrian Early Bronze Age, particularly its initial centuries when the Uruk civilization had declined and the settlement hierarchy was limited.

When using such a broad definition of warfare, it becomes necessary to distinguish between different types of conflict, whether by scale or by other characteristics. Carman (1997) conceptualizes these differences in terms of “levels” of violence from interpersonal, such as a bar fight, to total war, such as World War I. In the case of Tell es-Sweyhat, neither extreme end of Carman’s spectrum is relevant, in the former because of lack of evidence of a singular interpersonal confrontation, and in the latter because societies were not inter-connected enough to engage in warfare at the global scale. Using the

available evidence, we can limit the discussion to conflicts ranging between smaller-scale raids, and larger-scale organized sieges (1997: 6). Burke, using different criteria, claims that “In the ancient world military engagements may be characterized broadly as one of two main types: the open or pitched battle, and the siege” (Burke, 2008: 27). Burke’s model, developed as part of his analysis of second millennium warfare in the Levant, is not entirely appropriate for the third millennium, since it assumes a high level of military organization that likely only came into being in Southern Mesopotamia towards the end of the EBA. His two main types could still be applied if both terms are stripped of their assumptions concerning the sizes and level of organization of the two clashing armed forces. A pitched battle is essentially a clash of two forces away from the home city of either, while a siege is an attack of an invading force on the home city of another. Generally, these terms are loaded with the assumption that these forces are organized armies and that the attacks are planned and strategized. These assumptions may not necessarily hold, particularly for the earliest centuries of the third millennium in the Middle Euphrates region. The basic contrast of off- and on-site conflict provides a useful framework for this analysis, however.

A variety of terminology describes conflicts of various scales both on and off-site. The term “ambush” describes a small-scale off-site sudden attack by a group on people who were away from their village (Steinen, 1992: 134). Archaeological evidence for such an act would be slight, as it would represent a single event in the landscape outside of a settlement. Ambushes are attested in second

millennium records at Mari, but we have little other evidence of such attacks (Burke, 2008: 27). A raid, small to medium-sized and on-site, could potentially leave traces in the archaeological record, since occupation often continues after the residents had recovered. Raids can also vary in intensity. During the Crow Creek Massacre, for example, a village of nearly 500 was overwhelmed and slaughtered by another group (Zimmerman, 1997). This event was enormous and devastating in impact, even though it would still be considered a raid because of the presumed goal of the attack. Both ambushes and raids tend to be intended for some specific goal, such as theft or revenge that does not include occupation of the settlement (Steinen, 1992: 134).

When discussing conflict in the Bronze Age of Mesopotamia, most immediately think of sieges, because of the iconographic and textual references to such conflicts. A siege is a large-scale on-site attack. When under siege, a settlement is attacked by an organized armed force for a prolonged period of time. Those inside the city may be equally organized and powerful, or slightly less so. Generally, if the force inside the city was much weaker than the army outside its gates, the army would gain nothing by laying siege to the city when a raid or sudden attack would suffice. Siege warfare is usually imagined as armies of Sargon or Naram-Sin marching through the Euphrates on their way to sack regional centers such as Ebla and Armanum (Cooper, 2006: 69). Sargon claims to have “conquered the city of Uruk and destroyed its walls,” and his grandson Naram-Sin makes similar claims (Burke, 2008: 28). In the documents available

from the UrIII period, sieges are referred to obliquely through references in year names (Burke, 2008: 28).

Archaeological Correlates

Archaeologists of prehistory generally agree that several lines of evidence can point to warfare in the archaeological record: 1) skeletal remains; 2) weaponry; 3) iconography; and 4) settlement data, including architecture (Thorpe, 2003; Runnels *et al.*, 2009). In the case of skeletal remains, both mass graves and evidence of traumatic injury on individual skeletons have been treated as evidence of warfare. This kind of data supplies the most immediate and direct evidence of violent conflict. Traumatic injury—provided it could not have resulted from an accident—indicates that someone actually died at the hands of an enemy. Weaponry, iconography, and settlement data all indicate that a violent milieu existed, but do not necessarily indicate that a violent attack occurred.

Skeletal Data

Little skeletal evidence of large-scale violent death exists throughout the Early Bronze Age in Northern Mesopotamia. One notable exception is at Tell Chuera, where several skeletons were uncovered in a destruction layer dating to roughly 2450. In level 4 of Steinbau 2, the skeletons of 5 individuals were found. Their bones were so heavily burned that they had a bluish tinge. These

individuals appear to have been covered over with dirt where they fell, rather than formally buried. The bodies were also accompanied by weaponry, including blades and axes. Seven more skeletons were found nearby in similar circumstances (Orthmann *et al.*, 1995: 75). This rather dramatic scene is perhaps unique in the EBA of Northern Mesopotamia. No evidence of violent death has been uncovered at Tell es-Sweyhat to date.

Iconography and Documents

Iconographic depictions of warfare have been used as evidence in contexts as early as cave paintings in the European Paleolithic (Thorpe, 2003: 152), and have also been used by classical and biblical archaeologists to supplement their documentary understanding of the practice of war. Coupled with finds of weapons, images and artwork can let archaeologists know which objects were used in warfare. Such images can also indicate what kinds of perishable weaponry and armor may have been used. Wooden arrow shafts, bows, and shields would not survive in most contexts, for example.

Archives in some of the major cities in Mesopotamia provide insight into the political climate that would not otherwise be available archaeologically. In addition to warfare as a method of resolving political conflict, peaceful solutions such as treaties and royal gifts were also used. These sorts of inter-city interactions would not be apparent from the archaeological record at all. Certain ancient

documents and images are notoriously propagandistic, however, so the historical record must be treated with a bit of caution and skepticism.

Texts from the Mari and Ebla archives, although not the only documentary sources on violent conflict in the past, have provided some of the best documentation for the regional political climate in third millennium Northern Mesopotamia (Archi, 1995a; Archi, 1995b; Civil, 2003). These texts document a tense relationship between the two regional powers fraught with battles and negotiations over the affiliations of smaller political entities. These documents also provide evidence about the organization of armies and weaponry (Archi, 2008: 3). Texts reveal that the bow was made and presumably used in Syria, since documents record a tribute of bows paid from Ebla to Ur (Miller, McEwen & Bergman, 1986: 180). Composite bows are also referred to in the Mari letters, along with bronze arrowheads and even hard wood arrowheads (Miller, McEwen & Bergman, 1986: 190). Shipments of bronze arrowheads were sent from Ebla to regional centers Nagar (modern Tell Brak) and Kis (Archi, 2008: 3).

Later in the third millennium, ancient texts begin to document the exploits of Sargon and Naram-Sin in Northern Mesopotamia. Although these are not the first inscriptions documenting violent conflict in the third millennium, they are clearer and more numerous (Postgate, 1992: 242; Hamblin, 2006). Unfortunately, since we do not know the ancient name of Tell es-Sweyhat, we cannot get

specific evidence as to what battles or negotiations with the city may have taken place.[11]

Iconographic and textual depictions of warfare from as early as the third millennium is a little spottier. One of the earliest pieces of iconographic evidence of violent conflict was found at Uruk, and depicts a few armed men with bound prisoners (Brandes 1979). A cylinder seal from Mari dating to the late Early Dynastic period (EBIII) may depict a siege of enemy fortifications, based on the specific type of large reed shield used to protect the shield holder and an archer shooting a fire arrow (Eichler, 1983: 99). Various fragmentary ivories uncovered at Mari dating to this era also show soldiers with weapons such as knives, or captured enemies with their arms bound behind their backs (Parrot, 1953: fig. 66, 70). Images reveal that the composite bow was introduced sometime in the middle of the third millennium as well (Miller, McEwen & Bergman, 1986: 180). Early Dynastic III and Akkadian art shows the recurved composite bow—a technological improvement over the simple bow, since it is made of several different materials glued together for more tensile strength (Miller, McEwen & Bergman, 1986: 182). Because glues were probably used to assemble these devices, few archaeological remains would persist. Our only clues could be the horn cores that may survive (Miller, McEwen & Bergman, 1986: 184). Perhaps a little oddly, not many depictions exist of archers using simple bows, possi-

11 Tell es-Sweyhat might be ancient Burman, mentioned in Enna-Dagan's letter to the king of Mari, for example, but this designation is not secure (Danti and Zettler 2007: 180; Pettinato, 1991: 238; MEE 6, r. VII 2–VIII 3).

bly because of their relative weakness compared with other bow types (Miller, McEwen & Bergman, 1986: 181).

The best-known and clearest examples of warfare iconography in third millennium Mesopotamia are probably the Standard of Ur and the Stela of the Vultures. The latter, found at Girsu in southern Mesopotamia, depicts armies marching into battle behind the king of Lagash in a battle against Umma (Winter, 1986; Alster, 2003). On one side of the Standard of Ur, uncovered in the Royal Cemetery of Ur, organized forces with spears and various wheeled war vehicles head to battle as well. At least in Southern Mesopotamia, then, leaders directed large-scale organized conflicts. It is not always possible to tell how well-matched the king's opponents may have been. Many, if not most, of these battles were likely very asymmetrical. Some reliefs uncovered at Ebla reveal evidence of violent conflict perpetrated by that city as well, so at least some powers may have existed to rival the Southern Mesopotamian forces (Hnila-Gilbert, 2004). Slingers were included in mixed infantry units along with archers and spear-wielders in this earlier time period as well (Saggs, 1963: 151).

At Tell es-Sweyhat, decades of excavation have revealed no texts and little iconographic evidence. Iconographic evidence at the site is limited to painted plaster murals, figurines of animals and humans, and three dimensional models of houses and wheeled vehicles. The wheeled vehicles, referred to as "chariots," are uncovered in a variety of contexts throughout the site (Figure 49, 50). These model chariots may indicate that inhabitants at Sweyhat had some

knowledge of or interest in the use of these vehicles. It is unclear, however, how or whether they may have contributed to violent conflict in Northern Mesopotamia during this time period. Iconographic depictions of these kinds of vehicles might suggest that they were thought of as machines of war, but in off-site battles, where they would have been of more use, rather than in sieges.

Several fragments of model chariots have been uncovered in a range of contexts in the EBIV levels of the Inner City at Tell es-Sweyhat. These figures are ceramic, and appear to be made of the same ware types as ceramic vessels. All three examples from Area IV were found in the same context as model chariot wheels and/or human figurines. These models have a long hole punched through for an axle to attach the wheels, and another hole punched through where the harness would go (Figure 49, 50). Two of these figures have decorative hatching inscribed on the front of the vehicle. None of these examples were found with metal rods or wires, so presumably they would have been assembled with reeds or sticks. Much more commonly, model chariot wheels are found in contexts without other fragments of the main body of the chariot itself. These wheels are distinguished from pierced disks on the basis of their “hubs.” SW.522, for example, was accompanied by SW.547, and SW.549, two chariot wheels, and SW.521, a model house. The two chariot wheels appear to have been fired very evenly, but at different temperatures, with one wheel fired to a greenish hue.

Complete model chariots and chariot wheels have been found in a variety of contexts, including domestic work areas and funerary contexts. Like other figurines, these models were most likely created to be used both as toys and as religious relics. Two contexts from the SWLIC indicate that not all of these "wheels" may have been used as parts of chariot models, but may have sometimes been used interchangeably with the pierced disks, which were most likely used as spindle whorls. The primary phase of room 8 contained a chariot wheel and several stone spindle whorls, indicating that these artifacts may have doubled as spindle whorls. Essentially, a spindle whorl and a chariot wheel are functionally the same—they are discs meant to have a stick or a reed stuck through the middle. The stick is the axle of the model chariot, and is used to spin wool into thread on the spindle whorl. These two kinds of artifacts are essentially interchangeable, and old spindle whorls could even have been used to make model chariots or vice versa. The fact that the two chariot wheels mentioned above were fired at two distinct temperatures could be the result of this reuse. Each could have begun its life as a spindle whorl, but was then incorporated into a model chariot.

These clay models most likely did not represent the light spoked-wheeled war vehicle that is usually conjured by the word "chariot." Iconographic evidence from Southern Mesopotamia shows no indication of the spoked wheel before the Middle Bronze Age (Burke, 2008: 29). Instead, these figurines more likely depicted heavy block-wheeled carts that would have been pulled by equids. The

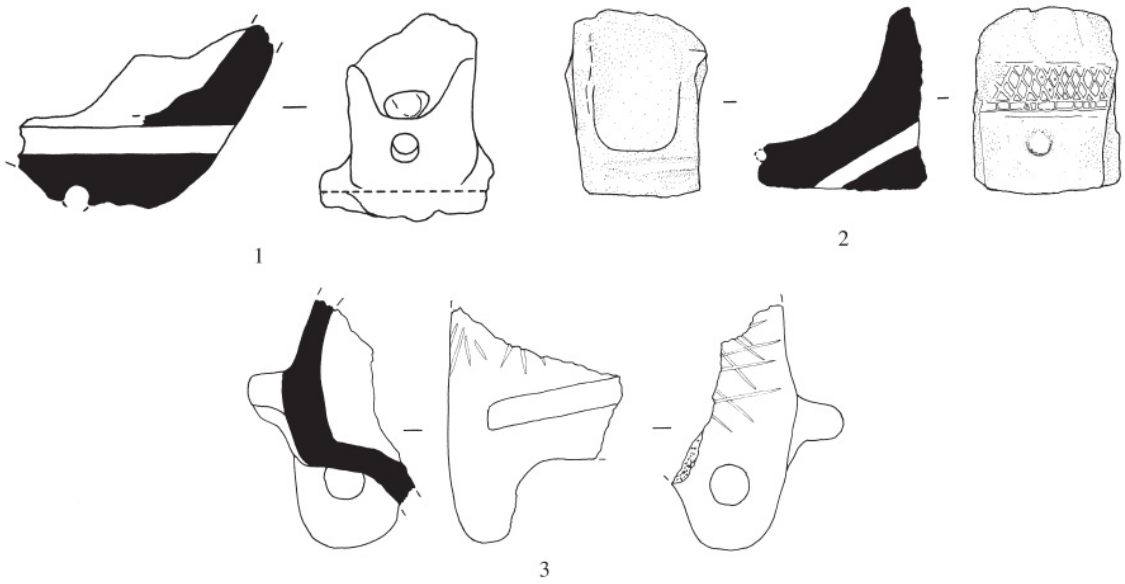


Figure 49. Illustrations of Model Chariots from Area IV. From Holland 2006: Fig. 159.

Figure 50. Photographs of Model Chariots from Area IV. From Holland 2006: 119.

image on the standard of Ur might be the best-known early depiction of such a vehicle. Another roughly contemporary image on a cylinder seal from Kish in Iraq may show a war wagon drawn by some kind of equid, but mostly the heavier chariot with block wheels are known from this time (Littauer & Crouwel, 1973; Moorey, 1986: 199). The carts may have been drawn by the special kind of half-breed equid known to have been bred at the nearby site of Umm el-Marra. Burke suggests that chariots were most likely not used in siege warfare, but in what he terms “pitched battles,” or large-scale off-site conflicts, even in the Middle Bronze Age, when true chariots were used (Burke, 2008: 30).

Weaponry

The existence of weapons both in burials and in other contexts can hint at a violent environment (Gilchrist, 2003: 2). In Chalcolithic and Bronze Age contexts, uncovering weaponry in most contexts is rare, however, since metal is inherently valuable and easily recyclable. Because of this, much of our understanding of ancient weaponry is derived from textual or iconographic sources, particularly for highly degradable objects such as leather quivers or wooden arrow shafts. Weapons are most often recovered from mortuary contexts, where it is difficult to tell whether these weapons were used by the deceased in life. Generally, weaponry found in mortuary contexts can provide some idea of the suite of weapons available for the arsenal. Many weapons, such as axes or knives, can double as hunting equipment, so this caveat must be considered

when examining weaponry. Hunters were known to have served in Mesopotamian armies, however, so a weapon's utility in hunting does not preclude a military function (Postgate: 245).

Although most weapons double as tools or hunting implements, the presence of weapons at an archaeological site is usually treated as direct evidence of warfare (Thorpe, 2003: 150). At Tell es-Sweyhat, relatively few weapons have been uncovered since the beginning of excavations in the 1970s. This is not particularly surprising, since bronze weaponry would have been highly valuable and would therefore have been saved as long as it was useful before it was finally recycled into a new object. However, a number of bronze non-weapon artifacts, including some metal tools and personal ornaments have been recovered from non-mortuary contexts. If a lot of large-scale formal warfare was being carried out in and around Tell es-Sweyhat, a number of arrowheads of either bronze or chipped stone, and horn cores for the construction of composite bows might be expected, particularly in Area IV. Little direct evidence of these sorts of attacks has been uncovered, however. It could be that combatants used hard wood points instead of stone or metal, but a pointed reed would not work without some kind of tip that is both hard enough to pierce flesh, and heavy enough to steady the arrow's flight (Miller, McEwen & Bergman, 1986: 188). These are the kinds of artifacts that have been uncovered at cities that display ample evidence of attack by large forces. At Brak, for example, a number of

flint arrow heads were found discarded in and around the palace in the burned destruction level (Mallowan, 1947: 181).

By far the most common weaponry recovered at Tell es-Sweyhat, and possibly even at any site in the Early Bronze Age of Northern Mesopotamia, is the clay sling bullet. These artifacts are clay balls that may be entirely spherical, or may be shaped into ellipsoids or other shapes. This category of artifact is found throughout archaeological reports in the Near East, from Neolithic sites such as those stored by the thousands in small containers at a narrow public building at Tell Sabi Abyad (Akkermans, Limpens & Spoor, 1993: 50). Most archaeological site reports that categorize these clay balls as sling bullets do not explicitly explain the reasoning for their categorization as weaponry. The identification of "sling stones" is murkier still. As Korfmann points out, the distinction between a smooth rounded stone used as sling ammunition usually depends on context and ruling out other potential uses (1973: 38).

The line of argument for clay balls as sling bullets originates with a morphological similarity to inscribed cast lead examples. These lead objects are roughly football-shaped, and are found in both classical Greek and Roman contexts. Many examples are inscribed with phrases like "for Pompey's backside" or "ouch," which makes their purpose as projectile weapons clear (Korfmann, 1973: 39). The similarity in size and shape between these lead objects and the shaped clay balls that existed in the Neolithic and earlier throughout the classical world led many scholars to conclude that they were used for

the same purpose (Runnels *et al.*, 2009: 180). In the 1950s, Mellaart draws the connection between the Neolithic clay sling bullets in Greece and Italy and examples that he had recently uncovered at Hacilar, a Neolithic site in Turkey. He included "sling-stones or clay substitutes" in the list of similarities between the material culture of the Sesklo culture and the Neolithic of Turkey (Mellaart, 1958: 134). A second, but related line of argument would tie worked stone artifacts from biblical contexts to these clay objects. In an early treatment of sling ammunition, Sellers used biblical references to David and Goliath as evidence that worked stones in archaeological contexts were sling stones. From there, he uses similarities in shape and size between this potential sling ammunition and worked stone artifacts from the Early Bronze Age as evidence that the latter were also used as sling ammunition (Sellers, 1939: 42).

The case of the "arsenal" at Umm Dabagiyeh illustrates how complex the identification of these artifacts can be. At this site, a small storage room was found with its floor covered with approximately 2400 "baked clay sling pellets," earning the room the name "the arsenal (Kirkbride, 1973)." In this same context, mixed in with the sling pellets, were a number of "large baked clay balls about 15cm in diameter," which were deemed much too large and heavy to have been used as sling ammunition (Kirkbride, 1973: 209). A pile of the same clay balls—but unbaked—were also found in a domestic courtyard near the kitchen, piled up against a wall, possibly waiting to be fired (Kirkbride, 1973: 209). The excavators hypothesized that these large artifacts may have been used for "holding down

light roofs" presumably similar to the way sandbags are often used to weigh down corrugated metal roofs on mudbrick buildings throughout modern villages in the Near East (Kirkbride, 1973: 209).

Some examples of caches of clay balls reveal some details of the life history of these objects. Evidence from Tepe Gawra and Chogha Gavaneh shows two different patterns for fashioning these balls out of clay. At Tepe Gawra, a number of raw clay globes, neither sun- nor oven-baked, were found immediately next to the clay deposit from which they were presumably made (Bache, 1936: 7). An analysis of the clay fabric of clay sling bullets from the Neolithic and Chalcolithic site of Chogha Gavaneh, Iran revealed that four of the examples were made of clay materials that were outliers. The author suggests that some of the bullets may have been formed from wide-ranging clay beds when the slinger was roaming about with the herds (Forouzan *et al.*, 2012: 3535). After the balls are formed, they may be left as is, baked in the sun, or fired in a kiln. At Tell Brak, a small group of egg-shaped clay sling bullets were uncovered near the edge of a kiln, indicating that they were about to be fired (Matthews, 1996: 66). Once created, they were stored in various ways. At Tell es-Sweyhat and at Umm Dabagiyeh, they were stored in piles on the floor, or in some kind of basket or leather bag that disintegrated. At Sabi Abyad, a number of unbaked clay sling bullets were found stored in containers sunk into the floor of a court-yard (Akkermans, Limpens & Spoor, 1993: 63). This courtyard appears to have been delineated by a linear public building with long rooms that were presumably

used for storage based on room shape, although few artifacts were found within it.

A number of scholars interested in sling bullets made of different materials have done some experimental research on the capacity of sling bullets to inflict harm. Modern rural populations often use slings, so archaeologists are able to find experts to test these weapons for them. The ranges of sling stones seem to vary wildly from study to study. Vega and Craig have recorded how far local Peruvian herders in the Andes can sling river pebbles. They found that the average range of these sling stones was roughly 65m, and that the gender of the slinger greatly impacted the sling distance (Vega & Craig, 2009: 1267). Stout found the "best slinger in the neighborhood," a 16 year old boy from the village of Nefileh, near the site of Tell es-Sweyhat, to sling replicas of the clay bullets found in the cache in Area IV. This boy managed to sling these bullets between 90.5 and 120m. A large number of variables, including the gender of the slinger, the length of the sling, and the weight and shape of the bullets all affect the range of the projectile. The force and accuracy behind the projectile would be reduced with distance.

These two studies found that the seasoned slingers in both rural Peru and the small village in Syria used their slings for the same purpose—to "ward off wild animals and unfriendly dogs" from either their herds of llamas and alpacas, or their flocks of sheep and goats (Stout, 1977: 64; Vega & Craig, 2009: 1264). Since herding activities were very important at Tell es-Sweyhat, the sling

bullets—of whatever materials—may have been used at least primarily for the same purposes.

Some scholars are skeptical of the strength of the argument presented above, that egg-shaped or spherical clay objects are sling bullets (Simms, Berna & Bey III, 2013). Although Sellers generally accepts the typical interpretation of these objects, he notes that “as in modern rural Palestine, these stones could be heated and then put into water vessels” as hot rocks (Sellers, 1939: 43). Atalay follows this contention in her reassessment of clay balls at Çatal Höyük (2005: 147). She bases her interpretation primarily on context. These objects tend to be found in domestic contexts either stored in pits, or cast off into ovens (Atalay, 2005: 148). Her alternative hypothesis is that these objects may have been placed in some kind of sack for use as a loom weight—a use that she observed in a modern Turkish village (Atalay, 2005: 159).

The clearest archaeological context that indicates that these artifacts are sling bullets is the burnt building at Hamoukar, uncovered in 2005. When the burned building was initially uncovered in excavations, the project directors were hesitant to declare the destruction level the result of warfare. When the debris layers turned up hundreds of sling bullets, larger clay balls, and “Hershey’s kisses,” they concluded that the building had been burned down in a violent attack (Reichel, 2006). Reichel determined that the “Hershey’s kisses” were clay sling bullets that had been slung when wet, deforming the shape on impact. The larger clay balls were also found to have been slightly smushed on one side,

indicating that they were merely a larger version of the sling bullets, possibly meant to cause property damage while the sling bullets were meant to injure (Reichel, 2006).

It is unclear exactly how the battle of Hamoukar took place. One would assume that slings would be of most use in open areas, either outside of a settlement, or from a rooftop. The cramped spaces inside of a building would presumably inhibit the use of a sling, and would be more suited to hand-to-hand combat. This would mean that the bullets likely gathered on the roof, and entered the debris layer when the roofing material and second story collapsed in the fire. The deformed sling bullets must have hit something with a great deal of force in order to warp into the distinctive “Hershey’s kiss” shapes, however. This would imply that they did not merely fall onto the top of the roof, but hit someone or something up there, or perhaps flew through a window and hit a wall or person before falling to the floor. Alternatively, it could be possible that the sling bullets actually were used inside the building. This structure is tripartite, meaning that they constitute a large room surrounded by smaller ones. The large central room was approximately 3.25m by 7.5m, which may have accommodated people with slings using the underhanded slinging technique. It is unclear why a sling would be a weapon of choice indoors, however. A three dimensional reconstruction of the find locations within the structure could aid in reconstructing the attack, similar to how the excavators able to determine which seals were used on the upper floors or roof of the building.

Clay or stone sling bullets have survived in many contexts at Tell es-Sweyhat. A cache of clay sling bullets was recovered from the Phase 3 floor of Room 2 in Area IV trench K (Figure 51). The rooms of these buildings sustained heavy fire damage, with burned walls and a thick ash deposit that probably resulted from burned roofing material (Holland, 2006: 57). Holland claims that the sling bullets from this room indicate that "the town was under attack from a hostile force at the time of its destruction by fire" (Holland, 2006: 58). Stout, in contrast, says that the bullets from the floor of the building were more likely stored there, whereas the 11 bullets mixed in with the burned roofing material in Room 1, the neighboring room to the north, may be evidence of armed conflict (Stout, 1977: 63). She interprets the context of the 11 clay balls in the roof material as having originally been located on top of the roof when the roof collapsed similar to the situation at Hamoukar.

Ethnographic evidence indicates that slings are often used by shepherds. These shepherds may have gathered river rocks for use as sling stones when watering their flocks. Currently, shepherding is the province of teenage and younger boys, who eventually grow up to perform other kinds of labor for their families and communities. If protecting the flocks was a life-stage at ancient Tell es-Sweyhat as it is in modern Nefileh, then most of the adult population would have grown up to become experienced slingers. They could then use their skill to ward off potential attackers or unwelcome strangers if or when patrolling the city wall from its towers. From the vantage point of the Inner City towers, a

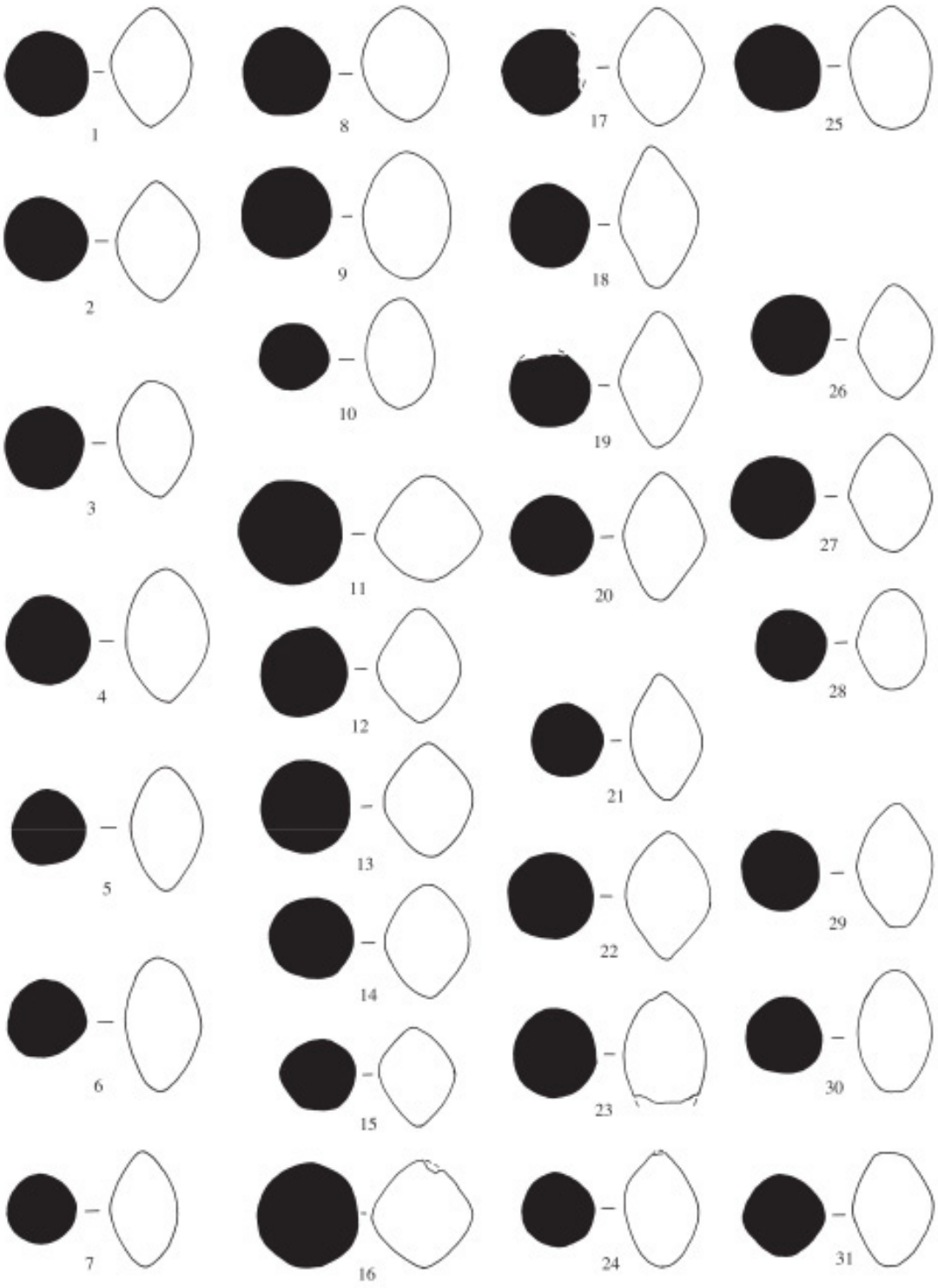


Figure 51. Illustrations of clay sling bullets from Area IV. From Holland 2006: 119.

talented slinger or an archer could reach any attacker who had breached the Outer City wall. Slingers could protect the city from any number of forces, but these bullets likely do not represent a huge violent response, considering how few were found compared to those at Hamoukar.

Defensive Architecture

Finally, settlement locations have been used in various ways to divine the existence of ancient warfare. Relevant settlement data includes defensive structures, position within the landscape in easily defensible positions, and the separation of settlements by buffer zones (Oosterbeek, 1997; Lambert, 2002; Runnels *et al.*, 2009). Some scholars would even point to the rise in urbanism itself as a defensive strategy—"safety in numbers" (Lambert, 2002: 209). Fortification walls are generally the most commonly used indicators of warfare in historical eras.

Archaeologists often view city walls as evidence of a martial society fearing imminent attack from aggressive neighbors (van Tuerenhout 2001, Steinen 1992). In a study of city walls in the Maya area, for example, Inomata and Stiver claim that the mere presence of this wall indicates "intensive warfare" (Inomata & Stiver, 1998: 432). In his analysis of European hilltop forts, Avery rather dramatically imagines "terrified clans each huddled timorously into a massively defended hill-top refuge, each storing its crops under secure cover to prevent destruction at the hands of a ravaging enemy, each awaiting with fear

the missiles which would signal the start of an assault" (Avery, 1986: 228). In her overview of Euphrates valley city walls, Cooper asserts that the fortified cities were "perennially vulnerable to pillaging and attacks by desert marauders (Cooper, 2006: 69)." Even the repair and maintenance of the city wall is seen as evidence of continuing or even escalating armed conflict in the area (Cooper, 2006: 79).

Some defensive structures associated with large city walls have been found to be constructed for purely defensive purposes, like those imagined by the archaeologists above. Baffled gates and bastions, for example, have been found to be "invariably defensive" in all instances where supplemental information is available as to their use (Keeley, Fontana & Quick, 2007: 55). Other common features of city walls, such as V-shaped exterior ditches, serve more than one purpose, and are known to funnel people along predictable paths so that officials could level customs (Keeley, Fontana & Quick, 2007: 55). Large thick boundary walls are erected and maintained for a wide range of purposes, not only for defense. Some earthworks in 6th millennium Europe, were definitely not built with urban defense in mind, since they are entirely empty and do not encircle settlements at all. Instead, they must exist for other purposes entirely, such as blocking the view or access to a sacred place (Keeley, Fontana & Quick, 2007; Parkinson & Duffy, 2007).

Fortified Buildings

Starting as early as EBII or even EBI, a large thick-walled building, dubbed the fortress, dominated the center of Tell es-Sweyhat. The structure was uncovered in two areas in the 1990s, on the western and southern sides of the Inner City. Excavations below the floor level of the EBIV temple on the high mound most likely uncovered levels within the middle of the fortress. Rather than finding an earlier temple as might be expected, these fortress rooms appeared to contain domestic contexts, as identified by bread ovens (Danti, 2009). This building most likely served as a communal storage area for agricultural and pastoral products, and also provided work areas to add value to these products by processing them into bread and other products. Outside of this fortress, smaller buildings and work areas spread down the gently sloping lower tell.

This building type is unusual, and finding precedents and comparisons for it is difficult. Currently, no examples of similar architecture exist in the Euphrates region. A few sites in the Khabur and Hamrin regions of eastern Syria and northern Iraq have similar structures.

Tell Raqa'i is a small mounded site in the middle Khabur valley, in an area at the edge of the dry farming zone, in an environment as marginal as that of Tell es-Sweyhat. The most prominent feature of this small (0.5ha) site is referred to by excavators as "the Rounded Building." It consists of a large building delineated by a thick curving wall (Figure 52). This structure contained several silos, ovens, and platforms, and was interpreted as a specialized production area

(Curvers & Schwartz, 1990; Schwartz & Klucas, 1998). Tell ‘Atij and Kneidig boast similar structures in this region.

Besides the Rounded Building at Raqa’i, the closest parallels to the Sweyhat fortress is a set of circular buildings in the Hamrin region. The Hamrin region lies on the Tigris in Northern Iraq. The environment in this area is even dryer than that of Raqa’i and Sweyhat, with the area getting a mere 200 to 250mm of annual rainfall. Sites with these round fortified structures include Razuk and Gubbah (Fujii, 1981; Gibson, 1984; Renette, 2009). All of them date to roughly the Early Dynastic period. At Razuk, the building consists of two concentric circles joined by dividing walls. The thick outer wall also was interrupted by a staircase that led to a useable roof area. The inner circle was interpreted as an open courtyard (Gibson, 1984). The side rooms contained some long bins, presumably used for some kind of storage or specialized work activity. The structure was interpreted as a garrison for soldiers, or some kind of outpost surrounded by a small town (Gibson, 1984: 473). Gibson struggles to explain whose garrison the building would be, considering nearby larger political entities had far greater agricultural potential. A more likely explanation is that these sites served as communal storage areas for cooperative use by seminomadic populations (Renette, 2009). The fortress at Tell es-Sweyhat may have served a similar function.

The rounded fortress is an unusual building type for the third millennium, but some parallels do exist, primarily in very dry areas along the three rivers

of the Euphrates, the Khabur tributary, and the Tigris. It is tempting to posit some direct connection between these areas, such as some pan-marginal-zone entity that served as storage depots for wandering herders or for another more highly-organized political entity. The other material culture at these sites does not seem to support such a connection, however.

Walled Early Bronze Age Sites

Sweyhat's Late EBA city wall system was among the most elaborate in Northern Mesopotamia, but it was not unprecedented or even particularly rare. In

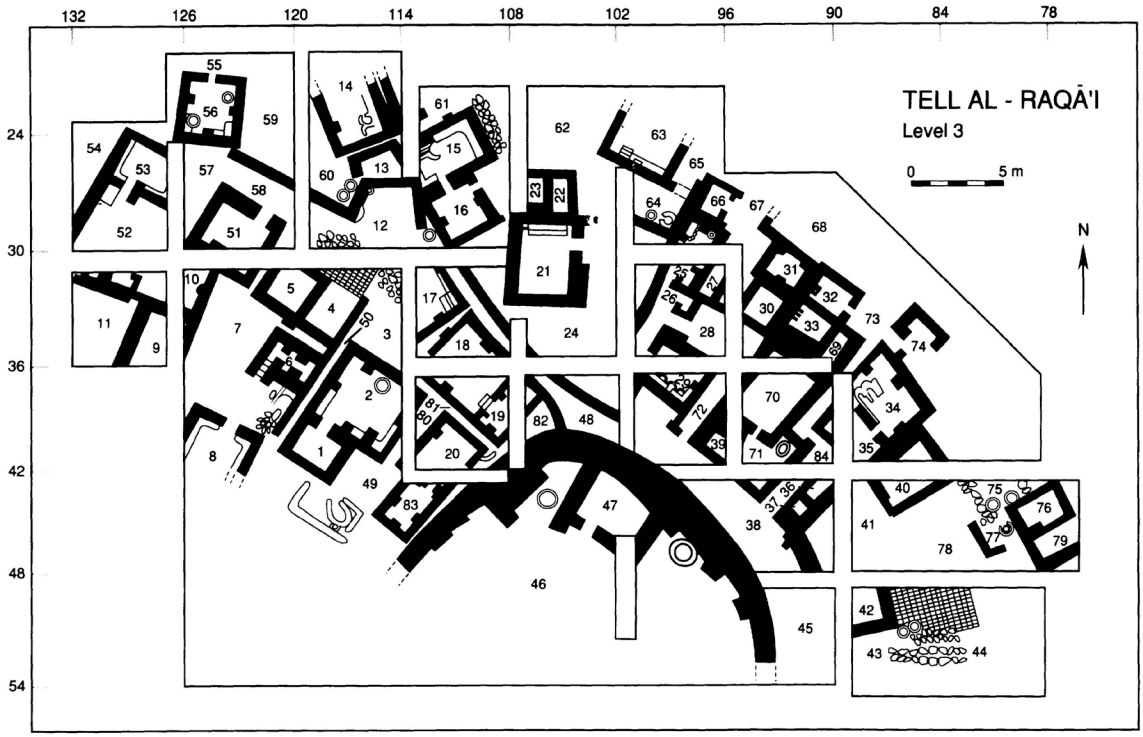


Figure 52. The Rounded Building at Tell al-Raqa'i. From Schwartz and Curvers 1992: 403.

the following section, I situate the development of the city walls at Tell es-Sweyhat within the broader context of city walls in the Early Bronze Age of Northern Mesopotamia. Since archaeological reports may use a variety of terminology to describe similar city wall features, I use the terms as defined by Burke in his work on Middle Bronze Age Levantine fortifications. Table 4 summarizes the walled sites from the third millennium, and lists the features of each wall.[12] This table reveals that although city walls were a common feature in EBA Northern Mesopotamia, they are not uniform, since: 1) site size is not correlated with the thickness of the city wall, 2) initial construction of city walls was staggered throughout the early 3rd millennium, 3) few commonalities exist between sites in terms of rebuilding techniques and phasing, and 4) even initial construction techniques imply differing levels of organization and oversight. The main commonalities that appear are that most cities either initially build or later add a rampart and towers to their wall, and most cities constructed a city wall after the site had already been occupied for some length of time.

Sites of all sizes were fortified in the Early Bronze Age, not only those that would grow to become large regional centers like Tell es-Sweyhat. As Cooper (2006: 78) indicates, the size of the walled city does not appear to be correlated to wall thickness. She suggests that this may relate to how defensible the site already was, so a site already located on a hilltop might have a thinner wall than a site located on a flat plain (2006: 78). Free-standing city walls tended to

12 See Burke 2004 Appendix A for a comprehensive list of fortified settlements in these regions, along with short summaries and plans of each site.

Table 4. Walled Early Bronze Age Sites in Northern Mesopotamia.

Site	No.	Occupied (fortified	Site Size (fortified	Width (rebuilt)	Features	Rebuilds
Tell el-'Abd	1	EBIII (EBIII)	(2.5)HA	2.5(10) m	Glacis, rampart	Expanded to 10m thick
Jerablus Tahtani	1	Late Chalc to EBA	3(1.7)HA	7m	Glacis, towers	
Tell Bderi	1	EBA (Early)	5-6HA	2.4m	Glacis, towers, 3m wide gate	
Munbaqa	2				IC: casemate, OC: stone wall	
Selenka-hiye	1	c. 2400-1900 (Early)	10.5HA	2.5(2->4)m	Glacis, towers, bastion, 3m wide gate	Rebuilt narrower, then expanded
Tell Hadidi					unexcavated	
Tell Leilan	2	c. 5500-1900 (2450-2350)	90(15) HA			
Tell Beydar	2	EBI/EBII (EBII)	21(7)HA		Unexcavated, OC: 7 gates	
Tell Chuera	2	EBIII	65(43) HA			
Habuba Kabira	1	EBI	(0.5)HA			
Hamam et-Turkman	1	EBIV	3.7HA	8m	casemate	

be around 2.5 meters wide in their initial construction phase, not counting any additional features such as ramparts or glacis, no matter what size the settlement was. Most likely, the goal of this construction was to reach a certain height of wall while maintaining a high level of structural integrity. Therefore, the thickness of the initial construction was likely unrelated to defensibility of the site. At Tell el'Abd, fortified from the end of the EBIII onwards, the wall started as a 2.5m thick mudbrick core, which was quickly reinforced and expanded on both sides to reach an eventual 10m thickness (Finkbeiner, 1997: 101). The wall would have enclosed an area of about 2.5ha (estimated based on Finkbeiner, 1997: figure 2). The wall constructed at Selenkahiye at roughly the same time period enclosed an inner city of about 10.5ha (estimated based on van Loon, 2001: fig. 3.2). This wall was about 2.5m thick, and although it was later expanded in some areas, eventually totaled a little over 4m in thickness, far less than the reinforcements at Jerablus Tahtani and Tell el-'Abd. The fort wall at Jerablus Tahtani encloses a small area, at roughly 1.7ha.[13] It is unknown how far occupation extended around the city center, but even this small area warranted a wall with a rampart that totaled roughly 7m in width.[14]

The city walls were also constructed at various points in the third millennium, ranging from the Early Bronze I to the Early Bronze IV. Habuba Kabira had a city wall that was one of the earliest in the area—constructed at the beginning

13 When excavators did not publish their own estimates of site sizes or walled area estimates, I made my own estimate using site plans. In this case, I estimated the walled area assuming a roughly circular area of about 80m in diameter, based on the plan in (Strommenger, 1977).
14 This is the approximate width as estimated from the site plan in (Peltenburg *et al.*, 2000).

of the third millennium (Strommenger, 1977: 73). Tell es-Sweyhat's fortress may have been constructed around the same time as the wall at Habuba Kabira, or slightly later, in the EBII period. The construction of Tell Beydar's city walls likely occurred around the EBII period as well. The EBIII period appears to be the chief time for city wall construction, with Tell el-'Abd, Jerablus Tahtani, Selenkahiye, Tell Chuera, and Tell Leilan constructing walls during this period. Many of these sites have only very vaguely defined chronology with few radiocarbon dates, however, so unfortunately, more specific construction dates within the centuries-long EBIII period cannot be pinpointed in many cases.

Most of the city walls erected in the third millennium began their lives as basic mudbrick superstructures on stone footings, sometimes with additional features such as a glacis or rampart. Over time, these simple structures were modified in different ways at different sites, reflecting subtle differences in function at each ancient city. The rebuilding events at Selenkahiye is one of the more remarkable, since the wall was originally built using several different methods, and its chaotic construction only increased over time. In one area, for instance, the earliest wall was about 2.5m wide, and built on a 1.5m high pebble and stone footings (Wall I, van Loon, 2001: 3.51). After this wall was apparently destroyed, a second phase of the same thickness was constructed on top of a layer of pebbles, but this phase fell into disrepair as well (Wall II). This wall was then repaired narrower on the same footings, but with a sloping rampart covering the stub of the previous phase that jutted out from the rebuild, so the final product

of the third phase was actually wider than the second. In the fourth phase, the wall was expanded further by filling in the rooms of the houses that abutted the wall. Since the overall trend was to make the wall thicker over time, the excavators interpreted these rebuilds to a threat response.

The rebuilding of the fort at Jerablus Tahtani was also quite complex. The fort wall was constructed and modified in three building phases, dubbed the "fort, fort extension and fort annex" (Peltenburg *et al.*, 2000). The initial "fort" phase consisted of a large mudbrick platform with an attached mudbrick room, probably a bastion or watch tower, accessed by a 2.6m wide entrance. This entrance was modified several times, morphing from a boulder passageway with a glacis, to a "zigzag" entrance associated with an ashlar-paved street. Although it is tempting to take the "baffle gate" style rebuild as an attempt to thwart invaders, the excavators indicate that the more likely purpose of the rebuild was to address the slope wash that had destroyed the first gate by adding a retaining wall (Peltenburg *et al.*, 2000).

The modifications of Mumbaqa's original casemate city wall would have completely nullified any original defensive function that the wall may have had. Built in the second half of the third millennium, this wall continued to stand in the EBIV period, but domestic structures were constructed up against the outside of the wall during this later phase (Burke, 2004: 371). Since roof access was a common feature of domestic structures, people could have easily ascended to the roofs of the houses lining the wall in order to breach the city's defenses. In

the EBIV, therefore, the city wall would have only served to limit access to the Inner City to peaceful traders, rather than violent invaders or smugglers, who could have easily accessed the inner city by force or stealth.

The variety of construction practices of city walls indicates an equally wide variety of organizational principles. Usually, large public projects like city walls are hailed as elements of highly organized labor, but some of the construction practices of city walls belie that interpretation. Burke would interpret the variations in construction in various areas around the wall as planned responses to topographical and environmental variables (Burke, 2008). Variation in construction practices between sites in similar topographic circumstances suggests otherwise, however. Habuba Kabira's wall, for example, was not truly a formal or separate structure at all. Instead, houses were crammed together with doors facing the street rather than outside the settlement, which had the same effect as a distinct mudbrick fortification wall (Cooper, 2006: 71). This kind of construction would have been achieved with some cooperative decision making, but without any organized labor, since the residents would have presumably been tasked with building their own homes.

The construction at Selenkahiye and Jerablus Tahtani is more formal than that at Habuba Kabira, but still varies greatly across the site, which may indicate a low level of central oversight of the construction project. At Jerablus Tahtani, the excavators indicate that the variation in fort wall features across the site means that "these are not unified structures constructed to serve a simple

defensive function at a single point in time, but are a series of individual entities designed to serve a variety of functions that change and develop over time (Peltenburg *et al.*, 2000). The excavators of the "squiggly" fortification wall interpret the variation across the site similarly (van Loon, 2001: 103).

Throughout the EBA, a variety of fortification types of different sizes were constructed at an equally wide variety of settlement types over the course of several centuries. This breadth of variation indicates that throughout Northern Mesopotamia, more nuanced issues were at play than a simple reactionary response to a specific threat from warlike neighbors. Fortifying appears to be distinctive to processes within each ancient town or city. These findings warrant an examination of the role of fortifications within the broader context of warfare.

Fortifications at Tell es-Sweyhat

At the beginning of Sweyhat Period 4, the fortress was abandoned, and two concentric walls were erected around the settlement. Both walls exhibit a variety of construction practices, using different materials, techniques, and structural shapes in different areas. The outer edge of the Outer City wall is roughly rectangular, and the northwestern corner appears to have some unusual morphology, perhaps with casemate construction. It is unknown whether the inner course represents an earlier or later iteration of the outer town wall, or if both courses coexisted. Excavations in the northwest revealed that the inner edge of this corner consisted of a 1.8m wide mudbrick wall on stone footings

(Zettler, 1997b: 49). This could be interpreted as either a casemate city wall, or a simple wall with a building pressed up against the inside. The outer path of this corner was not excavated, but presumably the outer town wall in that area would have resembled the section of the wall that was uncovered in the Operation 25 slit trench.

Excavations on the eastern side of the Outer City, revealed an 18.5m wide earthen rampart faced with a sloping stone revetment on its outer face. The inner face was held in place with a 1.15m thick mudbrick retaining wall built on stone footings (Zettler, 1997b: 49). The excavators estimate that the rampart would have been about 6m high, although it may also have been topped by some kind of curtain wall (Zettler, 1997b: 49). They also acknowledge that the stone facing on the sloping revetment may have been configured differently in antiquity, possibly terraced. Excavations in and around the outer wall did not uncover a gateway, but geophysical prospection may indicate that a multichambered gate existed in the northeastern corner of the outer rampart (Zettler 1997: 79).

The Inner City wall was uncovered in several areas around the tell, mostly in the west and southwestern trenches. Each of these larger stretches of exposed city wall had the remains of a tower. The fabric of the wall differed between the two areas, however, as did the way in which buildings were constructed along the inside edge of the building. Overall, the western section of the wall appears to have used higher quality material, and included niches for access to the tower or to the top of the wall. A gate through the Inner City wall

was also uncovered in excavations on the western side of the main mound. This gateway was flanked on both sides by the outer walls of buildings that had been constructed along its inner edge. One side of the gateway also contained two smaller rooms, possibly guard rooms.

Kranzhügeln

In the Early Bronze Age of Mesopotamia, fortification walls are very common, and produce a distinctive urban form. A “citadel city,” is a city with double, roughly concentric fortification walls, usually with the inner wall delineating a higher inner tell. Tell es-Sweyhat would be considered a citadel city in the EBIV period. The term “Kranzhügel” is also applied to cities with two concentric city walls, but this term is generally restricted to cities that are nearly circular in shape (Cooper, 2006: 76).

Kranzhügeln are found in the area ranging between the Khabur and the Balikh rivers (Meyer, 2007: 129). Meyers has identified two types of Kranzhügel on the basis of topographic features—1) those with a depression in the middle, such as Chuera and Mabtuh, and 2) those with a peak in the middle, such as Beydar and Bogha (Meyer, 2007: 129). These sites exhibit radial street plans that Meyers believes result from “preconceived central planning” (Meyer, 2007: 137).

Tells Beydar and Chuera are fortified cities that fall under the category of “Kranzhügeln” because of their nearly circular plans. Tell Chuera is the

best-known Kranzhügel site, located between the Khabur triangle and the Euphrates region. This city, treated by many as the type site for Kranzhügeln, was founded in the EBIII period (Moortgat, 1960; Moortgat-Correns, 1988; Wilkinson, 2000: 239). Unusually, Chuera's upper town is larger than its lower town, with the former covering 43ha, and the latter covering only 22ha (Burke, 2004: 345).

Widespread Burning

To the basic archaeological indicators listed above, I would add evidence of widespread destruction by fire. Archaeologists often consider widespread burning a hallmark of violent conflict, because burning is seen as a "common consequence of war" (Lambert, 2002: 210). Typically, archaeologists do not immediately ascribe burning events to an act of war unless some other evidence exists. At Hasanlu, for example, a very dramatic destruction scene was uncovered in level IVB of the city (Dyson & Muscarella, 1989; Danti, 2013: 19). Several large structures collapsed after sustaining severe burning, covering and sealing the contents of rooms, along with weaponry, and even some unfortunate people (Dyson, 1960). At Hamoukar, excavators were hesitant to ascribe the burning event on an invading enemy until they tallied the sheer number of clay sling bullets left in the rubble (Reichel, 2006). In the Maya area, Aguateca was burned to the ground in its entirety, with valuable belongings left in place by those eventually forced to flee (Inomata *et al.*, 2002).

Violent conflict could lead to widespread burning in two ways—either the enemy sets a settlement on fire remotely using burning arrows, or by breaching the city walls and setting fire to the settlement at close range using torches. When setting a fire from outside of the settlement, the attackers could either attempt to burn a neighborhood by hitting the roofs with fire arrows, or by burning the thick wooden gates. A roof fire would cause chaos and distract defenders from their tasks, while a gate fire weakens a vulnerable point in the city wall so that the enemy can enter and conquer more easily. Setting fire to the settlement by hand, once the walls are already breached, might further a longer-term strategy—a prolonged conflict between two large entities, wherein the city in question is one part of a larger corporate group. Destroying the city would help the attacker weaken their greater enemy by cutting off supplies or the possibility of getting help from neighbors.

Experiments with fire arrows have revealed that one can reasonably expect to shoot a fire arrow about two stories high from a distance of about 30m (Miller, McEwen & Bergman, 1986: 191). Any shot that would send the arrow higher or further would require the arrow to move fast enough to extinguish it. This means that an attacking archer at Tell es-Sweyhat would have to already have breached the outer town wall in order to set fire to the roofs of Low Inner City structures using fire arrows.

Even if an enemy archer did breach the Outer City walls and proceeded to shoot fire arrows into the Low Inner City, mudbrick and timber architecture

(perhaps counter intuitively) is very fire resistant, making it unlikely that the widespread fires at Tell es-Sweyhat were set using burning arrows raining down on the roofs. The mudbrick itself does not burn, and generally allows oxygen to reach any flames only through the windows. The roofing is the weak point of the structure, although even the roof material is resistant to fire from outside the building.

This architecture is so resistant to being burned from fires originating outside of the structures that the government of Victoria, Australia recommends its use in areas prone to even the most violent bush fires that periodically rage through this semi-arid southern Australian province (Building Commission, 2009). In 2009, such severe bush fires stormed through this district destroying hundreds of homes in the worst recorded bush fires in the history of Australia (Musson, 2009). In the aftermath of the disaster, the government created the Victorian Bushfires Royal Commission, which solicited submissions of stories from survivors so that they could ascertain the best way to stave off further loss of life and property. These submissions have been made available as public documents. One of these documents recounts the story of the Mortimer family, whose mudbrick house saved their lives and the lives of their neighbors and dog during the 2009 fires (Mortimer & Mortimer, 2009).

Knowing that their land was prone to severe bush fires every few decades, the Mortimer family elected to build their house from mudbrick and timber. In 2009, when the fire storm hit, the Mortimers, their neighbors, and their neigh-

bors' dog sought shelter in their "fire pantry," which consisted of "four mud brick walls to the roof, terracotta air vents in the outside wall, [and] a concrete slab floor" (Mortimer & Mortimer, 2009: 2). This structure kept them so cool during the first 30 to 50 minute attack that "not even the dog stirred" (Mortimer & Mortimer, 2009: 3)." Although the roof of this house was constructed with soft wood and other flammable materials in addition to the mud brick, the roof did not catch on fire, even when "embers rained down on the roof and quick peeps out the kitchen window revealed fireballs whizzing all around outside" (Mortimer & Mortimer, 2009: 3). This structure retained its integrity through two waves of bush fires, and only caught fire much later, when the family was unable to quell some smoldering embers in the roof material that eventually caught the materials inside of their library on fire. At this point, once their highly flammable belongings caught fire inside the house, they had to flee. The Mortimer family reports that the hardwood posts and mudbrick were very fire resistant, despite the fact that the temperatures of the bush fire were hot enough to melt the 3mm panes of glass (Mortimer & Mortimer, 2009: 7).

This harrowing tale indicates that attacking a well-prepared settlement with fire arrows may have had limited success. Since extremely high temperature embers and "fireballs" took an hour of sustained burning to eventually catch the roof of the Mortimers' home in Australia on fire, it would most likely take an absolute deluge of fire arrows to burn a mudbrick neighborhood effectively from the roof down. It is likely that unlike the Mortimers, the ancient residents of

Sweyhat stored materials, some of which may have been flammable, on their flat roofs. In the modern village of Nefileh, roofs are accessible by formal stairways, and are used for hanging laundry and for sleeping in hot weather. Rooftops may have been used for similar purposes at ancient Tell es-Sweyhat. Some have even suggested that fuel may have been stored on mudbrick roofs in antiquity. This suggestion is based on the personal account of a traveler in the far eastern region of Syria in the 1800s, where the locals used brush, sticks, and wood for fuel, which would have taken up a lot of space (Forbes, 1838; Miller, McEwen & Bergman, 1986: 190). At Tell es-Sweyhat, animal dung was more commonly used for fuel, which would have taken up less space and may not have necessitated a large area, such as a rooftop, for storage (Miller, 1997a).

Experimental archaeology has largely confirmed that the experience of the Mortimers would apply to ancient mudbrick architecture as well, even if flammable material was stored on the roof. The majority of burning experiments on reconstructions of ancient homes has been conducted on highly flammable materials, such as grass huts or timber buildings (Dennis, 2008: 163). A recent experiment on a mudbrick house revealed that catching a mudbrick house on fire is very difficult. The thatch and timber roof of a mudbrick home might seem like it would burn very easily. Since they are typically coated on the top with a thick layer of mud, however, even the roofing material remains relatively fire-resistant from the outside. In the fire experiment at Beidha, researchers had a difficult time setting the roof on fire, and eventually succeeded only by encouraging the

flames in an area where the clay covering was degrading (Dennis, 2008: 168). A well-maintained roof would catch fire only from the inside, where more of the organic roofing material is exposed. In order to catch the roofing material on fire from the inside, simply allowing the cooking fire to rage out of control did not result in burning down the structure either. Instead, the archaeologists had to stack dry brush along the insides of the walls to eventually cause sufficient fire damage (Dennis, 2008: 168).

The experimental structure that was burned was newly built, which might have reduced its flammability a bit. The walls by the hearth, for example, would have been clean fresh mudbrick, without years of grease buildup from cooking fatty meat. Depending on how clean the ancient residents would have kept their cooking areas, buildup of cooking residue could have posed an additional fire hazard not represented in the burning experiments. Most of the areas that were burned contained domestic assemblages, and fire features such as hearths, tanurs, other types of ovens, and even kilns. The ancient household inventory would have included lots of flammable materials, including dung fuel for fires, raw and spun wool, bedding, reed mats, and various grains (Miller, 1984).

Based on these results, it is quite unlikely that any of the widespread burning at Tell es-Sweyhat would have been started with fire arrows. Even if lots of flammable material, such as dung fuel, brush, or sleeping mats, was stored on the roofs, only those buildings in disrepair with leaky cracked roofs would eventually catch fire. If the house fires at Tell es-Sweyhat were the result of enemy

action, then that would mean that the enemy breached the outer wall, the inner wall, and the front door of the home itself to set fire to the flammable materials stored inside. Even this scenario would only be successful if a lot of flammable, long-burning material were stacked and stored inside the houses.

Once at a gate, the enemy would have to either batter down the gate or catch it on fire. The “dump ramparts” of the outer city wall could have been effectively protected by slingers, because they make the gate further away from the outside of the passage through the wall (Avery, 1986: 223). A fire arrow would not be up to the task of catching a thick wooden gate on fire. If an armed force wanted to use fire to weaken the gate, one of the enemies would have to set up tinder and kindling at the base of the gate to start a sustained hot fire that would eventually catch the door (Avery, 1986: 224). Alternatively, they would have to batter the gate down. Once in the city, it would be much easier to set fire to neighborhoods, since it would be easier to break into homes and set fires in the goods stored within the houses. Before both walls are breached, protecting the city could be done by nearly anyone with a sling.

Widespread fires in Area IV at Tell es-Sweyhat, coupled with a set of clay sling bullets have been cited by scholars as evidence of a siege. In this area, Holland reports that in certain rooms “all of the wall surfaces were heavily burned,” and there is “burned brick…and a thick ash deposit…resulting from the burning of the ceiling and roofing materials and finally the collapse of the upper courses of the southern wall into the room, which came to rest at a 45 degree

angle on top of the ashy destruction debris." (Holland, 2006: 57) He also notes that "this pattern of destruction is attested for all of the rooms abutting the inner face of the town wall, and variations on the destruction by fire also occur in the excavated rooms farther east." (Holland, 2006: 57) He goes on to connect this widespread burning to the 36 sling bullets found on the floor, hypothesizing that "the town was under attack from a hostile force at the time of its destruction by fire." (Holland, 2006: 58)

At Tell es-Sweyhat, several buildings were burned across the Inner City. In Area IIIB on the northern edge of the inner city, in Phase 3, which is roughly contemporary with the construction of the Inner City wall, the excavators interpret a roof beam that had collapsed onto the floor as evidence that the room had been destroyed by fire (Holland, 2006: 73). This fire does not seem to have ruined the structural integrity of the walls, since another floor was laid in this same room after "the destruction debris was roughly leveled" (Holland, 2006: 73). Holland does not specify what additional evidence of this destruction by burning existed in this phase of this room, other than the fallen roof beam. He does not specify whether the roof beam itself was charred either.

One of the rooms in the southwestern sector of the Low Inner City also exhibits signs of a high-temperature blaze. There was dark ash in this area and a number of ceramic sherds were burned, vitrified, and warped out of shape. Fire does not appear to have hastened the destruction of the rest of the buildings

in this sector. One of the rooms in the Eastern Mound area was also burned, then immediately rebuilt in a later phase.

Although many excavation areas contained traces of burning events, it is impossible to tell whether these fires occurred as part of a single event, since these areas are not contiguous across the site. At Selenkahiye, excavators interpret evidence of burning in distinct areas of the site as the result of different burning events. They see evidence of a building-wide destruction at the Southern Mansion, but distinct house fires in a residential area with discontinuous burning events (van Loon, 2001: 3.38, 3.69).

The burned layer in the Sweyhat Period 4 temple in the city center was most likely intentionally set. Excavations in the temple revealed evidence of burning similar to that of the Area IV building (Danti, 2010). Burned and reddened mudbrick walls indicate a sustained high temperature fire. The temple did not contain any fire features, and it is difficult to guess what contents of the temple would have fueled the fire. It is unknown what flammable materials may have been stored in the temple—two bell-shaped pits could have been used for grain storage, for example. Wooden objects or reed mats could have contributed to a fire. Presumably, the temple would not have contained bedding or dung fuel, since we would assume that priests or parishioners would have slept elsewhere, and there were no hearths in which to burn the fuel.

Discussion

Most of the evidence of warfare at EBA sites and at Tell es-Sweyhat in particular indicates that the northern cities existed in a violent milieu, but without any specific immediate threat. Since cities fortified themselves at various times throughout the millennium, this does not point to a particular moment in the EBA where a polity began wreaking havoc in the countryside. This is not to suggest that the fortress and later city walls served no defensive function. These structures were likely meant to protect craftspeople from the theft of their goods rather than from large-scale violent conflict. The few weapons recovered and the relatively simple city walls, towers, and gates would have provided adequate protection from raids by bands of thieves—small-scale attacks. Furthermore, the Sweyhat residents may have invested resources into the fortification walls to signal their military strength to any potential aggressors, thereby fending off violent conflict before it had a chance to spark (Bliege Bird *et al.*, 2005; Roscoe, 2009; Glatz & Plourde, 2011)

When the fortress was in use at Tell es-Sweyhat, most of the population of the city would not have lived and worked under its protection. The general population would have benefitted from the fortress if some special person, institution, or commodity was protected by the building, possibly a communal storage and work area. If they benefitted directly from the protection of this fortress, it would be as a place of temporary shelter from a violent threat.

The available textual evidence suggests that towards the end of the fortress phase, Mari and Ebla began their territorial struggle (Michalowski, 1985; Archi & Biga, 2003). Before the middle of the Early Bronze Age, it is likely that any attacks on Tell es-Sweyhat would have been carried out by smaller bands of troops or even untrained or semi-professional groups of bandits, as imagined by Cooper (2006). Once larger regional powers began to form, it is unclear how organized the troops from Mari and Ebla would have been, so it is unclear how many armed troops might have been deployed to a city like Tell es-Sweyhat. Epigraphic evidence indicates that diplomacy was carried out as well as violent conflict (Archi & Biga, 2003). Presumably whoever might have been authorized to speak on behalf of the city might have met with diplomats from Mari and Ebla within the protection of the fortress. Any shift between smaller-scale threats from roving bands and a threat from a larger more organized force from Mari or Ebla is not marked by a change in defensive strategy at Tell es-Sweyhat.

In the Sweyhat 4 period, we must accept the rough chronology that the two city walls were constructed at around the same time. It is likely that one preceded the other, but unfortunately, our dating of the outer wall is not fine-grained enough to determine the order. It is also unclear exactly how the gate in the Outer City wall would have looked or whether it had a door. Almost certainly it did not have a baffled gate designed to deter large forces, as that would be obvious in the topographic map, much like the elaborate hilltop fort gates. In any case, such a wall with a rampart would have controlled the

movement of all people into the city and would have facilitated monitoring who was coming and going. People on watch towers in the Inner City would have been able to see down to the outer wall, and guards could set upon any unwanted people breaching that barrier with sling fire. Based on the small informal experiment performed by Stout, an experienced slinger could have sent a clay bullet roughly the distance from the tower to the outer wall (1977). Because slings tend to be used for protecting herds, it is possible that herders would have had a second job of patrolling the Inner Town wall.

The major change in defensive strategy between Sweyhat 3 and Sweyhat 4 appears to be equal parts cosmetic and expansive. Construction of a wide variety of fortifications was staggered throughout Northern Mesopotamia over the course of the EBA. This implies that the blame for any increased feeling of an impending attack should not be pinned on the rise of any particular polity. Furthermore, Sweyhat itself was fortified from a very early date, from a time when the settlement hierarchy in the region was fairly simple. At Sweyhat 2, there would most likely not have been any large armed forces in the area capable of sustaining a siege on the fortress. The town still decided to erect a very large over-built structure, which would have been used for storage of agricultural products. The majority of the residents would have resided outside of the fortified area. The major change in defensive strategy between Sweyhat 3 and 4 is that after the city walls were constructed, most domestic structures were behind either

one or two fortifications. The range of activities that fell under the aegis of the city's centralized protection strategy shifted from communal to more private.

Chapter 6: Urban Planning

The shift from town to city at Tell es-Sweyhat accompanied alterations in both the placement of the dead, and in defensive strategy. Sweyhat's living no longer buried their dead in tombs accessible to all on the outer edges of their town, but rather restricted access to the dead to household members and mourners. Although there is little to no evidence of an increase in the threat of violent attack in Northern Mesopotamia, and little evidence of violent attacks occurring at Tell es-Sweyhat, the city's defenses were expanded to cover a much larger area and to encompass a wider array of activities. While the Sweyhat 3 fortress appears to have protected storage areas and some domestic spaces, many people worked and lived outside of its protection. The Sweyhat 4 city wall and rampart, in contrast, enfolded nearly the entire sedentary population under its aegis. In both cases, the emphasis of the change may have been a decrease in communal mourning and storage, and increased emphasis on privacy or personal possession.

In this chapter, I propose to answer the following question: as Sweyhat became more urban, did it also become more planned? First, I examine the convoluted relationship between urbanism and complex society. Next, I outline the theoretical underpinnings of the spatial archaeology approach that I will be using for this component of the dissertation. Finally, I examine how well Tell

es-Sweyhat was planned in periods 3 and 4 in terms of its monumentality, orthogonality, and access and visibility.

Urbanism and Complexity

The concepts of urbanism and complexity have been closely intertwined since Gordon Childe first outlined his traits of state societies, of which “cities” was one (Childe, 1950). Statehood and urbanism have been treated as interchangeable in many archaeological works (Cowgill, 2004). In Mesopotamia, this conflation is likely rooted in the concept of the city-state. City-states, or “micro-state[s] centered on the city,” are the earliest known form of state-level political system, with a number of these political entities co-existing and exerting control over an area from a central capital (Hansen, 2002: 15). At least a dozen of these micro-states constituted Sumerian society, which is why Westenholz begins his chapter entitled “The Sumerian City-State,” with the statement “Of course, there is no such thing as the Sumerian city-state” (Westenholz, 2002: 23). He elaborates that each of these political entities is distinct, “each with its own peculiarities,” and so when scholars discuss “the Sumerian city-state,” they must necessarily discuss a generalized or even idealized city-state that never truly existed. This conflation of urbanism and complexity translates into an equation of settlement scale and complexity at the regional level (Wilkinson, 2000: 241). A complex society is often assumed to possess larger site hierarchies, even though settle-

ment size hierarchies are not necessarily equivalent to administrative ones (Wilkinson, 2000: 243).

City-states are not the only form of early state, and not even the only form of primary states. Egypt, for example, was organized in a territorial state from an early date (Yoffee, 2005). Sargon of Akkad takes credit for unifying the city-states of southern Mesopotamia into a territorial state at the inception of the Akkadian period. Documents have also revealed that at roughly the same time in the third millennium BCE, Ebla and Mari were the capital cities of competing territorial states (Archi, 1990: 15). Although Ebla at least claimed to control the area up to Carchemish at times, it is unclear how much territory it ever directly controlled (Archi, 1990: 19). If the documents at Ebla represent the situation accurately, Tell es-Sweyhat may have lied within the boundaries of one or both states during the Sweyhat 3 period. This still tells us very little about how the struggle played out on the ground, since presumably the amount of control exerted by either state at the peripheries of their spheres of control would have been lower, with “maximum concentration of power at the centre of the structure and maintenance of the original system on the outskirts” (Archi, 1990: 19).

The culture history of Northern Mesopotamia can be puzzling in many respects to those theorists primarily concerned with explaining the relationship between complexity and urbanism from the point of view of Southern Mesopotamia. Hansen (2002: 7), for example, posits that the Kranzhügeln might have

been city-states, specifically listing Beydar, Chuera, and even Brak.[15] He treats these early cities as an example of the primacy of documentary evidence in ascertaining upper-level political organization. In the same volume on city-states, Westenholz cites then recent evidence of early urbanism from Hamoukar and Brak as a curiosity that challenges the designation of Southern Mesopotamia as the birthplace of the city (2002: 24). Because so much of the understanding of Mesopotamian urbanism was defined based on southern models, some scholars have denied the huge site of Brak its status as urban, since it was not accompanied by a "proper urban hierarchy" (Algaze, 2008; Ur, 2010a: 399).

Urbanism and complexity are even more curious in the Euphrates Valley, since cities here were much smaller, but at least occasionally more successful. Tell es-Sweyhat's fluorescence occurred during a time of depopulation of the cities of the Khabur, for example. The Euphrates valley also lacked the marked settlement hierarchies that have often been used as a marker of complex society in the south (Cooper, 2006: 4). The apparent specialization of certain sites, particularly those that appear to serve almost entirely as mortuary centers, has led some scholars to believe that complexity in this area may simply have been different. The monumental centers at Banat and Umm el-Marra may indicate that each smaller settlement may have carried out a particular function in a network of local settlements (Porter, 2012; Schwartz *et al.*, 2012). Furthermore, little evidence of centralized secular power exists in this area in the form of palaces or

15 His inclusion of Tell Brak in his list of Kranzhügeln highlights the uselessness of the designation as distinct in some way from the citadel city, as defined by Cooper. See chapter 5 for more on this distinction or lack thereof.

administrative artifacts (Cooper, 2006: 5). Instead of eschewing kinship-based organization entirely in favor of a hierarchical secularized system, the two may have operated concurrently.

Cowgill asserts we should "think of urbanism as a cluster of variables that can be measured (if only roughly) on ordinal or interval scales, rather than as a discrete category" (2004: 527). Essentially, he advocates rejecting the city/non-city dichotomy, and says instead we should situate settlements on a scale of non-urban to urban on a number of axes. Some societies, he says, are non-urban, whereas some are urban, and yet others undergo a process of "urbanization," wherein they change from the former to the latter. This is essentially the process that Tell es-Sweyhat undergoes throughout its history, eventually filling the role of regional urban center.

Spatial Archaeology

Many credit the rise of settlement archaeology in the 1960s with sparking the development of spatial studies in the field (Steadman, 1996: 52; Ashmore, 2002: 3). Work by scholars such as Flannery (1972) and Adams (1965) linked social developments, environment, and settlement location within an explicitly spatial framework. The archaeology of mortuary landscapes, reviewed in more detail in Chapter 3, was a subset of the socio-spatial approach that helped drive the field (Ashmore, 2002: 6). By the late 1970s, spatially informed archaeology had become a formal area of inquiry, with Clarke's 1977 edited volume *Spatial*

Archaeology. This volume divided spatial studies into a three scale approach, scaling up from “micro” to “semi-micro” and finally to “macro,” in other words, the building, site, and regional levels (Clarke, 1977). Multi-scalar, and more specifically tri-scalar, approaches to spatial questions became common in spatial studies. Steadman, for example, restricts her review of spatial archaeology to “the microscale, i.e., intrasite and intrastructure models,” after giving a nod to the regional approaches that sparked an interest in spatial archaeology (Steadman, 1996). In the 1980s, archaeologists began to incorporate the work of social scientists such as geographers, who had been developing bodies of theory on the recursive nature of the relationship between space and people by the 1970s (Rapoport, 1976; Soja, 1989; Ashmore, 2002). It is also in this decade that household archaeology blossomed into a formal area of inquiry as a kind of compliment to landscape studies (Ashmore, 2002: 7).

Since that era, archaeologists have embraced the work of human geographer and architectural theorist Amos Rapoport, largely because the datasets he used were ethnographic or archaeological. Rapoport developed the notion of interaction between culture and the built environment, starting with his 1970 book *House Form and Culture*. In this work, he proposes that “present day ‘stone age’ civilizations,” as he terms them, do not physically separate or differentiate activity areas (Rapoport, 1987: 9). Vernacular architecture, according to Rapoport, is a conservative and traditional endeavor, and is “distinguished by lack of change” (Rapoport, 1987: 15). Although his approach minimizes individual agency, he

cautions against viewing environment, construction materials, or defense as the main determinants of house form. Instead, he treats these as modifiers of the socio-cultural forces (Rapoport, 1987: 47).

Rapoport sometimes expresses his theories as a cautionary tale for architects and designers—they must remember to design with the user in mind, not for other architects (Rapoport, 1987). Throughout his career, he advocated viewing spaces from the perspective of the user. In order to do so, he wanted to dissolve distinctions he viewed as artificial from the human perspective, such as the distinction between interior and urban space (Rapoport, 1969: 18). He also laments the gap between planning and design (Rapoport, 1969: 17).[16]

Kent provided a cross-cultural comparison of domestic spaces to support her hypothesis that complexity of society is directly linked to segmentation of domestic space, a proposal clearly rooted in Rapoport's work (Kent, 1990: 127). This study does not have a time dimension, as the model might suggest. Rather than compare changes in domestic architecture over time in a single society, she compares each society as a data point of complexity vs. spatial segmentation.

More recently, some archaeologists have stressed the time perspective along with the spatial. This is the "life history" or "biography" approach. This approach has been used to discuss topics ranging from the "history houses" at Çatal Höyük to the change in use of space at the Rio Viejo acropolis in Oaxaca, Mexico (Düring, 2005; Joyce, 2006). This approach considers the human perspective, taking into account a person's movement through the space in

16 See Steadman 1996 for a more exhaustive review of Rapoport's contributions.

question. It does not reduce a space to a two dimensional plan, but considers it in three dimensions, taking change over time into account as well.

The approaches described above tend to treat spaces as operating on distinct scales. Space is treated differently at the building level than at the neighborhood level. These approaches have addressed many questions concerning the way people live in houses and the way communities interact. For this study, I will focus instead on some theoretical frameworks that provide the mechanism to move between scales. This approach will allow me to consider how decisions of builders and residents lead to the particular shape of a domestic structure and also how those forms create the city plan. It also provides the mechanism for connecting the archaeological data available, consisting of small segments of architectural plans to the question at hand: the plan of the city as a whole.

Recently, Michael Smith (2011) provided a review of the various related bodies of theory that are most applicable to ancient urban landscapes. He covers the bodies of theory developed in the social sciences other than archaeology, and provides examples of the successful applications of those theories to archaeological materials. Of this set of bodies of theory, syntax and generative planning theory provide the means to transition between architectural scales. The capacity to analyze spatial organization across spatial scales, from building to neighborhood to city, is crucial in interpreting the evidence at Tell es-Sweyhat, because we have access only to small portions of the city plan.

Urban planners often envision the built environment as a medium for communication. Two schools of thought have built on the analogy between architecture or urban landscape and language: pattern language and space syntax. The two approaches are distinct, but not contradictory in most respects, and can be used simultaneously.

Pattern Language

Alexander, Ishikawa, and Siverstein (1978) wrote a tome outlining what he called a "pattern language" of cities and vernacular architecture. He created a list of over 200 "patterns," or modules, which could be chosen by individuals or small groups to plan a city, a neighborhood, a building, or even an expansion on a building. Ultimately, if all community members are communicating in the same "language," the result will appear to have been planned (Alexander, Ishikawa & Silverstein, 1978: 3). Alexander intended to empower designers, architects, and even builders to assemble these patterns into their own houses and neighborhoods (Mehaffy, 2007: 44).

Although the text of *Pattern Language* was written as a "how to" in planning, it also acts as a philosophy for how architectural patterns arise. Distinct building cultures would construct their built environments through their own pattern languages (Mehaffy, 2007: 44). In a sense it builds on the work of sociologists such as Durkheim and Mauss, who treat language as a classificatory system negotiated by a society (Durkheim & Mauss, 1963). Alexander describes

the “language” of vernacular architecture as a set of “patterns” that a society has agreed upon as desirable or appropriate building traits. A “pattern” in his sense would be analogous to a word or phrase, which can be combined with other words to express novel thoughts that others familiar with the system can immediately understand, even if the listener has never heard that particular combination of words before, or in this case, seen a particular structure. A “Main Entrance,” for example has a clearly visible position and a distinctive shape, such as a small columned porch (Alexander, Ishikawa & Silverstein, 1978: 543). An approaching parcel delivery person, for example, should be able to recognize the main entrance by these cues and behave appropriately, by approaching it and ringing the doorbell.

Alexander records the design principles that already developed organically within his society. In this sense, he attempts what Bourdieu might describe as the impossible—creating what could be termed an “etiquette handbook” for vernacular design. Bourdieu might have criticized this approach, since he believed that “The science of practice has to construct the principle which makes it possible to account for all the cases observed,” rather than an exhaustive list of reactions to potential actions (Bourdieu, 1977: 11). Using the language analogy, however, the Pattern Language would be more like a dictionary than an etiquette book. Dictionaries are useful in spite of the fact that they are essentially always out of date, since word use is constantly changing as users negotiate new definitions for existing words, or new words for new products and concepts. In another

sense, Alexander's "etiquette book" can be treated as an extended example of the choices a builder or city planner might make in pursuit of a culturally appropriate construction project.

Alexander's work has not been used extensively by archaeologists, although Michael Smith acknowledged its potential utility in his review of urban theory.[17] This body of theory has been used for historic preservation, however. For example, Hakim advocates a historical preservation model that allows historic towns to retain the generative process (2007: 88). He proceeds to outline some terms from the pattern language of vernacular architecture on Bahrain, such as typical building height, that should be proscriptive but subject to modification (Hakim, 2007: 92).

Space syntax

Space syntax adapts the linguistic concept of word order to the way in which people move about in a particular built environment. Its practitioners treat architecture as a vessel that holds spaces, rather than a structure in and of itself (Shapiro, 1999: 420). This approach examines how these spaces relate to and modify one another. Archaeologists often approach architecture from the typological perspective of ordering and grouping buildings or architectural features by style. Space syntax forces archaeologists to eschew the architectural

17 A Pattern Language is well-known in the urban planning community. Planetizen, an influential planning news blog, named it one of the top 20 planning books of all time. See the complete list at http://www.planetizen.com/books/20.

details and the style of the building, but to focus on the primary purpose of the building—to encapsulate and delineate spaces.

Space syntax studies are concerned primarily with quantifying two variables—symmetry and distribution. Symmetry describes "the accessibility relationship of two spaces." (Shapiro, 1999: 421) In contrast, distribution refers to how interconnected spaces might be. In order to "do" space syntax, an architectural plan is reduced to a diagram of interconnected nodes. Each node represents a room, and those rooms are connected with lines that represent access points such as doorways, gates, or rooftop access points. Thus, a more distributed building will produce a pattern of concentric circles, and a more symmetrical building will not have any particular space that is very hard to reach from the other spaces. Then, using these graphical representations, the structure's symmetry and distributedness are quantified using formulas (van Dyke, 1999: 466). If one of these diagrams is created from the point of view of each of the spaces within the structure, the symmetry and distributedness can be calculated for each room and displayed with shading. This type of graphic can clarify which rooms integrate the most spaces in the building (Hillier & Vaughan, 2007: 210). Building on this simple approach, one can create a "visual integration model" for a structure that will ultimately give a visual impression of which rooms provide the most visibility within the building (Chatford Clark, 2007; Hillier & Vaughan, 2007).

Some problems are inherent in space syntax, primarily because the entire approach hinges on oversimplification. The most basic assumption is that an access point, or doorway, will be recognizable. Archaeologists do not share a "pattern language" with the ancient people they study, after all. In many cases, moveable materials such as mats or cloths may have demarcated spatial divisions (Steadman, 1996). In an "open concept" modern American home, for example, a kitchen may be separated visually from the living area by the positioning of an island or a butcher's block. Whether or not the kitchen should be considered a distinct node could be debated. Some scholars would overcome this problem by arbitrarily dividing "problem areas" such as long winding corridors, or rooms separated by turning a corner rather than a dividing wall by dividing up these spaces into more nodes as they see fit (Grahame, 2000: 31). This is not even to mention the problem of differential archaeological preservation of materials.

Another potential weakness is that access lines are all valued equally. If the hypothetical family in the open concept modern American home throws a house party, a guest will likely feel and act as though an upstairs hallway is less accessible than a downstairs bathroom. The guest would probably feel no need to ask permission to enter the bathroom, but would not start wandering around upstairs unless directed to do so by the host or hostess. According to a space syntax approach, the two rooms might be rated as equally accessible, however (Shapiro, 1999: 421). Hillier acknowledges some of these weaknesses, and

responds by attempting to model human decision making by breaking spaces—in this case streets—into more nodes.

Despite its limitations, the space syntax approach can be useful. Viewing a simplified graph of nodes and linkages can illuminate central spaces that may not be obvious otherwise. This approach can also move between scales—it is not only useful for single buildings, but can also indicate broader patterns in a city's structure. Space syntax has been used to plot the relationships between several buildings at Khirbet Qumran, for example (Regev, 2009). This analysis showed that strong socio-spatial boundaries existed at this site that may reflect a high degree of sectarianism, hierarchy, and ritual activity. By eliminating style from consideration, the space syntax approach can make cross-cultural comparisons of use of space easier. Regev was able to use the space syntax approach to compare the results from Khirbet Qumran to ethnographic examples (2009).

While the space syntax approach is concerned with movement within an existing structure, the pattern language approach provides the mechanism for change in the built environment over time. Space syntax is often used to contrast different phases of buildings or cities, but is still static in the sense that it does not identify how or why a structure might have come to be a certain way. Scholars bridge the gap between space syntax and urban formation processes through their conception of the city as "one thing," rather than the superposition of a social city and the physical city (Hillier & Vaughan, 2007). They criticize the traditional bifurcation of the city by asserting that "The social city is either side of

the physical city: it brings it into existence, and then acts within the constraints it imposes" (Hillier & Vaughan, 2007: 206). Many archaeological space syntax studies use an empty architectural plan to analyze the use of space based solely on space syntax indices, such as symmetry. Hillier and Hanson's indices cannot be used as a simple proxy for "importance," however. The authors themselves highlight this issue, with the example of the formal Victorian front parlor, which is rarely used and is the least integrated precisely because it is a very important space (Hillier & Hanson, 1988: 16).

Hillier and Hanson's space syntax approach allows for a generative process similar to that championed by Alexander. In arriving at the space syntax methodology and indices, the authors began by creating a computer model that would randomly create "rooms" and "doorways" in the form of cells connected by access points using only a few simple rules about room access. Ultimately, this model created a series of courtyard complexes that appeared relatively lifelike, similar to the "ringy" village form that may appear to have been planned in a top down manner, but that the authors identified as the result of an organic growth pattern in parts of France. Essentially, their model illustrated how a global pattern can appear as the result of small individual decisions, that "real problems in settlement generation might sometimes be solved through the notion of local rules leading to well-defined global forms" (Hillier & Hanson, 1988: 10).

When applied to the city as a whole, the pattern language intersects with and amplifies the space syntax approach. Alexander famously wrote that "a city

is not a tree," when outlining his best practices for designing urban neighborhoods (1965). If you were to represent a city graphically, it should not funnel people into and out of a core downtown area, but should consist of smaller neighborhoods, each with their own character and employment opportunities. If graphed, rather than a dendritic figure, the city should represent what he calls a "semi-lattice," or should display a high level of interconnectedness. Presumably, the transportation network should be planned to facilitate more "ringy" movement, as Hillier and Hanson would term it. As Harary points out, however, certain components of the city are necessarily dendritic (2011). The sewer system, for example, should not meander block to block in a semi-lattice pattern, but should rather move from each home to the treatment plant in the most efficient way possible, and in a single direction (Harary, 2011: 348).

Archaeological activity area analysis is similar to space syntax, in that it considers space as a snapshot in time. The added benefit of activity area analysis is that it looks at the contents of the rooms, not just the rooms as containers. Space syntax generally does not consider the contents of the rooms in question, since it was not developed primarily for the use of archaeologists, but rather adapts concepts of topology to architectural problems. Space syntax could obscure any intra-room variation in activity, since it privileges the movement of people between rooms rather than within them. In contrast, "activity areas include bounded, or partitioned, spaces associated with particular social groups and their patterns of behavior" (Lawrence & Low, 1990: 462).

These approaches each address different components of archaeological spaces. Space syntax provides a measure of rooms as containers, while activity area analysis addresses the contents of those containers. Pattern language provides a model for the mechanism of the piecemeal construction process that is evident in the phasing of the buildings at Sweyhat. In this chapter, I use these concepts to assess whether Tell es-Sweyhat became more or less planned as it transitioned from town to city.

Planning at Tell es-Sweyhat

The original director of excavations at Tell es-Sweyhat, Tom Holland, saw evidence of city planning in the EBIV neighborhoods in the western edge of the Low Inner City. He asserted that "The discovery of a street … situated parallel to the town wall, revealed that the Bronze Age town was well planned, especially as the eastern portion of this building complex faced directly onto the west side of the street" (Holland, 2006: 55). It is unclear why the presence of a street with buildings opening onto it would necessarily indicate that the city was well planned. Most likely, he meant that some agreement must have existed dictating the approximate path of the fortification wall and the corresponding parallel street, possibly before either the wall or the buildings lining it were constructed. He imagined that the city blocks or parcels of land must have existed before they were filled in with architecture. The level of organization required to plan the path of a city street is relatively modest, however, particularly in the case of

city planning on a steep hill. The easiest way to move across the tell from north to south would be along one of the elevation contours. People would naturally choose to move in roughly circular paths around the tell rather than at an angle oblique to the slope.

Ascertaining whether or not Sweyhat should be considered a planned city is no simple task. As Smith (2007) indicates, the dichotomy between "planned" and "unplanned" cities should be avoided, since several kinds of traits can be seen as evidence of planning. Some might call the mere presence of a city wall or monumental architecture "well-planned," while others would reserve the term for properly gridded orthogonal street plans. For example, Lilley et al. have discovered that even in some Medieval towns previously thought of as highly planned, the rulers may have had less of a hand in planning than those doing the actual building (Lilley, Lloyd & Trick, 2007). Thus even a situation in which a single decree may have precipitated the construction of several towns on virgin soil, a high degree of variation between settlement layouts was apparent. This avoidance of a simple "yes or no" to whether a city was planned evokes Cowgill's rejection of the urban/non-urban dichotomy.

Smith articulates the following categories of planning: coordination among spaces, and standardization among cities (2007). Since analyzing standardization among cities requires a number of nearly complete city plans, we cannot make many observations concerning how standardized third millennium Northern Mesopotamian city plans may have been. This is largely because of a

combination of the nature of tell archaeology and the trend over the last several decades away from massive exposures. Because third millennium cities are often represented as a few layers within a more complex mounded site that may have meters of later occupation overlying it, it is very difficult to achieve large exposures of deeper areas, practically speaking. Furthermore, third millennium cities in Northern Mesopotamia were not a major area of inquiry in the era when archaeologists felt no ethical qualms about exposing vast areas of a site at once. The "big dig" style of archaeology, which was used at Ur and a number of Neo-Assyrian sites, has been largely abandoned in favor of excavation techniques with much higher artifact and ecofact recovery rates at the expense of huge exposures.

Coordination among buildings is a much more apt area of inquiry for Northern Mesopotamian cities such as Tell es-Sweyhat, since it requires smaller exposures and relies less on cross-site comparisons.[18] Smith identifies several ways in which buildings may be coordinated: arrangement of buildings, formality and monumentality of layout, orthogonality, other forms of geometric order, and access and visibility (Smith, 2007: 7). In this chapter, I examine how well Sweyhat was planned over time in terms of the most applicable of these measures to the available data—monumentality, orthogonality, and access and visibility.

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18 See Chapter 4 for an explanation of the problems with Northern Mesopotamian chronology as it relates to cross-site comparisons.

Monumentality

Monumentality has been used as a signal that Mesopotamian society had achieved statehood since Childe used the ziggurats and temples at Ur as part of his dataset for defining urbanism (Childe, 1950). Ever since that time, monumental architecture has been used as part of the "checklist" for statehood in a given society largely because it is assumed that a large unnecessary labor expenditure must signal control of resources by some authority (Moore, 1996: 94; Smith, 2009: 11). Subsequently, monuments in the rural landscape have been attributed to corporate groups in simpler societies, such as Neolithic Europe (Renfrew, 1976; Barrett, 1990; Holtorf, 1997). Formal monumental architecture in urban settings, however, remains for the most part treated as attributes of hierarchical complex societies.

I follow Smith in using Trigger's definition of monumental architecture as "buildings that are much larger than they need to be for utilitarian purposes," with the caveat that not only can monumentality stem from the size of a structure, but it can also come from visual prominence or topographical location (Smith, 2011). The royal tombs at Umm el-Marra, for example, were not topped by massive pyramids or other overbuilt structures. Instead, the semi-subterranean tombs were perched on top of the tell in a very prominent position, which may have, in effect, used topography to increase the perceived size of the structures. We can therefore reasonably argue that public architecture located on top of a citadel may be considered monumental, even if it was not overbuilt.

During Sweyhat Period 3, the fortress would qualify as “monumental,” due to the sheer thickness of its walls and the buttresses that bolster them. Furthermore, it was modified in a second phase for apparently ornamental purposes, rounding the corners. We do not currently know what was underneath the fortress before its construction, but since the city was already slightly mounded as early as Sweyhat period 1, we can assume that some area was cleared to make way for the fortress. Both the clearing and the construction would require organized coordination of those who had previously used the space and those who were constructing the new building.

The designation of “monumental” would certainly apply to the later Sweyhat 4 temple. It is a large structure, even if not overly so, and possesses stylistic traits (or Alexander’s Patterns) such as buttresses and a long central room that “signal” a temple to those viewing it. Most importantly, it was constructed on top of a large prepared platform that subsumed the remains of the earlier fortress. Like many other temples in Northern Mesopotamia, this structure seems to have been surrounded by an open area, in contrast with the densely packed architecture of the residential area (Cooper, 2006). Constructing this temple required subsuming the fortress under a massive terrace. People using that fortress for work areas or storage had to move their things out, which indicates the level of coordination required to build the temple. While we do not know whether or for how long the terrace may have stood before the temple was constructed, excavations beneath the temple revealed no remains between it and

the fortress. Most likely, this means that even if the terrace stood open for some period of time before the foundations of the temple were made, it was the first structure to fill that newly constructed open space.

The city walls themselves could potentially also be treated as works of monumental architecture, since they likely required a significant level of coordination and would not have been built by individuals or families, in the manner of domestic structures. City walls are most often discussed in terms of their defensive functions. These structures are nearly always initially constructed to keep something or someone out, so it is not incorrect to think of them as defensive structures first. Both the fortress and the subsequent city walls sent a clear message—that the settlement and its agricultural products were safe from raids and theft.

Even though originally constructed for defensive purposes, a city wall may remain standing for centuries, and its defensive function can cease to be important. The city wall of Jerusalem, for example, was rebuilt during the reign of Suleiman the Magnificent, and it is still standing today. Currently, it is maintained not for defense, but as an object of historical interest, preserved with a buffer zone of gardens (Enis, 2004: 314). The city wall of Tolouse also stood for centuries, from Gallo-Roman times until the beginning of the last century (Horste, 1986: 5). The Toulouse rampart wall, which also featured purely defensive features such as a portcullis and a moat, had protected the city from sieges in 1159, and later in the 13th century (Horste, 1986: 5). In later times, however, it served primarily

to delimit the “old city” center. Furthermore, even in times when the wall was actively used for defense, generations passed without a siege. During most of its lifetime, the wall’s defensive nature was inactive. Although it most likely was constructed with a defensive purpose, we have no way of knowing whether it retained that function throughout its lifetime.

City walls had particular importance for the people of Mesopotamia. From contemporary EBA textual records, we know that the phrase “to fortify a city” was used to mean “to make a city,” so the walls appear to have conceptually distinguished cities from lesser settlements (Ristvet, 2007: 184). In this case, “lesser” should not be equated with “smaller,” since we know that city walls encircled a wide range of city sizes (Chapter 4). Contemporary documentary evidence also suggests that fortresses, such as that dating to the early EBA at Sweyhat, were important in labor regulation. The Beydar tablets use the phrases “those of the fortress, who harvested the grain” to mean “worker” (Ristvet, 2007: 185).

While city walls have been viewed as a long-term labor and resource intensive projects, some recent calculations might suggest otherwise. Ristvet used evidence from scribal calculations to tally the person hours involved in constructing the outer city wall at Tell Leilan (2007). Certain Mari tablets indicate that a rampart large enough to enclose the 90ha area of Tell Leilan would have taken 45 days, provided half of the adult population (approximately 1080 to 3600) was working on this project (Ristvet, 2007: 200). The masonry of the inner city wall, which enclosed an area of 15ha, would have taken approximately 163 days

provided the same labor force. Ristvet acknowledges that the actual masons and earth movers would have needed a support staff of planners, overseers, etc., which would have reduced the available labor supply accordingly (2007: 201). She suggests that the labor available at Leilan itself may have even been supplemented by workers traveling in from the rural areas, or providing goods and services to support the construction efforts at the regional center. These calculations reveal that the major energy expenditure actually lies with the inner city wall, since it involves processing mud and straw into bricks, whereas the outer city wall required only that earth be moved from one place to another, probably with overseers to pack it into the appropriate shape. The additional work required to ring a city with an outer town rampart would be minimal compared with the inner city wall. This makes one wonder why the smaller cities did not invest in outer town ramparts, because encircling an even smaller area could potentially be achieved in a matter of months at sites as small as Selenkahiye or Tell el-'Abd.

The scale of the project at Tell es-Sweyhat would have been much smaller, but the population would have been similarly limited, meaning the project may have been as big of an undertaking at Sweyhat as at Leilan. Tell es-Sweyhat would have had neither the urban nor rural labor force to draw from that Leilan had. Fewer support staff and fewer laborers implies that less oversight and bureaucracy would have been available. The few soundings excavated through the footings of the Inner City wall indicate that the project was constructed on

open work areas. Some leveling was necessary, but little to no standing architecture would have stood in the way of the project—occupants would not have been required to vacate the area. One of the biggest labor expenditures for the construction project would likely have been hauling in the unworked limestone from the surrounding area. Some of these stones were quite large, and even with the help of wheeled vehicles, a huge number of trips back and forth between the stone sources and the city would have been required.

Although the reorganization of the Tell es-Sweyhat was radical, the level of planning apparent in monumental architecture at the site did not increase dramatically. The town had already constructed a massive fortress, which required coordination not only for the construction project itself, but also for the preparation of the building site. Based on the position of the corner on the western side of the mound and the side that was exposed in the southern side, the building may have been as large as 0.25ha. Its construction could have required clearing and relocating the entire town center in addition to creating and assembling thousands of mudbricks. The Sweyhat 4 construction event would have required a similarly vast effort, since that same 0.25ha would have been cleared again in order to be enclosed within a high terrace that would later support the temple. The city walls were new construction as well, although they appear to have been constructed on areas that were already open. Construction of the inner wall would have required more skill than the outer rampart would have, but even that

inner wall appears to have been constructed in segments with variable quality of building materials.

Orthogonality

The gridded orthogonal city plan has been traditionally viewed as the deciding factor for whether or not a city was planned. As Smith indicates, early Mesopotamian cities like Ur do not exhibit orthogonal plans, whereas later cities, such as the Neo-Assyrian Borsippa do. Where does Sweyhat lie on this spectrum? A cursory glance at the SWLIC and Area IV plans might give one the impression that Sweyhat had a "distorted orthogonal layout" that was warped by the position of the city wall, because the rooms look small and regular (Smith, 2007: 15).

The phasing of the buildings in the southwestern sector, however, indicates that the appearance of a modified orthogonal plan is really what Smith terms "semiorthogonal" (2007: 15). A semiorthogonal city plan is one in which the plan appears orthogonal, but really "results from the actions of individual builders who make additions to an existing rectangular house or build a new house adjacent to a standing structure" (Smith, 2007: 15). Although we do not have access to the city plan at Sweyhat as a whole, through the process of aggregation seen in the excavations in the southwest, more limited exposures reveal that houses grew together over time. This process gave this build-

ing complex the ultimate appearance of regular planning, since the city wall constrained the growth of buildings.

The shift from an open to a semiorthogonal plan is significant, but only in that it signals an increase in population density as the town added more buildings while restricting its growth within city walls. This increased occupational density would certainly have affected the way the inhabitants went about their daily life. Inner city residents would not have access to the wide-open work areas that the outer city residents had. It does not, however, automatically signal a change in how well the city was planned. Ultimately, residents arrive at the semi-orthogonal plan through negotiated building additions, and by following their pattern language.

Access and Visibility

Controlling access to particular areas is another signal that a city is more planned. The Sweyhat 3 town was very open, with no indication that access to any particular area was restricted, except possibly entry to the fortress. The outer town was certainly open, with ready access to the dead through cemeteries ringing the town, and open work areas.

Although likely constructed to signal military strength to potential attackers, the quotidian effect of Sweyhat's city walls was to demarcate the small high temple-topped citadel from the outer town, and to delineate the extent of the settlement. No matter what their original intended purpose may have been, city

walls restrict access to some area and to “channel the movement of people” within the city on a daily basis (Smith, 2007: 23). Even if we imagine that anyone at all was allowed through the outer or inner town gates, the wall still would have greatly affected the way residents could move about in their city. Once the inner city wall was constructed, Area IV and the southwestern sector became “restricted access” areas, in that residents were funneled through gateways.

The city wall at Sweyhat affected not only the neighborhoods built against its inner face, but also access to the other major new feature of the urban landscape—the temple-terrace complex. At Tell es-Sweyhat, the outer and inner city walls both restrict and channel the movement of people, animals, and goods. People approaching the temple at the center of the city would be restricted to particular approaches, such as through the gate uncovered in Area IV. The city may have had an interest in limiting who was allowed to enter the inner city. The visibility of the temple, appears to contrast with this sense of limitation. Some residents would presumably be able to see the temple at the top of the terrace, but might not be allowed to enter.

Space Syntax at Tell es-Sweyhat

The new restriction of access to the city center is reflected in differential access to different activities within the domestic structures of Sweyhat 4. Here I use a space syntax approach, coupled with activity-area analysis to examine the difference between access to work areas and access to other areas within two

structures in the Sweyhat 4 Inner City. I treat the indices arrived at through the space syntax approach as an intangible part of the assemblage of the room, to be examined in context with physical features such as hearths and benches, and assemblages of artifacts (Normark, 2009).

In order to better understand how Sweyhat's inhabitants designed and used their buildings, I apply a contextual space syntax approach to two spaces around the SWLIC and Area IV.[19] Considering that the space syntax approach works best in buildings with unambiguous entry points and no winding passage-ways, the building styles of the EBA of Northern Mesopotamia represent good analytical cases. Wherever the mudbrick superstructures of walls are at all preserved, doorways tend to be clear, and rooms of domestic and work structures tend to be "boxy," with spaces clearly delineated by tangible and nearly permanent mudbrick. Of the excavated structures at Tell es-Sweyhat, I selected those most amenable to the space syntax approach. Area IV contains the largest and most complete exposure of a single building in the Low Inner City at Tell es-Sweyhat. The mudbrick superstructure survives throughout this area, so all doorways are clearly visible in the architectural plan, making it an excellent candidate for the space syntax approach. I also selected a building in the SWLIC for similar treatment, although less of its plan was excavated. The mudbrick superstructure did not survive in many areas of the SWLIC, including most of Opera-

19 While it could be interesting to compare these structures to the buildings in the Outer Town, the largest exposure does not have a surviving mudbrick superstructure, so the building plan cannot be discerned.

tion 102. The partially excavated building in Operation 103 did have surviving walls with visible doorways.

I have limited my analysis to diagramming and calculation of "control values," or the measure of how much each space restricts access to other spaces. Control values rely primarily on the internal configuration of doorways, so they are particularly robust in the case of the incomplete architectural plans that we have at Tell es-Sweyhat and in most archaeological contexts. Any potential variations in the syntax diagrams would change only the control values of rooms at the edges of the trenches, beyond which the building layout is unknown. The control values of rooms fully exposed by excavations will vary little in relation to one another.

The first step was to create a simple diagram of room access for the Area IV building (Figure 53, Table 5). The exterior is represented by a crossed circle.[20] Doorways are represented by connecting lines, and rooms are represented by circles. The next step was to calculate "control values" for each. A control value is a simple metric used to assess whether a space is "controlled" by access to other spaces or is "controlling" access to spaces. Each room has 1.00 unit to contribute to adjacent spaces, which is divided evenly between all connected rooms. For Room 2, for example, Room 3 contributes .33, since it is connected to three other rooms, and Room 4 contributes .5, since it is connected

20 I treated all of the exterior space as one area for the purposes of this analysis. I could have diagramed this building as having two exterior spaces, since the area that Rooms 5 and 6 open onto is different from the area that Room 9 opens onto, but changing the treatment makes little difference in the Control Values.

to two rooms, for a total of .85. Since this room is “giving” 1.0 to its neighboring rooms, and only “receiving” .85 in return, Room 2 is considered “controlled.” Any room with a control value greater than 1 is controlling, while any room with a value lower than 1 is controlled. Without this metric, simple estimation based on the simplified floor plan below would reveal that Room 9 is controlling, since it is a large courtyard from which smaller rooms radiate. The control values also reveal that Room 3 is controlling as well, in spite of its smaller size, however, which highlights the usefulness of the space syntax metrics. Room 4 should be treated as neutral. I then assembled and reviewed inventories for each room in phase 2A, which is contemporary with the foundation of the building. During later phases of the building, certain doorways were blocked, and a large oven was constructed in the middle of Room 9.

The most challenging component of activity area analysis is establishing whether the artifact assemblage would have actually reflected the activities carried out in that area (Kent, 1984). The Area IV building is particularly suited to this kind of analysis because it burned down, so the artifact assemblage should more accurately reflect the places where those items were used or stored when the building was occupied.

Most of the rooms in the Area IV building appear to have been used for food processing activities (Figure 54). Every room except rooms 2 and 17 contained at least one stone artifact identified as a grinder, pounder, or rubber. Most rooms also contained some combination of bowls and jars presumably

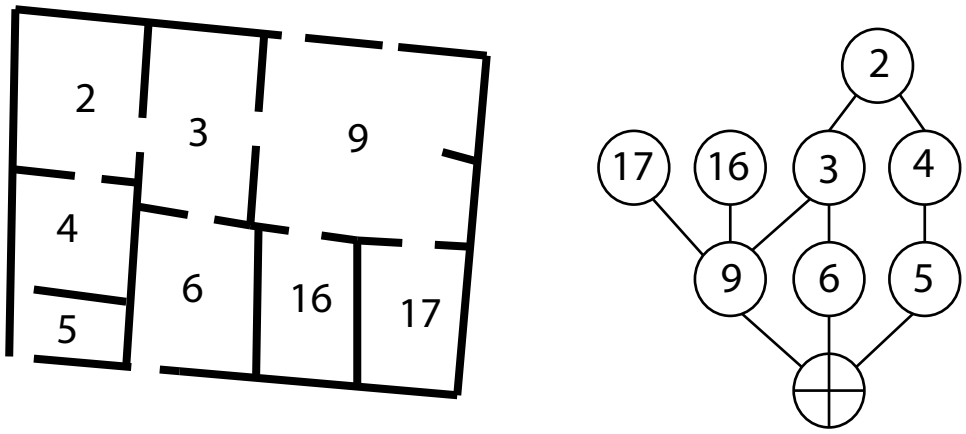

Figure 53. Area IV building, phase 2A. Right: Room access diagram, Left: Simplified building plan with room numbers.

Table 5. Control values for the Area IV building.

Room Number	Control Value
9	2.66
3	1.25
4	1
5	.83
2	.83
6	.66
16	.25
17	.25

used for at least temporary storage. The inventories of rooms 6, 3, and 4 stand out, since they contain artifacts used for a greater variety of activities. In addition to the typical assortment of grinding tools and ceramics, Room 9 also contained the charred remains of a wooden loom, along with its clay loom weights, suggesting that an active weaving project was underway in this area at the time of its abandonment. Furthermore, a number of figurines were uncovered in this room. Since all other artifactual evidence indicates mundane rather than religious activities in this room, I would propose that these figurines may have been used

Room 4
Rubber or Burnisher
Pin Fragments (Copper/Bronze)
Tool (Hematite)
Collar (Copper)
Bead (Obsidian)
Jar Sherd
1 Bowl
2 Small Bowl/Cups
3 Small Jars
2 Cooking Pots
4 Small Bowls
4 Pins (Copper/Bronze)
9 Bases
29 Jars

Room 16
Pounder
Small Bowl/Cup
Lid
Jar Sherd
Spheroid Fragment
2 Bases
5 Bowls
8 Jars

Room 2
Small Bowl/Cup
Tool (Hematite)
Windowed Pedestal Stand
3 Small Jars
10 Jars

Room 3
Weight (Cuneiform)
Burnisher or Rubber
Cylinder Seal
Strainer Bowl
Crucible Bowl
Figurine (Human)
Base
Pounder
Polisher
Tool (Hematite)
Windowed Pedestal Stand
Jar Sherd
Applied Band Sherd
2 Small Flasks
2 Flasks
3 Cooking Pots
4 Bowls
6 Small Jars
17 Jars

Room 17
2 Small Bowl/Cups
Jar
Base
Counter Disk

Room 5
Grinder
Rubber
Small Jar
Small Bowl/Cup
2 Jars
5 Small Bowls

Room 6
Weight
Strainer Bowl
Bottle
Base
Grinder
Grinder/Pounder
2 Pounders
Small Bowl/Cup
Model Chariot Wheel
3 Pot Stands
4 Small Bowls
5 Cooking Pots
9 Jars
1 Jar Sherd

Room 9
Pounder
Grinder
5 Animal Figurines
Human Figurine Stand
Female Figurine
Small Jar
Unidentified Fragment
Jar Sherd
Wooden Loom
Clay Loom Weights
2 Windowed Pedestal Stands
2 Bases
2 Flasks
2 Bowls
4 Pot Stands
5 Jars
6 Small Bowls

Figure 54. Area IV building, phase 2A. Right: Room access diagram, Left: Simplified building plan with room numbers.

as toys to amuse small children while the adults, adolescents and older children engage in other household tasks.[21] Room 3 contains a weight with a cuneiform inscription, a crucible, and a hematite tool. This set of specialized equipment could represent a toolkit for someone who forged metal implements elsewhere. Room 4 contained a number of bronze or copper pins and pin fragments in addition to the usual suite of materials.

The contrast in activities between Rooms 9 and 17 appears to be the most extreme. The artifact assemblage from Room 17 is atypical not in its variety, but in its scarcity. Since few artifacts were uncovered in this room during the initial phases of the building, the original excavators postulate that it may have been used for a sleeping area. A small hearth, not a tanur like those apparently used for cooking, lay in the corner and may have provided heat during chilly winter evenings. The excavators also point to Room 16 as another sleeping area, which it may have been, considering it was completely bereft of artifacts during the following phase of occupation.

Unfortunately, we do not have complete plans of any buildings in the SWLIC, and in some areas, the mudbrick superstructure of the walls did not survive, leaving the position of certain doorways a mystery. One area in Operation 103 is relatively well suited to a space syntax analysis, however. The north, south, and western boundaries of the building were revealed in excavations, leaving only the eastern street entrance unknown. Furthermore, the mudbrick

21 This is not to say that all figurines, or even all figurines of these types, are always used as toys. In many cases, they could be involved in religious practice, or for decoration, for example. See Chapter 3 for similar figurines from a ceremonial mortuary context.

superstructures survived in this area, clearly demarcating doorways. The northern 2m of the building is unexcavated, since it lay under the thick baulks we left between operations. This leaves four possible layouts of the building.

In order to apply a space syntax approach to this incomplete building plan, I modified the process. First, I treated room 14 as the exterior. While it is not the exterior of the building, it is the exterior of the grouping of four rooms at the back of the building, so this adaptation is reasonable. Second, I consider all four of the possible room layouts of these four rooms, and then followed the steps described above for Area IV (Figure 55). The resulting control values listed in the chart below indicates that Room 16 is definitely a controlling space (Table 6). Room 14 is not controlling, but they must be viewed with some caution, since we don't know what rooms may extend to the east. Most likely, however, room 14 opens directly onto the street, if the street in the SWLIC is a similar distance from the city wall as in Area IV. Provided room 14 opens onto the street, it would become a controlling room, but Room 16 would most likely remain controlling as well. Rooms 12 and 13 in this building are probably controlled spaces. Room 15 may or may not be controlled, depending on the configuration of doorways between the northern rooms. In short, we know that room 16 is controlling, and rooms 12 and 13 are controlled.

Room 16 of the Operation 103 building contained a nearly complete vessel in its southwestern corner, a basalt door socket, a large quern (61cm in length) and two loaf-shaped grinders. This artifact assemblage would point to its

use as a grain processing area. Room 12, in contrast, contained lots of storage vessel sherds, indicating that it may have been used as a storeroom.[22] Room 13 was unfortunately not very completely excavated, so few artifactual clues remain as to its primary use.

The results from both Area IV and the southwestern sector indicate that a variety of general work activities were often performed in more easily accessible spaces, such as the Room 9 courtyard in Area IV. That sleeping and storage took place in well controlled areas implies that control—an objective metric that merely describes the way spaces relate to one another—may be used as a proxy for the social concept of "privacy" at Tell es-Sweyhat.

The concept of privacy, including which activities must be carried out in private rather than in public, varies considerably cross-culturally (Moore 1984). Privacy may be one of the human needs that influences house form the most (Rapoport, 1969: 66). The most public space, then, seems to have been a bustling mixed-use area, with weaving activities, grain processing activities, and children playing in the same space.

Unfortunately, space syntax calculations cannot be used on the overall city plan at Tell es-Sweyhat simply because not enough of the city plan is known. Although we know the approximate path of the outer and inner city walls, we do not know how many gates would have led in, or the location of main roads. At Tell es-Sweyhat, one gateway in Area IV was excavated, so that area can be

22 Observation based on field notes. Unfortunately, the ceramics from this area were not processed before the Syrian Civil War prevented our return. Similarly, while ceramics were found in Room 16, they were not processed.

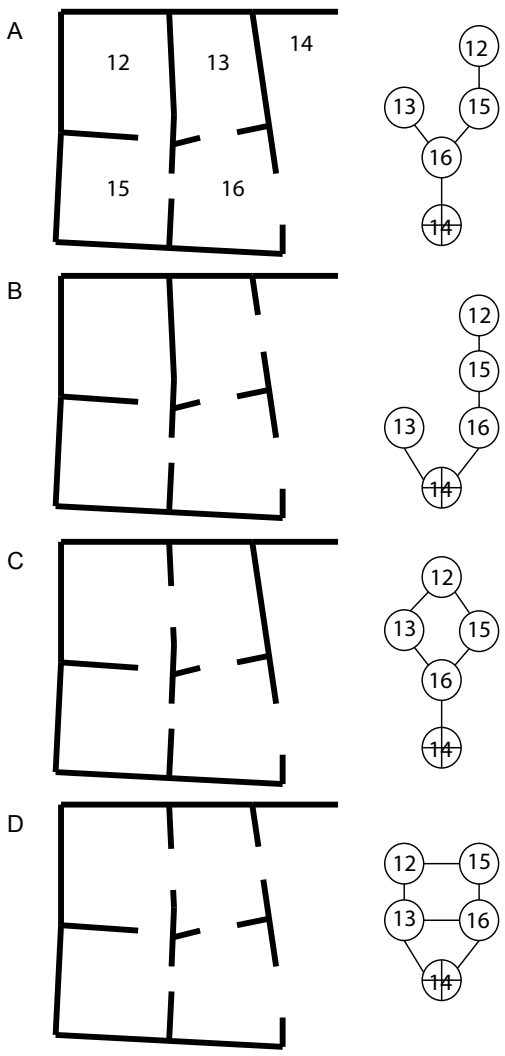

Figure 55. Operation 103 building. Right: Room access diagram, Left: Simplified building plan with room numbers.

Table 6. Control values, Operation 103 building.

Room Number	Possible Control Values			
	A	B	C	D
14	0.33	0.83	0.33	0.66
16	2.5	1.5	2	1.3
13	0.33	0.83	0.83	1.3
15	1.5	1.33	0.83	0.83
12	0.5	0.5	1	0.85

examined in some detail. A gateway at Tell Leilan was also excavated, which could provide a point of comparison. Although we cannot access the quantitative tools that space syntax provides, we can use its principles in a more qualitative way. Logically, gateways would likely be some of the most controlling spaces in the city, since access to streets is narrowed in those areas and branches out from them on the other side. Textual evidence has shown that gates were considered important components of the cityscape. Neighborhoods were often named for the nearest gate, for example (Ristvet, 2007: 184). Gates often serve as sites for levying tariffs, inspecting and trading goods (Ristvet, 2007).

The single excavated gateway at Tell es-Sweyhat in Area IV illustrates this point. Small side rooms in the gateway area would likely be controlled by the main gate area, since that large thoroughfare opens into both side rooms (Figure 56). The gateway area also funnels movement from the eastern area, outside the city wall, to the street that runs north past the Area IV building described above. Presumably the street continues to the south as well, past the SWLIC building. If so, the gateway would control access to both of those sectors of the city. Unfortunately, we have even less information about gateways through the Outer City earthen ramparts at Tell es-Sweyhat. The contour map shows a number of potential ingresses where the rampart appears to break. Five of these breaks appear in the outer ramparts, with two pairs on the east and west, and one in the northeast. A sixth smaller break appears in the southwest. These breaks are not as distinct as those at other cities such as Leilan or Beydar,

however, so excavations would likely be needed to confirm whether these breaks represent ancient gateways. The southern pair of openings on the eastern and western walls of the ramparts may represent the path of a wadi.

Excavations in the gateway at Tell Leilan reveal a similar pattern. They were only able to expose a narrow area because they were cleaning some bulldozer damage, so these excavations revealed little of the gateway plan. The three phases of architecture in this area revealed that this gateway was used for administrative purposes as well (Ristvet, 2007: 196). Phase 2 of this construction revealed what Ristvet described as “government offices,” and all phases returned administrative artifacts such as discarded sealings (Ristvet, 2007: 196–197).

These two gateway excavations indicate that these controlling areas constituted meeting areas between gatekeepers or officials and those entering the city center. In this sense, controlling areas appear to host a larger array of activities than the controlled spaces such as the small rooms to the side of the gateways.

Access to the temple at Tell es-Sweyhat would likely have been even more restricted than the areas inside of the gateways. The temple platform was several meters tall, and likely also had restricted access points such as stairways or ramps, if only to keep temple-goers from scrambling up the sides of a high terrace. At least one set of steps connected the roof of the kitchen building to the high terrace, indicating that those with access to this building also had immediate access to the temple area (Danti, Personal Communication 2013). These

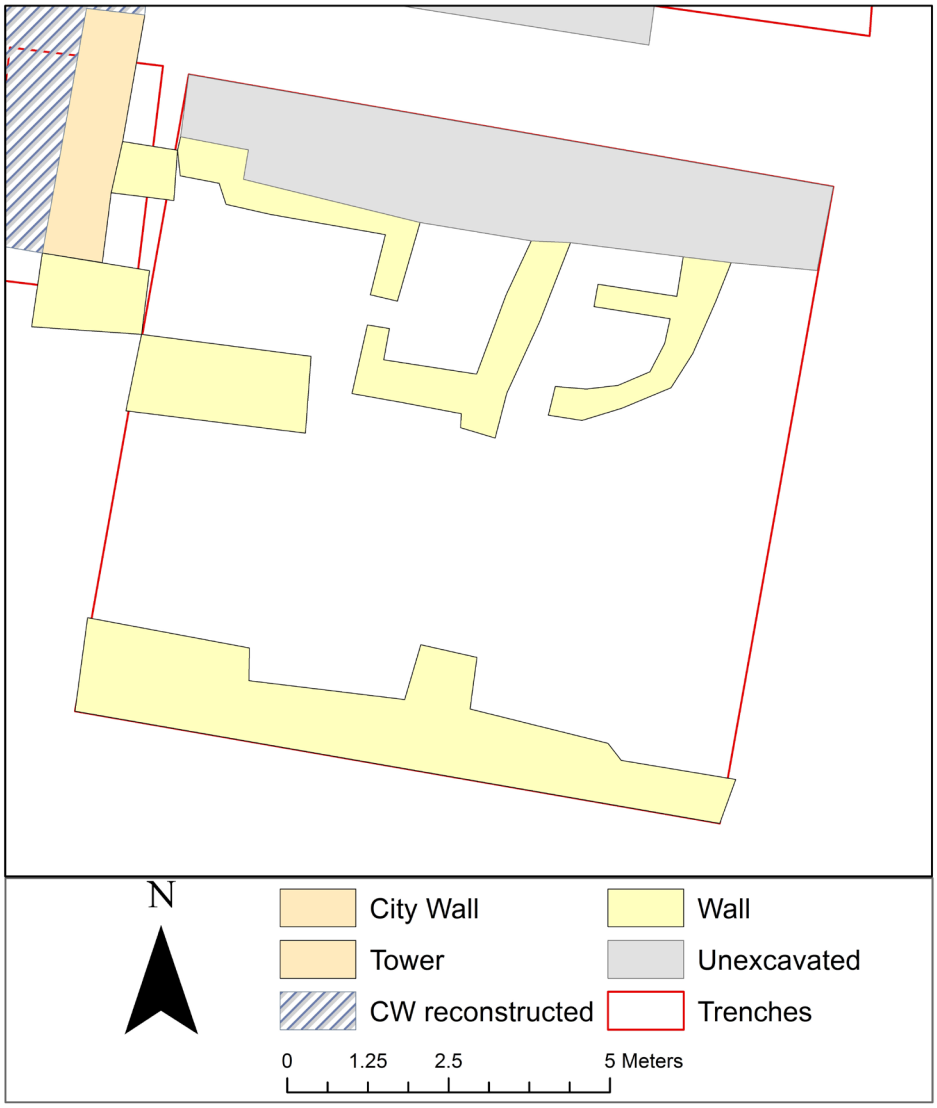

Figure 56. Gateway through Inner City wall in Area IV. Inner City is to the east, Outer City is to the west.

choked access points would have the effect of restricting religious or ceremonial practice at Tell es-Sweyhat. This parallels the shift in placement of burials from the open EBIII outer town cemetery to the restricted access single interment of the young woman under the EBIV SWLIC building. The ceramic and other open work areas in the outer town, in contrast, would be more easily accessible.

Fields and pastureland lying outside of the Outer City wall would have been the most accessible and most public.

This configuration of putting important buildings in inaccessible, yet highly visible areas, is common in Northern Mesopotamia during the mid to late 3rd millennium. Typically, the main tell can be topographically divided into an upper and lower tell, which correspond to the High and Low inner cities at Tell es-Sweyhat. The upper citadel areas are often the site of "buildings devoted to public ceremonial, administrative, and political activities (for example, palaces and temples)" (Laneri, 2007: 243). The lower town, in contrast, is typified by "private dwellings inhabited by individual households." Laneri claims that "the northern Mesopotamian sociopolitical system was centered on the secular authority represented by the royal family as well as selected nuclear families," as opposed to the southern model of the "religious temple-household authority" (2007: 243). This may not hold true at Tell es-Sweyhat in the Late EBA, since the central area of the city was home to a temple, but we have not uncovered any evidence of a palace or much evidence of administrative activities.

The space syntax analysis and the gateway excavations reveal that certain production activities, such as weaving and grinding, were considered public activities in both Sweyhat 3 and Sweyhat 4. The shift from town to city was accompanied by the restriction of access to the elevated platform and temple complex in the newly constructed city center. Furthermore, the activities carried out in the new Inner City may have duplicated or replaced those of

the large fortress of Sweyhat 3. The Sweyhat 4 Outer City took over the same function of the early Sweyhat 3 Outer City, supplying residents with open areas to perform work such as ceramic or lithic production.

Discussion

Overall, of the three measures of planning discussed here, Sweyhat 4 appears to have been moderately well-planned in terms of monumentality and access and visibility. Some relatively high level of coordinated effort must have been involved in the abandonment and infilling of the fortress along with the relocation of fortress activities. The construction of the temple would have served as an obvious beacon of the work that went into the city's reorganization, in addition to being a religious symbol. The city wall would have been a coordinated effort as well, although it would likely have required a modest amount of leveling and little relocation, since it was constructed over an area previously occupied by open work areas. As noted above, even though the wall system may have been built with a defensive purpose in mind, it would have continued to limit access to the newly created temple platform area. The city plan appears to have arisen organically, like the plan at Ur, in spite of the fact that the Low Inner City was a new neighborhood created on the leveled and filled work areas of Sweyhat 3. Had residents so chosen, they could have overlain a modified orthogonal grid over this area and planned their domestic structures more rigidly.

The choice to allow domestic areas to grow over time must have been a choice of the builders and Sweyhat residents.

Work activities appear to have been considered more public undertakings at Tell es-Sweyhat. In an examination of vernacular architecture, work took place in areas more accessible to visitors or people entering the house from the street. In the city plan as a whole, gateways were likely the locus of activities administering and regulating trade, while work activities such as pottery or stone tool production took place in the more open and accessible Outer Town.

Chapter 7: Conclusions

Tell es-Sweyhat occupied a marginal space in several respects. It was located in an environmentally marginal zone, with low and highly variable rainfall. Crop failure would have been a common occurrence, so the occupants alleviated some of the risk by relying more heavily on pastoral products such as meat and dairy than a city with adequate rainfall or a robust irrigation system might. They also would have supplemented agricultural and pastoral products with wild animals and grains hunted and gathered from the nearby river (Zeder, 1994a; Weber, 2006: 126). It was also historically marginal, in that it existed just outside literate areas. Textual records would not be attested in the Middle Euphrates region until the second millennium. The only obvious record-keeping system at Tell es-Sweyhat appears to be in the form of potters' marks and a single inscribed weight (Holland, 1975). Sweyhat also thrived during a valley between peaks of Northern Mesopotamian urbanism. It was founded when the first major urban centers declined in the Late Chalcolithic. It grew slowly and steadily until it peaked when other large cities were in decline. Sweyhat's position as a regional center during this transitional period in a marginal environment makes it a special case for examining the development of urban institutions. The Sweyhat 3 to 4 transition is particularly interesting since the settlement expanded markedly during this time. Ancient residents simultaneously undertook several major architectural changes, including ringing the settlement with thick fortifications.

Southern Mesopotamian documents indicate that fortification walls were considered synonymous with the city. The symbol of the city walls with the additional expanded settled area and increased population density indicates that the Sweyhat 3 to 4 reorganization event corresponds with the settlement's transition from a town into a city. At this juncture, the population redesigned several components of its settlement. The cemetery was discontinued, the city walls and ramparts were erected, and the town center was cleared to make way for a temple. These three basic physical changes correspond to the three areas of inquiry explored in this dissertation—burial, defense, and urban planning. Through the course of the dissertation, I examined the ways in which Sweyhat the city differed from Sweyhat the town in each of these three areas.

Burial Practices

Burial practices shifted markedly at Sweyhat's reorganization. During Sweyhat 3, large, labor-intensive earth-cut tombs dotted the edges of the city. These tombs were the focus of burial rituals for groups of people, presumably families, for generations. There may have been hundreds of these tombs, each with multiple burials. The extent of the cemetery is currently unknown, but it was not isolated to a single corner of the settlement as originally thought, as it lay to the south and northeast of the site as well. This cemetery fell into disuse sometime during the Sweyhat 3 period; the outer city wall was constructed directly over top of at least two tombs. The dead were no longer allotted their

own spaces outside of the settlement where they could be visited by mourners. The abandonment of the cemetery represented a major change in burial customs, but a change to what has been unclear. New evidence uncovered in the southwestern sector of the settlement may provide an answer to what Sweyhat's residents did with their dead after they no longer buried them in large tombs. A single adult burial dating to roughly the time of the reorganization event was uncovered in the southwestern sector of the Low Inner City. This simple pit grave with modest grave goods lay directly underneath the western wall of the Sweyhat Period 4 building complex. The burial was aligned with the wall of the building, and lay mostly under a long buttress that jutted out into an unroofed room. The placement of this burial suggests that the act of burial and of remembrance may have become more private and household-oriented as Sweyhat grew into a city. Furthermore, the location of this burial coupled with the burials of several infants in the rubble of the Sweyhat Period 4 building, indicates that the living used the deceased to consecrate spaces. Burials could be used either to open a new building, or close out an old, crumbling structure.

Defense

In addition to changes in burial practices, Sweyhat's residents changed defensive strategy. During Sweyhat Period 3, a large fortified structure dominated the site. This is an unusual type of building with few parallels, and little of it has been excavated, but it appears to have protected storage areas and

contained cooking installations. At the beginning of Sweyhat 4, this structure was abandoned and filled in, replaced by a fortification wall and rampart. Just what the residents were defending against has been unclear. The original excavator believed these walls were constructed to protect against the imminent threat of an invading army from the south. Presumably cities throughout the Middle Euphrates region would have been threatened equally by such an immediate danger, but settlements in this area erected city walls one by one over the course of centuries, not all at once.

There is some evidence of violent conflict at the city, however. In this dissertation, I examined several archaeological correlates for violent conflict—skeletal evidence, iconography and documents, weaponry, settlement location and architectural features, and widespread fires. Contemporary documentary evidence may not reveal the identities of area aggressors, but it might indicate that Northern Mesopotamia was familiar with organized conflict by the time of the Sweyhat reorganization event. Mari and Ebla had engaged in a series of conflicts, and Southern Mesopotamian rulers had engaged in some campaigns to the north. In terms of weaponry, clay sling bullets represent the most common type of weapon recovered at Sweyhat. Like other types of weapons, clay sling bullets may have been used primarily for other purposes, in this case hunting or repelling dogs from flocks of sheep or goats. Sweyhat's location within the landscape does not appear to have been selected for defensive purposes, but it did employ defensive architecture from an early date, first the fortress and

later the city walls. Finally, several excavation areas have revealed evidence of burning. The set of clay sling bullets among the Area IV building debris could have been related to the building's destruction by fire. The two most violent blazes occurred in the Area IV building and the temple, but other less-devastating fires damaged buildings in the southwestern sector, the eastern sector, and the northeastern sectors of the city. We cannot know based on current evidence whether these fires stemmed from a single event, or occurred over some period of time, perhaps decades. The fire that destroyed the temple, at least, is likely to have been purposefully set, since that structure did not contain fire features that could have accidentally set flammable materials ablaze. The Area IV building may also have been purposely set ablaze, considering the sling bullets that were found within the destruction debris. Overall, the available evidence yields an image of generalized increasing threat of violence.

The construction of the fortification walls likely represents a change in defensive strategy rather than an entirely new development, because these walls were built at the same time the fortress was abandoned. The city walls enclosed a much greater area, and could provide protection for nearly all of Sweyhat's residents. They likely also acted as a relatively inexpensive signal to the rest of the region that this city would be difficult to attack. This signaling may have been more a response to the possibility of an attack or raid rather than an army on the march.

Urban Planning

Ultimately, no matter what the immediate reasons were for constructing the city walls, they had the effect of significantly altering the city plan. Erecting two concentric walls with a limited number of gates not only kept out enemies, but restricted the movement of residents and visitors in and around the city. At the end of the Sweyhat 3 period, the residents reorganized their settlement from a fortress town to a citadel city. They vacated the central fortress, filling it in and covering it over to create a large terrace or platform. Those using the fortress for storage and for work areas had to relocate these activities to the Low Inner City and Outer City. After the initial construction of the city walls, residents of the Low Inner City constructed buildings against the city wall over time, ultimately creating a street plan that rings the citadel parallel to the path of the city wall. Activities that were carried out within the fortress during the Sweyhat 3 period now appear to be conducted alongside domestic tasks in houses with incorporated workshops. A space syntax analysis combined with artifact inventories reveals that work such as spinning, weaving, and grinding took place in open, easily accessible spaces that were more public and easily accessible from the street. This could mean that members of households visited one another and worked together.

The concern with segregating certain activities was reflected in the changing layout of the settlement. At the house level, larger rooms are subdivided and spaces between structures are filled in until a deceptively regular-looking plan

arises. At the neighborhood level, a similar process occurs. People build and add on to new structures that are similar to one another in shape because of their conception of what constitutes a house. Eventually, a formal-looking "semi-orthogonal" street plan is left between these structures.

This organically generated street plan does not mean that Sweyhat was entirely unplanned. Residents planned their city to various degrees in terms of monumentality, visibility, and access. The walls themselves, along with the large center-city terrace, required a unified vision and a labor investment. The resulting temple complex would have been both highly visible, because it was elevated on the high platform, and its access was restricted. The inner city wall would have restricted the possible approaches to the inner city, and climbing the terrace itself would have presumably required the use of staircases or ramps, further restricting the possible approaches to the religious area.

All of these changes indicate a shift in the conception of what activities were appropriate for public spaces at Tell es-Sweyhat at the onset of its urbanization.

Discussion

In this dissertation, I follow Chermayeff and Alexander in their contention that spaces are not merely "public" or "private," but fall somewhere on a continuum ranging from fully public, such as Central Park in Manhattan, to fully private, such as the pantry in one of the elite apartments overlooking that same park

(Chermayeff & Alexander, 1965). In the center city plaza, for example, defies easy categorization as a public or private space. There was tension between the high visibility of the space and the restricted access to it. Certain rooms within a dwelling, which would normally be thought of as private space, may have been considered more public, in that they were areas for the whole family and possibly also some neighbors to congregate.

The Sweyhat Period 3 fortress likely housed a communal storage and work area that was protected from outsiders, but accessible to certain community members. The town's defenses protected that community storage area. Ritual activities were not centralized, but were located at the edge of the settlement in the public ritual building to the south (Operation 5, Holland, 2006). Burial rites were similarly communal activities. Since the large tombs were located at the edges of the settlements, a large body of mourners would have had access to the cemetery, if not permitted to access the tombs themselves.

At the beginning of Sweyhat Period 4, these things changed as the settlement captured more inhabitants. Communal storage was no longer practiced at the same scale. Instead, storage and work were decentralized, taking place in the more public areas of private residences. Access to ritual activity, including both burial and religious practices, was restricted. The easily accessible cemeteries and religious buildings in the outer town were both closed. In their place, a large temple was erected at the center of the settlement in a large open area on top of a high platform. The temple would have been easy to see, but

more difficult to access. Fortification walls served the dual purpose of defending the city's inhabitants and restricting access to the inner city and the religious area.

This study has the potential for broad cross-cultural applicability outside of the field of archaeology. Tell es-Sweyhat experienced rapid population growth, thriving in an increasingly harsh environment. Current environmental and population trends worldwide are veering towards harsher climates with more frequent disasters such as droughts, as more and more of the population lives in cities. Examples from Tell es-Sweyhat and other ancient cities could serve as case studies for how to accommodate important social needs, in this case, remembrance, safety, and privacy, in urban environments experiencing sudden growth.

Context	Phase	Room	Description	Small Finds
Op. 101				
Loc. 0				
Lot 1	11		Northern half of operation, surface silt, soft spot in SW corner	
Lot 2	9		Northern half of operation, layer below surface, surface silt	2008.0150 2008.0151
Lot 3	11		Southern half of operation, surface silt	2008.0189
Loc. 1				
Lot 1	9	Late 10	North of northernmost stone wall running roughly E/W	
Lot 2	9	Late 10	compact light brown sandy silt	2008.0748
Loc. 2				
Lot 1	9	Late 1	windblown silt, just below the surface, surrounding Late Roman grave (Locus 4)	
Lot 2	8b	Late 1	surrounding Locus 4, floor	2008.0704 2008.0703
Lot 3	8a	Late 1	floor	

Context	Phase	Room	Description	Small Finds
Lot 4	8a	Late 1	floor, hard-packed green gray ash	
Lot 5	8a	Late 1	fill, dark gray ash	
Loc. 3				
Lot 1	11	Late 4	windblown silt just below the surface	
Loc. 4				
Lot 1	10	Roman Grave	Late Roman grave, sediment between two layers of capstones, burial in Room 2	
Lot 2	10	Roman Grave	Late Roman grave, under capstones, dark brown silt	2008.0258
Lot 3	10	Roman	Late Roman grave, under skeleton, brick and ash	
Lot 4	10	Roman	Late Roman grave, burial walls, stones and sherds	
Loc. 5				
Lot 1	9	Late 2	topsoil and degraded brick	2008.0159
Lot 2	9	Late 2	mudbrick collapse	2008.0291
Lot 3	8a	Late 2	area within grinding stone feature	
Lot 4	8a	Late 2	surface grinding stone is resting on	
Lot 5	7a	Late 2	ash just under surface	
Lot 6	7a	Late 2	mixed context	

Context	Phase	Room	Description	Small Finds
Lot 7	7a	Late 2	moderately compacted medium brown ash	
Loc. 6				
Lot 1	7b	Late 2	put cut into Locus 5, gray ash, burned mudbrick	
Loc. 7				
Lot 1	9	Late 5	half of the room north of the mid-operation baulk, north of Locus 14	2008.0164 2008.0174
Lot 2	8a	Late 5	mudbrick debris	2008.0194 2008.0254
Lot 3	8a	Late 5	ash, gray, slightly sandy	
Lot 4	8a	Late 5	plaster floor	
Lot 5	8a	Late 5	sandy ash	
Lot 6	8a	Late 5	compact bricky surface	
Loc. 8				
Lot 1	8b	Late 3	compact surface	
Lot 2	8b	Late 3	mudbrick collapse, ash, construction debris	
Lot 3	8b	Late 3	dark ash below mudbrick	

Context	Phase	Room	Description	Small Finds
Loc. 9				
Lot 1	7a		thick layer of dark ash below Late Phase architecture, below Locus 8	
Loc. 10				
Lot 1	9	Late 6, 7	stones, above dividing wall between Late Phase Rooms 6 and 7	
Lot 2	9	Late 6, 7	fallen mudbrick	2008.0191
Lot 3	9	Late 6, 7	degraded surface with flat-lying broken vessel	
Lot 4	9	Late 6, 7	dark ash	
Loc. 11				
Lot 1	9	Late 10	mudbrick collapse	
Loc. 12				
Lot 1	9	Late 6	mudbrick collapse in "room 6," which is the narrow gap created after Room 7's thick western wall was constructed.	
Lot 2	8b	Late 6	green gray ash, floor	
Lot 3	8b	Late 6	light gray ash	2008.0724

Context	Phase	Room	Description	Small Finds
Loc. 13				
Lot 1	9	Late 7	mudbrick collapse	
Lot 2	9	Late 7	dark loose ash	2008.0709
Lot 3	9	Late 7	very dark ash in southern third of locus	2008.0901
Lot 4	8b	Late 7	floor	
Loc. 14				
Lot 1	9	Late 5	southern half of room, south of the mid-op baulk, south of Op 7, mudbrick collapse	2008.0286
Lot 2	8a	Late 5	gray ash with plaster inclusions	2008.0294
Lot 3	8a	Late 5	light gray sandy ash	
Lot 4	8a	Late 5	surface	
Loc. 15				
Lot 1	9	Late 9	light brown sand	
Lot 2	9	Late 9	mudbrick collapse	2008.0721
Lot 3	9	Late 9	compact light gray ash	
Lot 4	8a	Late 9	compact dark ash, associated with Locus 17 tanur	

Context	Phase	Room	Description	Small Finds
Lot 5	8b	Late 9	pit cut into Locus 15, Lot 4; dark ash and organic matter	
Lot 6	8a	Late 9	floor depressions, very hard whitish gray green plaster	
Lot 7	8a	Late 9	post holes, gray ash fill	
Loc. 16				
Lot 1	8a	Late 7	tanur	2008.0715
Loc. 17				
Lot 1	8a	Late 9	upper layer of fill from tanur in Northwest corner of the room, silt and ash	
Lot 2	8a	Late 9	lower layer of fill from tanur, dark ash	
Loc. 18				
Lot 1	9	Late 8	windblown silt and sand	
Lot 2	9	Late 8	mudbrick collapse	2008.0287
Loc. 19				
Lot 1	9	Late 4	light brown silty sand, surface of southern half of Late Phase room 4, south of Locus 3	
Lot 2	9	Late 4	brown sandy silt with ash and mudbrick inclusions	

Context	Phase	Room	Description	Small Finds
Loc. 20				
Lot 1	8a	Late 9	tanur, gravel and stone surface in SE room in S. half of Op, Southwest corner of Op	
Loc. 21				
Lot 1	9	Late 6	area south of Locus 12, south of mid-operation baulk, mudbrick collapse, light ash and sand	2008.0720 2008.0719
Lot 2	9	Late 6	dark brown sandy silt	
Loc. 22				
Lot 1	8b	Late 5	pit cut into Locus 14, Lot 3	
Loc. 23				
Lot 1	8b	Late 9	pit cut into Locus 15, Lot 6 floor, fine brown sediment	
Loc. 50				
Lot 1	8a	Late 1	Northwestern corner of Late Phase Room 1	
Lot 2	8a	Late 1	*in situ* vessel	

Context Loc. 51	Phase	Room	Description	Small Finds
Lot 1	9	Late 4	western half of mid-operation baulk	
Lot 2	9	Late 4	western half of mid-operation baulk, mudbrick collapse	
Lot 3	9	Late 4	ash lens in Northeast corner of Late Phase Room 4	
Lot 4	9	Late 4	dark ash and mudbrick collapse in Northeast corner	
Lot 5	7a	Main 2	compact gray ash and mudbrick collapse, Southwest corner of Main Phase Room 2	
Lot 6	8a	Late 4	surface of compacted mudbrick collapse, Northwestern quarter of Late Phase Room 4	
Lot 7	7a	Main 4	dark ash lens associated with domed tanur cut by Locus 53 pit	2009.1186
Lot 8	7a	Main 4	mudbrick collapse, cut by Locus 53 pit	
Lot 9	7a	Main 4	mudbrick collapse, cut by Locus 53 pit, on top of tanur in Main Phase Room 4	2009.1567 2009.1442
Lot 10	7a	Main 2	silt and degraded mudbrick, underneath Locus 53 pit	
Lot 11	7a	Main 2	dark brown organic material	

Context Loc. 52	Phase	Room	Description	Small Finds
Lot 1	9	Late 8	mudbrick collapse mixed with sandy brown sediment, mixed context, cleaning for new season	
Lot 2	8a	Main 5	dark ash, eastern edge of room	
Lot 3	5	Main 5	tanur, burned red sandy clay with gravel inclusions	
Lot 4	6	Main 5	partly preserved tamped earth surface, small patch on the southern edge of the operation	
Lot 5	7a	Main 5	light brown sandy sediment with large rock inclusions, western third of room	
Lot 6	7a	Main 5	degraded mudbrick, west of 52/5, on top of city wall	
Lot 8	7a	Main 5	sandy degraded mudbrick, surrounding Locus 52, Lot 4 surface, and Locus 52, Lot 3 tanur in eastern part of room	
Lot 9	6	Main 5	laid sherd surface beneath 52/6, western edge of room 5	
Lot 10	7a	Main 5	mudbrick collapse in western edge of room, beneath 52/6	
Lot 11	7a	Main 5	mudbrick collapse in western edge of room, beneath 52/10	

Context	Phase	Room	Description	Small Finds
Loc. 53				
Lot 1	7b	Main 2	pit in doorway, cut into 51/6, mix of light and dark gray ash, compact mudbrick collapse, and loose brown silt	
Lot 2	7b	Main 2	pit in MP room 2 doorway	
Lot 3	7b	Main 2	pit in MP room 2 doorway	
Lot 4	7b	Main 2	pit in MP room 2 doorway	
Lot 5	7b	Main 2	pit in MP room 2 doorway	
Lot 6	7b	Main 2	pit in MP room 2 doorway	
Lot 7	7b	Main 2	pit in MP room 2 doorway	2009.1336
Lot 8	7b	Main 2	pit in MP room 2 doorway	
Loc. 54				
Lot 1	5	Main 5	tanur in NE corner of room, fire-hardened clay with gravel inclusions, same feature as 52/3	
Lot 2	5	Main 5	tanur in NE corner of room	

Context	Phase	Room	Description	Small Finds
Loc. 55				
Lot 1	7a	Main 5	eastern edge of room, sediment below Late Phase wall foundations	
Lot 2	7a	Main 5	sediment below Late Phase wall foundations	
Loc. 56				
Lot 1	7b	Main 1	pit in Main Phase Room 1 doorway; ash, contaminated context	2009.1414
Lot 2	7b	Main 1	pit; dark gray ashy brown silt, aeolian fill	2009.1413
Lot 3	7b	Main 1	pit; dark ash, light brown silt	
Lot 4	7b	Main 1	pit; brown silty clay, ash	
Lot 5	7b	Main 1	pit; loose brown silty fill, large stone inclusions	
Loc. 57				
Lot 1	8a	Late 1	gravel and stone surface	
Lot 2	7a		room debris below 57/1	

Context	Phase	Room	Description	Small Finds
Loc. 58				
Lot 1	5	Main 2	floor, light plaster on tamped mudbrick collapse, equivalent to Locus 71	
Loc. 59				
Lot 1	5	Main 2	large pit in southwestern corner of room, cut into 58/1, loose brown silt	2009.1423 2009.1429
Lot 2	5	Main 2	pit, brown sandy silt with pebble and charcoal inclusions	
Loc. 60				
Lot 1	5	Main 2	small pit in south of room 2, to the east of Locus 59 pit, cut into 58/1	
Lot 2	5	Main 2	small pit in south of room 2, cut into 58/1	
Loc. 61				
Lot 1	5	Main 4	loose ash around edges of a domed oven that is exposed in the profile of the Locus 53 pit	2009.1435
Lot 2	7a	Late 4	mudbrick collapse	
Lot 3	5	Main 4	degraded mudbrick tamped earth floor, level with foundation stones of eastern wall	

Context	Phase	Room	Description	Small Finds
Lot 4	7a	Late 4	loose brown silt, animal burrow or cut in floor in Southwestern corner of the room, runs along eastern wall	
Lot 5	5	Main 4	lightly plastered surface in western half of the room	
Lot 6	5	Main 4	surface between 61/3 and 61/4	
Loc. 62				
Lot 1	5	Main 5	shallow pit in eastern half of room, loose brown sandy sediment	
Loc. 63				
Lot 1	6	Main 1	mudbrick collapse	
Loc. 64				
Lot 1	6	Main 5	*in situ* vessel in pit in western edge of room, cut into Locus 52, Lot 11; soft sandy silt	
Lot 2	6	Main 5	pit in western edge of room, cut into 52/11, loose sediment surrounding 64/1 vessel	

Context	Phase	Room	Description	Small Finds
Loc. 65				
Lot 1	7a	Main 5	baulk under East wall of Late Phase Room 8, mudbrick collapse	
Lot 2	7a	Main 5	baulk under East wall of Late Phase Room 8, mudbrick collapse	
Lot 3	7a	Main 5	baulk under E wall of Late Phase Room 8, mudbrick collapse	
Loc. 66				
Lot 1	5	Main 4	underneath domed oven, mudbrick chunks with pockets of loose sandy silt	
Loc. 67				
Lot 1	6	Main 5	western edge of room, degraded upper layers of city wall, mudbrick collapse	
Lot 2	6	Main 5	western edge of room, degraded upper layers of city wall, under 52/11	
Lot 3	6	Main 5	partially preserved floor; eastern half of Locus 67, western edge of late phase room 8	
Lot 4	6	Main 5	same as 67/3; partially preserved floor, loose sandy brown silt	
Lot 5	6	Main 5	mudbrick topple in loose brown sandy sediment and compact degraded mudbrick with plaster inclusions	2009.0585

Context	Phase	Room	Description	Small Finds
Lot 6	6	Main 5	southern half of mp room 5, compact light brown sandy silt	
Lot 7	6	Main 5	mudbrick topple in loose brown sandy sediment and compact degraded mudbrick with plaster inclusions	
Lot 8	6	Main 5	covers entire room, mudbrick collapse, compact brown silty fill, light gray ash lenses	
Lot 9	5	Main 5	floor	2009.0548
Lot 10	6	Main 5	mudbrick collapse	
Lot 11	6	Main 5	mudbrick collapse--mixed context from cleaning	
Lot 12	5	Main 5	burned circular feature from within 67/9, burned sediment	
Loc. 68				
Lot 1	5	Main 1	tamped mudbrick surface, floor	2009.1659
Lot 2	5	Main 1	animal burrow in mudbrick collapse, runs parallel to eastern wall, brown sandy silt	
Lot 3	5	Main 1	ash lens in northeastern corner	
Lot 4	5	Main 1	loose brown silt	
Lot 5	5	Main 1	tamped earth floor, partially preserved, southwestern corner of room	

Context	Phase	Room	Description	Small Finds
Lot 6	5	Main 1	plastered floor	
Loc. 69				
Lot 1	6	Main 3	mudbrick collapse	
Lot 2	5	Main 3	tamped earth floor	
Lot 3	5	Main 3	poorly preserved plaster floor	
Loc. 71				
Lot 1	6	Main 2	mudbrick collapse	
Lot 2	5	Main 2	center of northern half of room, compact mudbrick surface	
Lot 3	5	Main 2	northeastern corner of room, loose ash on a tamped mudbrick surface	2009.1598
Lot 4	5	Main 2	northeastern corner of room, beneath 71/3	
Lot 5	5	Main 2	solid plaster floor, associated with narrow northern dividing wall	
Lot 6	5	Main 2	green gray compact ash	

Context	Phase	Room	Description	Small Finds
Loc. 72				
Lot 1	7	Late 5	windblown silt, surface of 101C, the 2m baulk between Operations 101 and 102	2009.1679 2009.1660
Lot 2	7	Main 5	mudbrick collapse, southern quarter of room	2009.1628
Lot 3	7	Main 5	mudbrick collapse, southern quarter of room, continuous with Locus 67	2009.0511
Lot 4	7	Main 5	mudbrick collapse, with pocket of dark ash, southern quarter of room, continuous with 67/8	
Loc. 73				
Lot 1	7	Main 5	circular mudbrick collapse in locus 67	
Loc. 74				
Lot 1	5	Main 1	pit cut into northern part of floor in 68/6	
Loc. 75				
Lot 1	10	Roman	Late Roman cist grave, top layers down to skeleton	2009.0521
Lot 2	10	Roman	Late Roman cist grave	

Context	Phase	Room	Description	Small Finds
Loc. 76				
Lot 1	7a	Main 6	mudbrick collapse, northern quarter of the room in op 101c	
Lot 2	7a	Main 6	mudbrick collapse	
Lot 3	5	Main 6	floor	
Lot 4	7a	Main 6	compact degraded mudbrick, level with 76/2, mixed context	
Lot 5	7a	Main 6	degraded mudbrick, mixed context from above 76/4	
Lot 6	7a	Main 6	mudbrick collapse	
Lot 7	7a	Main 6	pit in northeastern corner of room, dark ash mixed with brown silt, plaster, medium-sized stones	
Loc. 77				
Lot 1	7a	Late 1	Area north of Late Phase room 1, windblown silt, surface	
Loc. 78				
Lot 1	7a	Main 5	upper layer of sediment from doorway in eastern wall, mudbrick collapse	
Lot 2	5	Main 5	floor, same level as 76/3	

Context	Phase	Room	Description	Small Finds
Loc. 79				
Lot 1	7a	Main 2	below footings of late phase wall between LP rooms 4 and 8, sandy silt	
Lot 2	5	Main 2	compact mudbrick collapse, tamped surface	
Lot 3	5	Main 2	mudbrick collapse below 79/2	
Lot 4	5	Main 2	small ash pocket on 71/5 floor	
Lot 5	3	Main 2	sediment from underneath 71/5 floor, loose sandy silt, intact mudbricks	
Loc. 80				
Lot 1	7a		sediment from under footings of north wall of LP rpp, 6, degraded mudbrick, mixed context	
Lot 2	6	Main 4	ash layer on top of 80/3 floor	
Lot 3	5	Main 4	mudbrick collapse	
Loc. 81				
Lot 1	6	Main 6	top of pot capped with stones, cooking pot in NW corner of room, set into floor, infant burial	2009.0597

Context	Phase	Room	Description	Small Finds
Loc. 82				
Lot 1	6	Main 5	debris from niche in western wall	
Loc. 83				
Lot 1	5	Main 6	blocked doorway in wall between MP rooms 5 and 6, mudbrick and plaster	
Loc. 84				
Lot 1	4	Main 2	small pit, cut into 71/5	
Op. 102				
Loc. 0				
Lot 0	9		windblown silt, surface of entire operation	
Loc. 1				
Lot 1	9		pale brown surface silt, northwestern 5x5	2008.0100
Lot 2	9		northwestern 5x5 under surface silt to bottom of intact vessel, dense brown silt, some roots	
Lot 3	9		NW 5x5 under surface silt to bottom of intact vessel	2008.0106 2008.0107 2008.0108

Context	Phase	Room	Description	Small Finds
Loc. 2				
Lot 1	9	Main 6	Northern half of NW 5x5, dark brown silt	
Lot 2	9	Main 6	Northern half of NW 5x5, dark brown silt, same as 10/4	
Lot 3	9	Main 6	Northern half of NW 5x5, dark brown silt, same as 2/2	2008.0633 2008.0634
Lot 4	9	Main 6	Northern half of NW 5x5, soft brown silt, some mudbrick collapse, below 2/2 and 2/3	
Loc. 3				
Lot 1	9	Main 8	area south of east/west stone line in NW sector	2008.0104
Loc. 4				
Lot 1	9		stone line running east/west in the middle of the 5x5 in NW sector	
Loc. 5				
Lot 4	9		surface silt	

Context	Phase	Room	Description	Small Finds
Loc. 6				
Lot 1	10	Roman 4	late Roman grave 4, in the northwestern 5x5	
Loc. 7				
Lot 1	9		light brown silt and mudbrick collapse in the northeastern 5x5	2008.0111 2008.0112
Lot 2	9		dense rich brown silt with mudbrick collapse, bricky fill, NE sector	2008.0117 2008.0115 2008.0118
Lot 3	9		southeastern corner of NE sector, just below surface, dense brown silt with mudbrick collapse	
Lot 4	9		surface	
Lot 6	9		surface	
Loc. 8				
Lot 1	10	Roman 6	Late Roman Grave 6, in northeastern 5x5	2008.0632 2008.1030

Context	Phase	Room	Description	Small Finds
Loc. 9				
Lot 1	10	Roman 7	Late Roman Grave 7, in northeastern 5x5	2008.0607 2008.0146 2008.0128 2008.0127
Loc. 10				
Lot 1	7a		mudbrick collapse with some ash lenses, matrix surrounding Late Roman graves 6 and 7	2008.0123 2008.0120 2008.0122
Lot 2	9	Main 9	plaster flecked surface, covered in flat-lying sherds, northeastern corner of northeastern 5x5	
Lot 3	9	Main 9	tamped mudbrick surface in northeastern corner of northeastern 5x5	
Lot 4	7a	Main 9	mudbrick collapse surrounding graves 6 and 7, same as 15/2 and 15/3	
Lot 5	7a	Main 9	north of grave 6, same as 10/4	
Lot 6	7a	Main 9	soft brown silt, eastern 2.2m of northeastern quadrant	2008.0828

Context	Phase	Room	Description	Small Finds
Loc. 11				
Lot 1	9		windblown silt on surface of southwestern quadrant	
Loc. 12				
Lot 1	9	Main 9	pit north of grave 6 in NE quadrant, ash, soft brown silt	
Loc. 13				
Lot 1	9		windblown silt, surface of southeastern 5x5	
Lot 2	9		windblown silt, surface of southeastern 5x5	
Lot 4	7a		surface silt	
Loc. 14				
Lot 1	10	Roman	Late Roman grave 8, southeastern quadrant	
Lot 4	9		surface	
Loc. 15				
Lot 1	9		matrix surrounding grave 8 in southeastern quadrant	2008.0631
Lot 2	9	Main 11	brown compact silt, southeastern quadrant	
Lot 3	9	Main 11	brown compact silt, surrounding grave 8	
Lot 4	7a	Main 11	brown compact silt, surrounding grave 8	
Lot 6	7a	Main 11	plastered floor	

Context	Phase	Room	Description	Small Finds
Loc. 16				
Lot 1	9		sandy silt, southwestern 5x5	
Lot 2	7a	Main 10	eastern edge of southwestern 5x5, south of wall	
Lot 3	7a	Main 10	west of 16/2, south of wall	2008.0604
Loc. 17				
Lot 1	7a	Main 8	light brown silt, southern half of northwestern 5x5, on top of tamped mudbrick surface 17/3	
Lot 2	7a	Main 8	ash from tanur	
Lot 3	7a	Main 8	tamped earth surface	
Loc. 18				
Lot 1	7a	Main 10	wall in southwestern 5x5, western wall of room	
Loc. 19				
Lot 1	7a	Main 11	southern wall of Main Phase Room 11	

Context	Phase	Room	Description	Small Finds
Loc. 20				
Lot 1	7a	Main 10	brown silt, eastern side of wall 18/1 in southwestern 5x5	
Lot 2	7a	Main 10	brown silt with mudbrick collapse, same area as 20/1	
Lot 3	5	Main 10	brown silt with mudbrick collapse	
Lot 4	5	Main 10	large storage vessel	2008.1078
Lot 5	5	Main 10	mudbrick collapse and other debris under large storage vessels	2008.1029 2008.1027
Loc. 21				
Lot 1	7a	Main 14	soft brown silty sand	
Loc. 22				
Lot 1	7a	Main 8	brown silt, southwestern quadrant, equal to 20/1 and 20/2	

Context	Phase	Room	Description	Small Finds
Loc. 23				
Lot 1	7a	Main 8	ext of wall, on top of floor--in S end of room	2008.0810
Lot 2	5	Main 8	compact mudbrick collapse, tamped mudbrick surface, same level as 23/1, middle of room	2008.0816 2008.0814 2008.0817
Lot 3	7a	Main 8	on top of center wall	
Lot 4	5	Main 8	tamped mudbrick surface, same level as 23/1, northern end of room	
Lot 5	5	Main 8	pit near western wall, ash and organic matter	2008.1042
Lot 6	5	Main 8	pit in center of room, dark ash and organic matter	
Loc. 24				
Lot 1	7a		upper layers of city wall debris in middle of western half of operation	
Lot 2	7a		upper layers of city wall debris in middle of western half of operation	

Context	Phase	Room	Description	Small Finds
Loc. 25				
Lot 1	7a	Main 11	ash and mudbrick collapse, eastern wall of MP rooms 11 and 9, above the east/west dividing wall	
Lot 2	7a	Main 11	ash and mudbrick collapse	
Lot 4	5	Main 11	soft brown silt on top of lightly plastered floor	
Loc. 26				
Lot 1	5	Main 9	Room debris, including mudbrick collapse, grinding stones, animal bone, ceramic sherds, and large flat rocks	2008.1047
Lot 2	7a	Main 9	eastern and north of edges of room, over top of ovens in the east and in the southwest corner	2008.1067 2008.1057
Lot 3	5	Main 9	ash in northeastern corner	2008.1068
Lot 4	5	Main 9	ash associated with the oven in middle of east side of room	
Lot 5	5	Main 9	ash in southeastern corner	

Context	Phase	Room	Description	Small Finds
Loc. 27				
Lot 1	5	Main 6	soft dark sediment, eastern end of room	2008.1056 2008.1058 2008.1079
Lot 2	5	Main 6	floor contemporary with bottom of mudbrick podium	2008.1065
Lot 3	5	Main 6	mudbrick podium plastered with mud	
Lot 4	5	Main 6	sealed doorway between rooms 6 and 7	2008.1059
Loc. 50				
Lot 1	5	Main 6	cleanup of floor at beginning of season, mixed context	
Lot 2	5	Main 6	northeastern corner of room, cleanup at beginning of season, mixed context	
Lot 3	5	Main 6	area against northern baulk, micromorphological samples	
Lot 4		Main 6	Room debris	

Context	Phase	Room	Description	Small Finds
Loc. 51				
Lot 1	7a	Main 10	ceramic vessel from baulk, cleanup at start of season, mixed context	
Lot 2	7a	Main 10	ceramic sherds from wall that may join with 51/1, cleanup at start of season, mixed context	
Lot 3	5	Main 10	cleanup at start of season, mixed context	
Lot 4	5	Main 10	floor that the storage vessels were on, level with bottom of wall foundations	
Lot 5	5	Main 10	floor, level surface on top of 51/6	
Lot 6	5	Main 10	surface, slopes downward to the west	
Lot 7	5	Main 10	pit in southwestern corner, soft silt	
Loc. 52				
Lot 1	5	Main 8	middle of room, south of large central pit	
Lot 2	5	Main 8	middle of room, south of large central pit, mixed context, cleanup from beginning of season	
Lot 3	5	Main 8	light brown silt from area not in pits	2009.1917 2009.1918

Context	Phase	Room	Description	Small Finds
Lot 4	5	Main 8	surface, tamped light brown silt, very compact, area not in pits, west of early phase wall, slants down to the west	
Lot 5	5	Main 8	surface, tamped light brown silt, very compact, below 52/4, west of and above early phase wall, slants down to the west	2009.1929
Lot 6	3	Main 8	early phase wall protruding into main phase room 8, cobble stone wall footings	
Lot 7	3	Main 8	below 52/5, surface at level of early phase wall footings, east of early phase wall, tamped light brown silt, very compact	
Lot 8	3	Main 8	pit cutting through early phase wall 52/6, soft silt	2009.1937 2009.1930
Lot 9	5	Main 8	chunk of mudbrick collapse, originally excavated as a buttress	2009.1950 2009.1949

Context	Phase	Room	Description	Small Finds
Loc. 53				
Lot 1	7a	Main 9	eastern baulk, mixed context, clean up at start of new season	
Lot 2	7a	Main 9	eastern baulk, mixed context, clean up at start of new season	
Loc. 54				
Lot 1	7a	Main 9	eastern baulk, mixed context, clean up at start of new season	
Lot 2	7a	Main 9	eastern baulk, mixed context, clean up at start of new season, door jamb	
Lot 3	7a	Main 9	mudbrick collapse	
Lot 4	7a	Main 9	doorway in north wall	
Loc. 55				
Lot 1	5	Main 9	northeastern corner of kitchen room, mixed context, clean up at start of new season	
Lot 2	5	Main 9	plastered floor, replastered many times, associated with mudbrick pedestals	2009.1169
Lot 3	5	Main 9	pit with storage vessel between pedestals, white flecks in reddish soil	

Context	Phase	Room	Description	Small Finds
Lot 4	5	Main 9	surface below 55/2, throughout room, associated with mudbrick pedestals	
Lot 5	5	Main 9	Storage vessel on top of 55/2 plaster floor	
Lot 6	5	Main 9	ash on top of plastered surface 55/2 in northeastern corner of room	
Lot 7	5	Main 9	floor deposits in northwestern corner of room	2009.1390 2009.1397
Lot 8	5	Main 9	plaster floor under 55/2, under pedestals	
Lot 9	3	Main 9	associated with 55/8 surface, early phase wall footings	2009.1468
Lot 10	5	Main 9	pit with stone cap between mudbrick pedestals, contemporary with 55/8, soft brown and black silt with pebble inclusions	2009.1921
Lot 11	5	Main 9	pit with stone cap between mudbrick pedestals, contemporary with 55/8, soft ash on clay	
Lot 12	5	Main 9	plaster floor under 55/8, gravel inclusions	
Lot 13	5	Main 9	pit cut into 55/12 floor, in southeastern corner, dark soft moist reddish brown sediment	

Context	Phase	Room	Description	Small Finds
Loc. 56				
Lot 1	5	Main 11	cleaning surface throughout room, at or below level of main phase floors, mixed context	
Lot 2	5	Main 11	under the base of west wall, 2nd course of stones exposed,bone fragment scatter in NW corner	2009.1156
Lot 3	5	Main 11	northeastern corner of room, down to 2nd course of stones of east wall, soft brown silt, ash lens	
Lot 4	5	Main 11	plaster floor below 56/2 outside of northeastern corner, hard, burned surface, mottled with ash	
Lot 5	5	Main 11	burned vessel, 184cm from N wall, 264cm from E wall	
Loc. 57				
Lot 1	5	Main 11	tarred feature in northeastern corner	
Loc. 58				
Lot 1	7a	Main 14	surface on collapsed brick, clean up from beginning of season, mixed context	

Context	Phase	Room	Description	Small Finds
Loc. 59				
Lot 1	7a	Main 14	southeastern corner of op 102, surface silt	
Loc. 60				
Lot 1	7a	Main 7	clean up from beginning of season, mixed context	
Lot 2	7a	Main 7	collapsed mudbrick with ash and charcoal inclusions	
Lot 3	7a	main 7	mudbrick collapse-pushed over wall	
Lot 4	7a	Main 7	mudbrick collapse	
Lot 5	7a	Main 7	cut into the pushed over wall	
Lot 6	7a	Main 7	fallen mudbrick wall, western half of room, on top of room debris, below 60/3 and 60/5	
Lot 7	7a	Main 7	fallen mudbrick wall, western half of room, on top of room debris, below 60/3 and 60/5, same as 60/6	
Lot 8	7a	Main 7	mudbrick collapse, eastern half of room	2009.1902
Lot 9	5	Main 7	tanur in southwestern corner, ash, charcoal, small pebbles, burned brick	2009.1500
Lot 10	5	Main 7	doorway in NE corner, soft light brown silt	

Context	Phase	Room	Description	Small Finds
Loc. 61				
Lot 1	5	Main 7	floor outside of tanur in southwestern corner, underneath pushed over wall, lined with sherds	
Lot 2	5	Main 7	floor under 60/8, sherds lining sides of tanur, ash on pebble paving	
Lot 3	5	Main 7	floor under 60/6 and 60/7, compact brown silt with ash lenses	
Lot 4	5	Main 7	continuation of surface 55/8 into Main Phase Room 7, tamped earth surface	
Lot 5	5	Main 7	continuation of surface 55/12 into Main Phase Room 7	
Loc. 62				
Lot 1	7a	Main 7	blocked doorway between Main Phase Rooms 6 and 7	
Loc. 63				
Lot 1	7a	Main 6	pit cut into southern wall	
Loc. 65				
Lot 1	6	Main 6	stone feature set into surface 61/4	

Context	Phase	Room	Description	Small Finds
Loc. 100				
Lot 0	3	Early	windblown silt to the west of Early Phase wall, clean up at beginning of season, mixed context	2010.2002
Loc. 101				
Lot 0	3	Early	windblown silt to the east of Early Phase wall, clean up at beginning of season, mixed context	
Lot 1		Early	Compact sediment east of Early Phase wall	
Loc. 102				
Lot 0	3	Early	windblown silt from pit, clean up from beginning of season	
Loc. 103				
Lot 0	3	Early	windblown silt, southeast of Early Phase wall, clean up from beginning of season	
Lot 1	3		area next to and above hole-mouth jar	
Lot 2	3		area next to jar, w of early wall, mudbrick collapse	
Lot 3	3		down to bottom of jar	

Context	Phase	Room	Description	Small Finds
Loc. 104				
Lot 0		Main 7	windblown silt, clean up at beginning of season, mixed context	
Loc. 105				
Lot 0		Main 6	windblown silt, clean up at beginning of season, mixed context	
Loc. 106				
Lot 0		Main 9	Clean up, beginning of season	
Loc. 107				
Lot 1		Main 11	Surface clean up, beginning of season	
Op. 103				
Loc. 0				
Lot 0	9		surface silt, first 10cm of surface	
Lot 1	7		10 to 30cm below surface, northeastern quadrant, fine light brown silt	2008.0055 2008.0050
Lot 2	5		fine light brown silt, wall in northeastern quadrant	
Lot 3	7		10 to 30cm below surface, same as 103/0/1, northeastern quadrant, fine light brown silt	

Context	Phase	Room	Description	Small Finds
Loc. 1				
Lot 0	9		surface silt, fine light brown silt, southeastern 5x5	2008.0057
Lot 1	9	Main 17	heavily plastered surface, on top of pebble paving, southeastern 5x5	
Lot 2	6	Main 17	western edge of plastered platform	
Lot 3	5	Main 17	area south of grave 5 in southeastern 5x5, associated with large plastered work surface, Main Phase Rooms 17 and 19	
Lot 4	5	Main 17	area south of grave 5 in quadrant c, associated with "large tanur" plastered work surface	
Lot 5	5	Main 17	same as 103/1/5	
Lot 6	5	Main 17	sediment around grave 5, small oven and plastered platform	
Loc. 2				
Lot 1	10	Roman	cap stones of Late Roman Grave 5	
Lot 2	10	Roman	soil under cap stones of Late Roman Grave 5	
Lot 3	10	Roman	soil under capstones of Late Roman Grave 5, same as 103/2/2	

	Type	Material	Description	Dimensions
TSW 2008.0901 *14-TSW-0117* **Context** 101 / 13 / 3	Figurine	Ceramic	Fragment of figurine base. Handmade, pillar figure, burned. Likely Plain Simple Ware with a lightly applied slip. Incised decoration on front (?) of figure - series of lines.	Diameter of base: 3.8; Height: 4.9cm
TSW 2008.0118 *14-TSW-0116* **Context** 102 / 7 / 2	Figurine	Ceramic	Fragment of figurine torso. Flat figure, with arms folded onto chest under chin.	Length: 5.5cm; Width: 4.9cm; Depth: 1.0cm.
TSW 2009.1949 *15-TSW-0001* **Context** 102 / 52 / 9	Whole Vessel	Ceramic	Goblet, in 10 pieces, whole profile, not quite complete, buff/pink ware with a cream slip on exterior, slight ring base and a flat, yet defined rim. Wheel-circles are evident on exterior.	Height: 10.2cm; Width at rim: 11.2cm; Width at base: 4.4cm, Thickness at rim: 0.4cm.
TSW 2008.0321 *14-TSW-0049* **Context** 104 / 4 / 2	Figurine	Ceramic	2 figurine fragments: 1)body and base of a human figurine, handmade, Plain Simple Ware, light slip; 2)animal torso, head and legs missing, red ware, light cream slip evident in a few places.	1) Width at waist: 2.2cm; depth at waist: 1.7cm; Height: 4.6cm; Diameter on long edge of base: 3.1cm; 2) W: 2.5cm; Length: 4.9cm

	Type	Material	Description	Dimensions
TSW 2008.0151 *14-TSW-0006* **Context** 101 /0 / 2	Whole Vessel	Ceramic	Almost full profile of a globular bottom (more flat than round) in 9 pieces. Slightly everted rim. Burned core with pebble and straw inclusions. Only one small fragment of the rim; Most likely an open, wheel made jar, but the shoulder of the body is 1cm in width and the rim is .3cm, so perhaps it is not so open. Surface on lower half is more burned and very friable; most likely a cooking pot.	Approx. height (very small rim and uneven base): 11cm; Widest diameter: 19cm.
TSW 2008.0115 *14-TSW-0015* **Context** 102 /7 / 2	Whole Vessel	Ceramic	Nearly complete profile of a red ware bowl with cream slip on exterior, no interior slip. In five pieces. The bowl has two 2.5 cm parallel lines incised on body. Interior has sections that have flaked off, but two are round, and if on the exterior I would have assumed a handle had fallen off. The interior bottom is very uneven and has a deposit on it, possibly paint.	Diameter of the bowl: 11.6cm; Diameter of the base: 3.8cm; Height at tallest: 7.5cm.

	Type	Material	Description	Dimensions
TSW 2008.0669 *14-TSW-0078* **Context** 103 / 16 / 2	Figurine	Ceramic	Animal figurine fragment. Torso and hind legs. Plain Simple Ware with Cream Slip. Incised holes run the length of both sides of the animal and the rear has been indented with a finger, so as to upturn a tail that no longer remains. Possibly a deer or a feline.	Length: 6.0cm; Diameter of torso: 2.7cm; Height at rear: 4.6cm.
TSW 2008.0061 *14-TSW-0014* **Context** 103 / 3 / 1	Figurine	Ceramic	Animal figurine, head. Likely bull. Proper right eye visible.	Neck to top of "ear": 3.5cm; Horn span: 2.8cm; Nose to back of head: 3.8cm.
TSW 2009.1500 *15-TSW-0011* **Context** 102 / 60 / 9	Figurine	Ceramic	Animal Figurine. The back right leg remains. Headless. The tail makes the animal appear to be a sheep. Buff ware, maybe a hand applied slip of the same color.	Height from top of neck to bottom of foot: 3.1cm; Length: 4.9cm; Height from top of back to bottom of foot: 2.5cm.
TSW 2008.0106 *14-TSW-0010* **Context** 102 / 1 / 3	Figurine	Ceramic	Animal figurine. Most of head, neck, front part of body and where two front legs would have joined.	Height from top of head to underside of belly: 5.2cm; Width of body at "ears": 3.1cm; Width of body at leg joines: 3.0cm; Length from snout to end: 6.0cm.

	Type	Material	Description	Dimensions
TSW 2008.0312 *14-TSW-0043* **Context** 104 /0 / 3	Molded Vessel	Ceramic	Animal fragment from ceramic vessel. Most likely a lion, because of what appears to be a mane. The mouth is gone, leaving a goofy expression. Plain simple ware. The lion has no slip, but its details are incised. The object's proper right side is better preserved, detail wise.	Approximate length: 6.4cm; Height: 5.3cm.
TSW 2008.0659 *14-TSW-0073* **Context** 103 /9 / 3	Incense Burner	Ceramic	Base of an incense burner. Plain simple ware. Base is slightly worn, handmade. A series of holes are punched into the object above stem, some are not completely through the object. Some still have the clay burned on the interior.	Diameter of body (broken): 5.8cm; Diameter of base: 3.5cm; Height: 6.5cm.
TSW 2008.0954 *14-TSW-0093* **Context** 104 /6 / 5	Vessel Base	Ceramic	Base or stand. Red ware, cream slip. Very gritty. Broken off where vessel would join.	Diameter of join: 3.5cm; Base diameter: 5.9cm; Base height: 3.1cm.

	Type	Material	Description	Dimensions
TSW 2008.0128 *14-TSW-0019* **Context** 102 /9 / 1	Molded Vessel	ceramic	Bathtub burial north handle. Two pieces. Plain Simple Ware, seems to have a heavy straw temper. Hand molded in situ, can see the ridges on top of handle. Slipped with a light buff slip, finger print under more extreme curve, on section A. Fragment A has sharper angle, Fragment B is flatter.	A. Length: 6.9cm, Height 7.2cm; B. Length: 8.5cm; Height: 6.8cm; Total conserved length: 12.4cm; center of curve stands 4cm.
TSW 2008.0127 *14-TSW-0020* **Context** 102 /9 / 1	Molded Vessel	Ceramic	Bathtub burial south handle. Two pieces. Plain simple ware, seem to have a heavy straw temper. Hand molded in situ, can see the ridges on top of handle. Slipped with a light buff slip, finger print under more extreme curve, on section A. Fragment A has sharper angle, Fragment B is flatter.	A. Length: 6 cm, height: 7.2 cm; B. length: 9.0 cm, height: 5.6 cm; Total conserved length: 12.4 cm, center stands 4 cm.
TSW 2009.1628 *15-TSW-0007* **Context** 101 /72 / 2	Figurine	Ceramic	Bird nosed human figurine head. Cream ware with no slip. Nose is pinched into a beak-like shape. Proper left eye is applied on and donut shaped. Proper right eye is missing. Proper right ear has an applied small ball, possibly an earring. The back of the head also has 3 applied clay balls, possibly accidental additions.	Height from top of head to broken part of neck: 5.4 cm; Width from ear to ear: 5.2 cm; Width of neck: 3.4 cm; Depth of neck: 2.2 cm; Width of head from back to tip of nose: 3.0 cm.

	Type	Material	Description	Dimensions
TSW 2009.1679 *15-TSW-0012* **Context** 101 /72 / 1	Figurine	Ceramic	Body fragment of a figurine, possibly female because of visible necklace design. Buff ware with a white slip. The arms are added on and end in the hands that are turned upwards on the chest.	Length from (broken) neck to (broken) base: 4.8 cm; Width at base: 2.0 cm; Depth at base: 1.7 cm; Width at widest point (elbow to elbow ish): 3.0 cm.
TSW 2009.1435 **Context** 101 /61 / 1	Sherd	Ceramic	Originally thought to be a body fragment of a human figurine. Turned out to be a sherd.	
TSW 2008.0111 **Context** 102 /7 / 1	Whole Vessel	Ceramic	Chalice neck: body and base broken off. Plain Simple Ware.	
TSW 2008.0748 **Context** 101 /1 / 2	Chariot Wheel	Ceramic	Chariot wheel.	Diameter: 7.1 cm; Diameter of Hub: 2.0 cm; Width at Hub: 4.0 cm; Width of wheel: 1.0 cm

	Type	Material	Description	Dimensions
TSW 2009.1917 *15-TSW-0022* **Context** 102 / 52 / 3	Chariot Wheel	Ceramic	Chariot wheel. Red ware. Could be traces of a cream slip, but likely just accretions.	Diameter: 6.1 cm; Width at edge of wheel: 0.4 cm; Width at hub: 3.0 cm; Diameter of hub: 2.6 cm; Diameter of hole: 0.8 cm.
TSW 2008.0905 *14-TSW-0122* **Context** 103 / 10 / 6	Whole Vessel	Ceramic	Cooking pot with grave 11 found inside - infant burial	
TSW 2008.0258 *14-TSW-0075* **Context** 101 / 4 / 2	Vessel Fragment	Ceramic	Double rim fragment. Plain simple ware, cream slip.	Thickness of fabric: 1.7 cm, Height: 4.0 cm, Length: 17.4 cm.
TSW 2008.0340 *14-TSW-0087* **Context** 104 / 11 / 3	Figurine	Ceramic	Figurine base. Handmade, fingerprint in base. Plain simple ware, slip applied with fingers.	Height: 4.0 cm Maximum diameter: 4.0 cm.

	Type	Material	Description	Dimensions
TSW 2009.1156	Figurine	Ceramic	Figurine fragment.	
Context 102 / 56 / 2				
TSW 2008.0951	Figurine	Ceramic	Figurine fragment.	
Context 104 / 6 / 4				
TSW 2008.0081 *14-TSW-0047*	Figurine	ceramic	Figurine Fragment. Handmade. Red ware Slight evidence of a cream slip on base.	Width at "waist": 1.9 cm, Depth at "waist": 1.2 cm, Height: 3.4 cm, Diameter of base: 3.8 cm.
Context 103 / 8 / 1				
TSW 2008.0300 *14-TSW-0033*	Figurine	Ceramic	Figurine Fragment. Red ware, with a buff or cream slip. One section on the back was struck by a pick and the surface has been exposed. Also, the area of the "necklace" has been rubbed, with the surface exposed. Female torso from "necklace" to mid torso. Figure's arms are added on and bent onto chest.	Length: 6.1 cm, Width at base: 2.5 cm, Width at shoulders: 3.8 cm.
Context 104 / 0 / 1				

	Type	Material	Description	Dimensions
TSW 2008.0287 *14-TSW-0044* **Context** 101 / 18 / 2	Figurine	Ceramic	Figurine fragment. Shoulders and torso. Plain Simple Ware. No slip evident.	Width at "waist": 3.1 cm, Thickness at "waist": 1.6 cm, Height: 7.5 cm, Width at "shoulders": 5.4 cm.
TSW 2008.0100 *14-TSW-0007* **Context** 102 / 1 / 1	Figurine	Ceramic	Figurine fragment; animal. Plain simple ware; no slip. Front 2 legs and partial body of a quadruped, but front two legs appear as one pillar.	Width: 1.7 cm, Length of legs: 4.7 cm, Length of body: 4.6 cm.
TSW 2008.0291 *14-TSW-0065* **Context** 101 / 5 / 2	Worked Sherd	Ceramic	Filed ceramic sherd.	Length of flat end: 8.0 cm, Length of longer side ending in curve: 9.2 cm, Length of shorter side ending in curve: 6.7 cm.
TSW 2008.0654 *14-TSW-0063* **Context** 103 / 5 / 3	Molded Vessel	ceramic	Most likely a fragment of a lion pot. Possibly a figurine. The eyes, ears and nose are preserved. Beginning of the teeth are visible. The eyes are pierced completely through. Red ware, cream slip.	Height: 5.4 cm, Length: 7.2 cm, Thickness: 0.7 cm

	Type	Material	Description	Dimensions
TSW 2008.0607 **Context** 102 / 9 / 1	Molded Vessel	Ceramic	Fragment of "bathtub" vessel.	
TSW 2008.0150 *14-TSW-0004* **Context** 101 / 0 / 2	Whole Vessel	Ceramic	Full profile, not fully articulated ring base bowl in two pieces. Not complete. Plain simple ware, slightly unfired core--some air gaps visible along break. Slightly everted lip. Small divet in center of base, not fully articulated ring.	Height: 7.2 cm, Diameter at rim: 11.8 cm, Diameter at base: 4.0 cm, Thickness: 0.3 cm.
TSW 2008.0120 *14-TSW-0024* **Context** 102 / 10 / 1	Whole Vessel	Ceramic	Full profile. Cup. Green ware; very gritty. Flat base, slightly everted rim. Wheel marks on interior are so distinctive, that they are almost painted on. Small air bubble imperfection has popped on interior, exposing a very white section that cannot be seen along broken edges.	Height: 5.9 cm, Diameter: 10.0 cm, Thickness near rim: 0.4 cm.
TSW 2008.0286 **Context** 101 / 14 / 1	Whole Vessel	Ceramic	Whole vessel in four pieces; small piece of rim missing.	Diameter of vessel: 13.6 cm, Diameter of base: 5.0 cm, Height: 6.4 cm.

	Type	Material	Description	Dimensions
TSW 2009.2068 *15-TSW-0073* **Context** 150 / 9 / 12	Whole Vessel	Ceramic	Grey ware. Hand made.	
TSW 2009.1144 *15-TSW-0016* **Context** 150 / 6 / 1	Figurine	Ceramic	Figurine head. Crudely made. Greenish fabric, badly chipped pinkish "slip." The nose remains, and the proper right eye is bulging in comparison to the sunken proper left eye. The back of the head is concave, possibly pressed in by a finger.	Length from top of head to broken neck: 4.1 cm, Diameter of neck: 1.6 cm, Width from ear to ear: 2.8 cm.
TSW 2008.0066 *14-TSW-0011* **Context** 103 / 3 / 0	Figurine	Ceramic	Human figurine fragment: base, Handmade of red ware, with remnants of a cream/buff slip.	Length: 5.0 cm Diameter of base: 3.0 cm.
TSW 2008.0108 *14-TSW-0013* **Context** 102 / 1 / 3	Figurine	Ceramic	Human figurine torso. Plain simple ware.	Height: 9.3 cm, Width at base: 3 cm, Width at shoulders: 5.5 cm.

	Type	Material	Description	Dimensions
TSW 2008.0957 *14-TSW-0090* **Context** 104 / 6 / 6	Whole Vessel	Ceramic	Juglet. Red ware, cream slip, very worn, no lip. Flat base.	Width at shoulder: 5.0 cm, Rim diameter: 2.9 cm, Base diameter: 2.9 cm, Height: 5.5 cm.
TSW 2010.2542 **Context** 104 / 6 / 6	Collander	Ceramic	Large collander fragment, multiple borings throughout, one side preserves part of the rim.	Diameter 13.5cm, Height 7.5cm.
TSW 2008.0720 *14-TSW-0071* **Context** 101 / 21 / 1	Figurine	Ceramic	Large female figurine fragment. Hollow body, much larger than other figurines. Evidence of hair at neck. Hand smoothed from torso to the shoulders. Arms missing.	Height of fragment: 10.1 cm, Width at "shoulders": 8.2 cm, Width at "waist": 3.6 cm.
TSW 2010.2285 **Context** 150 / 103 / 10	Clay Ball	Ceramic	Lightly fired clay ball, roughly circular.	Approximate diameter: 2.5cm.

	Type	Material	Description	Dimensions
TSW 2008.1058 *14-TSW-0120* **Context** 102 / 27 / 1	Molded Vessel	Ceramic	Lion pot. Likely nearly complete vessel. The lion's head and front of torso are molded in 3 dimensions, and lion's torso and front two legs are represented with a 2 dimensional inscribed sketch. Highly fired plain simple ware. Slip appears greenish due to high firing temperatures.	Head projects 3.8 cm from vessel wall. Fragment length: 15.2 cm, Height: 9.5 cm, Fabric thickness: 0.9 cm.
TSW 2009.1382 *15-TSW-0021* **Context** 150 / 6 / 3	Loom Weight	ceramic	Grey ware.	Diameter: 6.5 cm; Width at center: 1.5 cm; Width at ends: 0.5 cm.
TSW 2008.0343 *14-TSW-0086* **Context** 104 / 6 / 2	Figurine	Ceramic	Male figurine fragment. Probably a red ware. Still stained dark from ashy soil. No head or arms, legs broken of at knees. Anatomically accurate, relatively. Hand made, finger marks evident around torso.	Width at shoulders: 4.5 cm; Height: 11 cm.
TSW 2008.1078 *14-TSW-0123* **Context** 102 / 20 / 4	Whole Vessel	Ceramic	Very large whole vessel.	

	Type	Material	Description	Dimensions
TSW 2008.1079 *14-TSW-0123* **Context** 102 / 27 / 1	Whole Vessel	Ceramic	Very large complete vessel.	
TSW 2010.2281 **Context** 151 / 104 / 2	Figurine	Clay	Multiple fragments of unfired clay animal figurines. Four figurines have discernible parts and have been assigned letters. Ten unidentifiable fragments remain and have been bagged separately. A. Largest fragment, joined from two pieces, full torso; B. Head, front torso, two front legs; C. Fragment joined from three pieces, badly preserving part of torso and one unidentifiable limb. D. Two non-joining pieces, one of a limb and the other of backside and two hind legs.	A. Length: 5cm, Width: 2.3cm, Height: 1.7cm; B. Length: 3.8cm, Width 1.9cm, Height 2.4cm; C. Length: 4cm, Height: 2.3cm; D. Single limb: Height: 1.5cm, Width 0.9cm; Backside: Height: 2.5cm, Width: 2cm.
TSW 2008.0174 *14-TSW-0026* **Context** 101 / 7 / 1	Perforated Disc	Ceramic	Perforated disc fragment; a little more than half; slightly convex; exterior is buff slipped. the interior is still rough; Plain simple ware.	Diameter: 4.4 cm; Width: 3.0 cm; Thickness of pottery: 0.7 cm.

	Type	Material	Description	Dimensions
TSW 2008.0123 *14-TSW-0023* **Context** 102 / 10 / 1	Spindle Whorl	Stone	Pierced stone. Spindle whorl.	Diameter of top: 4.3 cm; Diameter of bottom/hole: 1.9 cm; Height: 1.9 cm.
TSW 2008.0967 *14-TSW-0096* **Context** 104 / 13 / 3	Figurine	Ceramic	Pillar figurine fragment. Handmade, plain simple ware, light slip applied with fingers.	Body diameter: 2.0 cm; Base diameter: 3.2 cm; Height: 3.4 cm.
TSW 2008.0065 *14-TSW-0022* **Context** 103 / 3 / 0	Whole Vessel	Ceramic	Pinched cup. Incomplete profile. Red ware with a light cream slip.	Height: 5.0 cm; Diameter (at top): 8.1 cm; Thickness: 0.6 cm.
TSW 2009.0511 *15-TSW-0040* **Context** 101 / 72 / 3	Chariot Wheel	Ceramic	Pink ware chariot wheel with hub. Cream slip remains in most places, but its badly damaged.	Diameter: 8.5 cm; Diameter of Hub: 2.0 cm; Diameter of hole: 1.0 cm; Width at Hub: 2.0 cm; Width of wheel: 0.5 cm.

	Type	Material	Description	Dimensions
TSW 2008.0112 *14-TSW-0009* **Context** 102 / 7 / 1	Figurine	Ceramic	Plain simple ware figurine base; Handmade; thumb impression on bottom of figure. More oval than round.	Diameter of base at widest part of oval: 3.0 cm; Diameter of figure at widest part of the oval: 2.3 cm; Height: 3 cm.
TSW 2009.1151 **Context** 102 / 53 / 1	Weight	Stone	Drilled limestone weight.	90g
TSW 2009.1442 *15-TSW-0082* **Context** 101 / 51 / 9	Chariot Wheel	Ceramic	Model chariot fragment.	
TSW 2009.1336 *15-TSW-0046* **Context** 101 / 53 / 7	Sealing	Ceramic	Sealing.	Length of flat side: 4.8 cm; Height of sealing: 3.9 cm; Width of flat side: 3.8 cm.

	Type	Material	Description	Dimensions
TSW 2008.0146 **Context** 102 / 9 / 1	Molded Vessel	Ceramic	Detached section of the body of the bathtub burial vessel.	
TSW 2008.0083 *14-TSW-0068* **Context** 103 / 8 / 1	Chariot Wheel	ceramic	Sherd wheel with a "hub." Not quite complete. Plain simple ware. Salt encrusted exterior. Hole seems to be encrusted over one side. Likely went all the way through in antiquity.	Diameter: 6.0 cm; Diameter of the "hub": 2.5 cm.
TSW 2010.2491 **Context** 151 / 108 / 3	Bead	Ceramic	Small, irregularly shaped ceramic fragment of buff and turquoise colors, possibly from a bead.	Maximum Length: 0.7cm, Maximum width: 0.7cm, Height 0.5cm.
TSW 2010.2264 **Context** 151 / 105 / 4	Figurine	Clay	Unfired clay animal figurine, fragmentarily preserving torso and/or frontal portion.	Length: 3.3cm; Maximum width: 1.8cm; Maximum thickness: 1.4cm.

	Type	Material	Description	Dimensions
TSW 2010.2297 **Context** 150 / 104 / 1	Figurine	Clay	Unfired clay fragment, possibly the head, of unidentifiable animal figurine.	Length 1.5cm, Width 1.4cm.
TSW 2008.0344 *14-TSW-0085* **Context** 104 / 6 / 2	Chariot Wheel	Ceramic	Chariot wheel. Red ware, heavy inclusions, damaged loom weight.	Diameter of wheel: 8.3 cm; Diameter of "hub": 2.3 cm; Width of wheel: 1.0 cm; Width with hub: 4.0 cm.
TSW 2008.0961 *14-TSW-0094* **Context** 104 / 6 / 7	Chariot Wheel	Ceramic	Chariot wheel. Red ware, light cream slipped loom weight with notches apparent in the cardinal directions. Other light markings, more likely caused by a root system in the ground.	Wheel diameter: 6.8 cm; Hub diameter: 2.0 cm; Wheel width: 0.7 cm; Width with hub: 4.0 cm.
TSW 2008.0703 *14-TSW-0055* **Context** 101 / 2 / 2	Whole Vessel	Ceramic	Whole vessel. Plain simple ware encrusted with salt. Hand made, light cream slip. No base, simple lip.	Diameter: 12.8 cm; Height: 5.5 cm.

	Type	Material	Description	Dimensions
TSW 2008.0704 *14-TSW-0054* **Context** 101 /2 / 2	Whole Vessel	Ceramic	Whole vessel. Colander. One piece missing from rim to almost the base. Redware, encrusted with salt. No slip. The holes are punched through from both the interior to exterior as well as exterior to interior.	Diameter: 12.8 cm; Height: 5. 3 cm.
TSW 2009.0597 **Context** 101 /81 / 1	Whole Vessel	Ceramic	Whole vessel. Dead infant found in jar on June 25, 2009.	
TSW 2008.0104 *14-TSW-0002* **Context** 102 /3 / 1	Whole Vessel	Ceramic	Whole Vessel. Small cup. Plain Simple Ware. Top is uneven but doesn't appear to be broken, likely worn. Hand made. Flat bottom.	Overall height at highest point: 4.5 cm; Diameter: 7.2 cm; Widest thickness of wall: 0.4 cm.

	Type	Material	Description	Dimensions
TSW 2009.1390 *15-TSW-0025* **Context** 102 / 55 / 7	Personal Ornament	Bronze	3 bronze pins. A. Complete, visible "eye". B. Complete, with a piece attached; C. Fragmentary. Fragments are relatively stable with light bronze disease visible.	A. Length: 19.0 cm, Width: .3cm, Head length: 1.0 cm, Head width: 1.6 cm; B. Length: 16.0 cm; Width: .3 cm, Head length: 1.0 cm; Head width: 1.6 cm; Length of attached piece: 4.0 cm; Width of attached piece: 0.3 cm; C. Width: 0.3cm, Head length: 0.8 cm; Head width: 1.0 cm; Length of head fragment: 2.0 cm, Length of other fragments: 4.0 cm, 5.2 cm.
TSW 2008.0294 *14-TSW-0053* **Context** 101 / 14 / 2	Personal Ornament	Bronze	Bronze bracelet. The two ends do not meet, slightly off line.	Diameter: 16.7 cm; Width of bronze: 0.5 cm.
TSW 2008.0634 *14-TSW-0062* **Context** 102 / 2 / 3	Personal Ornament	Bronze	Bronze pin.	

	Type	Material	Description	Dimensions
TSW 2008.0631 *14-TSW-0061* **Context** 102 / 15 / 1	Personal Ornament	Bronze	Bronze pin head. In comparison to the 12 cm long pins found, this is very small. Either a fragment of a larger piece, or a small pin.	Length: 3.4 cm; Length of pin: 2.0 cm; Diameter of pin: 0.3 cm; Diameter of head: 1.5 cm.
TSW 2008.0709 *14-TSW-0064* **Context** 101 / 13 / 2	Personal Ornament	Bronze	Bronze pin. "Eye" opening approximately 2.0 cm below head.	Length of whole: 6.0 cm; Length of pin: 5.1 cm; Diameter of pin: 0.3 cm; Diameter of head: 1.2 cm.
TSW 2008.0815 *14-TSW-0081* **Context** 102 / 9 / 1	Bronze Object	Bronze	Bronze rod. Badly corroded. No discernable shape remains.	Length: 3 cm.
TSW 2008.0619 *14-TSW-0067* **Context** 102 / 9 / 1	Bronze Object	Bronze	Bronze or copper lump from burial context.	Length: 1.7 cm; Width: 0.8 cm.

	Type	Material	Description	Dimensions
TSW 2008.0327 *14-TSW-0057* **Context** 104 / 4 / 4	Metal Tool	Bronze	Copper or bronze chisel. very good condition. one end is slightly curved. the other comes to a flat point.	Length: 17.2 cm; Rounded end: 1.1 cm; Flat end: 0.4 cm.
TSW 2008.1059 *14-TSW-0112* **Context** 102 / 27 / 4	Personal Ornament	Bronze	Copper or bronze pin; two fragments; A. thinner than B, ends in a nodule of metal. B. thicker fragment, consistent thickness.	A. Length: 2.5 cm, B. Length: 1.8 cm.
TSW 2008.0194 *14-TSW-0039* **Context** 101 / 7 / 2	Personal Ornament	Bronze	Copper/bronze pin. In some places the original metal is visible beneath the corrosion. There is an "eye" with a hook through it near the head. On the opposite end there is a notch.	Full length: 16.2 cm; Head length: 1.3 cm; Head width: 1.3 cm; Distance from center of head to center of "eye": 2.6 cm; Distance from notch to tip: 2. 6 cm.
TSW 2009.1567 *15-TSW-0049* **Context** 101 / 51 / 9	Metal Fragment	Metal	Possibly electrum. One piece in two fragments.	Length of fragment A: 1.6 cm; Length of fragment B: 2.1 cm; Diameter of both: 0.3 cm; Width: 0.1 cm.

	Type	Material	Description	Dimensions
TSW 2009.1115	Metal Fragment	Metal	Possibly bronze. Possibly modern. Could be a heavy nail with a curled end.	Length: 5.6 cm; Height: 1.8 cm; Width: 0.4 cm.
Context 150 / 1 / 2				
TSW 2008.0828 *14-TSW-0088*	Jar Sealing	Mudbrick	Possibly a mudbrick cone.	Diameter: 9 cm; Height: 7 cm.
Context 102 / 10 / 6				
TSW 2008.1065 *14-TSW-0107*	Jar Sealing	Clay	Jar sealing.	Diameter: 8.0 cm; Height: 7.8 cm.
Context 102 / 27 / 2				
TSW 2009.1414 *15-TSW-0047*	Jar Sealing	Clay	Possible sealing.	Length of flat side: 5.7 cm; Width of flat side: 3.0 cm; Height of sealing: 3.7 cm.
Context 101 / 56 / 1				

	Type	Material	Description	Dimensions
TSW 2009.1429 *15-TSW-0068* **Context** 101 / 59 / 1	Jar Sealing	Clay	Sealing.	Length of flat end: 7.3 cm; Width of flat end: 5.2 cm; Height of sealing: 5.5 cm.
TSW 2009.1423 *15-TSW-0067* **Context** 101 / 59 / 1	Jar Sealing	Clay	Sealing.	Length of flat end: 9.1 cm; Width of flat end: 8.0 cm; Height of sealing: 4.8 cm.
TSW 2010.2495 **Context** 151 / 103 / 1	Personal Ornament		Small white ring bead.	Diameter 0.3cm, Thickness 0.2cm.
TSW 2010.3003 *16-TSW-0033* **Context** 151 / 106 / 5	Bead		9 beads found in flotation of 2010.2470	

	Type	Material	Description	Dimensions
TSW 2010.3004 *16-TSW-0083* **Context** 150 / 104 / 5	Bead		Bead from flotation of 2010.2477.	
TSW 2010.3005 *16-TSW-0034* **Context** 150 / 103 / 9	Bead		Bead from flotation of 2010.2278.	
TSW 2008.0050 *14-TSW-0031* **Context** 103 / 0 / 1	Counting Stone	Stone	2 counting stones.	A. 3cm diameter; B. 2.5cm diameter
TSW 2008.0055 *14-TSW-0030* **Context** 103 / 0 / 1	Stone Disc	Stone	Half of a pierced stone disc. Very porous.	Width: 3.4 cm; Diameter: 6.2 cm; Thickness: 1.2 cm.

	Type	Material	Description	Dimensions
TSW 2008.0057 *14-TSW-0008* **Context** 103 / 1 / 0	Figurine	Stone	Possible figurine fragment. If oriented on larger, broken, flat side, with curved end to viewer's right: Set of two carved horizontal lines, dividing piece into three equal sections. Top section has two diagonal lines, one down and to the left and one down and to the right; the lines join in a 90 degree angle. Three sections are equal in length.	Total length: 3.2 cm; Depth: 1.0 cm; Total width: 2 cm, Length of each section: 0.5 cm.
TSW 2010.2452 *16-TSW-0075* **Context** 151 / 106 / 2	Whole Vessel	Ceramic	Metallic ware vessel.	
TSW 2010.2458 *16-TSW-0074* **Context** 151 / 106 / 3	Whole Vessel	Ceramic	Ceramic jug near face of adult burial.	
TSW 2010.2458 *16-TSW-0073* **Context** 151 / 106 / 3	Whole Vessel	ceramic	Small cup within the jug (2010.2458, 16-TSW-0074) near the face of the adult burial.	

	Type	Material	Description	Dimensions
TSW 2008.0159 *14-TSW-0005* **Context** 101 / 5 / 1	Stone Object	Stone	Small stone object, possibly a cosmetic pestle. Chalky ground stone. There is a line around about half of the object--possibly incised from use. There is a small "nub" at the end of the line, possibly incised from use.	Diameter of bottom: 3.8 cm; Diameter of interior: 2.9 cm; Height: 2.0 cm.
TSW 2008.0189 *14-TSW-0041* **Context** 101 / 0 / 3	Chariot Wheel	Stone	Stone chariot wheel. Hole is not completely pierced through. Side with un-pierced hole is heavily encrusted with salt or plaster runoff. Large chips are missing.	Diameter of wheel: 6.4 cm; Width of wheel: 0.4 cm; Width of hub: 3.1 cm, Depth of hole: 1.9 cm
TSW 2008.0191 *14-TSW-0035* **Context** 101 / 10 / 2	Counting Stone	Stone	A. Whiter counting stone; B. Darker counting stone.	A. Diameter: 3.2 cm; B. Diameter: 2.8 cm.
TSW 2008.0196 *14-TSW-0040* **Context** 101 / 6 / 8	Personal Ornament	Stone	7 beads, possibly from a bracelet. Found "around" skeleton wrist. Each has one hole smaller than the other, as if they should be strung directionally. All appear to be stone, though two appear more yellow in color. One seems to shimmer as if glazed with glass.	Average length: 0.6 cm.

	Type	Material	Description	Dimensions
TSW 2008.0254 *14-TSW-0045* **Context** 101 / 7 / 2	Sling Stone	Stone	A. Counting stone, white, light stone; B. Sling stone, dark rock, smooth; C. Sling stone, dark rock, knobby.	A. Diameter: 2.5 cm; B. Weight: approx. 20 g, Diameter: 2.3 cm; C. Weight: approx. 15 g, Diameter: 2.2 cm.
TSW 2008.0715 *14-TSW-0060* **Context** 101 / 16 / 1	Loom Weight	Stone	Stone wheel, probably a loom weight. White, somewhat chalky stone. Many incised lines, possibly from use.	Diameter of wheel: 8.1 cm; Diameter of hole: 1.3 cm; Thickness: 1.1 cm
TSW 2008.0719 *14-TSW-0074* **Context** 101 / 21 / 1	Chariot Wheel	Ceramic	Ceramic wheel. Burned, causing exterior to appear green. Red ware, cream slip.	Diameter of wheel: 7.0 cm; Diameter of "hub": 2.6 cm; Depth of wheel: 0.5 cm; Depth of "hub": 4.1 cm
TSW 2008.0721 *14-TSW-0070* **Context** 101 / 15 / 2	Whole Vessel	Ceramic	Small vessel: juglet, rim is slightly broken. Bottom has very clear string removal marks. Plain simple ware, White slip, light evidence of salt encrustation, such as everything gets in this area.	Diameter of rim: 3.6 cm; Diameter of base: 4.0 cm; Height: 8.5 cm

	Type	Material	Description	Dimensions
TSW 2008.0724 *14-TSW-0072* **Context** 101 / 12 / 3	Loom Weight	stone	pierced stone disc. likely loom weight. Markings on exterior of stone, possible traces of thread, or more likely, root system. Edges are all abraded.	Diameter of hole: 0.7 cm; Diameter of disc: 7.3 cm; Depth: 1.8 cm.
TSW 2009.0521 *15-TSW-0029* **Context** 101 / 75 / 1	Personal Ornament	Shell	1 shell bead fragment saved. 1 snail shell was discarded.	Length 1.1 cm, Height: 1.4 cm, Depth of shell: 0.4 cm.
TSW 2009.0548 *15-TSW-0037* **Context** 101 / 67 / 9	Counting Stone	Stone	Spherical token. White stone.	Diameter: 1.5 cm
TSW 2009.0585 **Context** 101 / 67 / 5	Metal Fragment	Bronze	Bronze rod fragment.	

	Type	Material	Description	Dimensions
TSW 2009.1598 *15-TSW-0018* **Context** 101 / 71 / 3	Figurine	Stone	Stone sheep. Very light. There is a hole drilled in the center that appears to have been stained by a copper/bronze object such as a pin.	Length from nose to tail: 2.6 cm; Height from ears to feet: 1.8 cm; Height from top of tail to broken back feet: 0.9 cm; Diameter of hole: 0.2 cm; Length along back from center of hole to tail: 1.0 cm.
TSW 2009.1659 *15-TSW-0041* **Context** 101 / 68 / 1	Sling Bullet	Sstone	A shiny, smooth oval stone with a broken edge. Likely a sling stone.	Height: 3.9 cm; Width: 3.2 cm; Depth: 2.9 cm.
TSW 2009.1660 *15-TSW-0044* **Context** 101 / 72 / 1	Stone Object	Stone	Soft white stone, possibly used in drilling. There is a drill hole in each side, with concentric circles around the interior of each . One side has wear marks as well.	Diameter: 5.0 cm; Diameter of each hole: 1.0 cm; Width: 2.9 cm.
TSW 2009.1169 *15-TSW-0072* **Context** 102 / 55 / 2	Counting Stone	Stone	Spherical token.	Diameter: 1.8 cm.

	Type	Material	Description	Dimensions
TSW 2009.1397 *15-TSW-0053* **Context** 102 / 55 / 7	Personal Ornament	Shell	1 seashell bead fragment; Euphrates River shell with hole punched in end.	Length: 2.9 cm,Height: 1.8 cm, Width at punctured end: 0.6 cm,Width at other end: 0.1 cm.
TSW 2009.1468 *15-TSW-0045* **Context** 102 / 55 / 9	Stone Object	Stone	Small ground stone with a hole drilled into each side, concentric circles inside each of these holes are visible.	Length: 5.6 cm, Width: 5.4 cm, Diameter of each hole: 1.4 cm.
TSW 2009.1918 *15-TSW-0062* **Context** 102 / 52 / 3	Personal Ornament	Shell	Bead fragment, chipped along all sides, so hole is drilled not at the quite center of anything.	Length: 1.1 cm; Height: 1.0 cm; Width of shell: 0.15 cm; Width of hole: 0.2 cm.
TSW 2009.1921 **Context** 102 / 55 / 10	Stone Object	Stone	Stone mortar. One corner is missing. The hole shows signs of wear.	Height: 3.8 cm, Length: 8.8 cm, Width: 7.0 cm.

	Type	Material	Description	Dimensions
TSW 2009.1929 *15-TSW-0030* **Context** 102 / 52 / 5	Worked Bone	Bone	Point.	Length: 4.0 cm; Width of "haft": 0.5 cm; Widest width: 1.0 cm; Depth of bone: 0.2 cm.
TSW 2009.1930 *15-TSW-0015* **Context** 102 / 52 / 8	Personal Ornament	Stone	Small white stone bead, possibly alabaster. Appears complete.	Length: 1.8 cm; Diameter of smaller end: 0.9 cm; Diameter of larger end: 1.0 cm.
TSW 2009.1950 **Context** 102 / 52 / 9	Stone Object	Stone	A beautiful piece of stone. The two cut sides are highly polished, especially in comparison to the exterior that remains. Possibly used for polishing.	Length: 5.0 cm;Height: 3.3 cm; Width: 2.8 cm.
TSW 2008.0122 *14-TSW-0025* **Context** 102 / 10 / 1	Stone Disc	Stone	Half of a carved stone disc. Very porous stone; chalky, white.	Diameter: 6.5 cm; Width: 3.5 cm; Thickness of stone: 2.0 cm.

	Type	Material	Description	Dimensions
TSW 2008.0307 *14-TSW-0038* **Context** 104 / 0 / 2	Counting Stone	Stone	Counting stone. Local stone. Porous. Chalky when wet.	Diameter: 4.5cm.
TSW 2008.0310 *14-TSW-0042* **Context** 104 / 0 / 3	Chariot Wheel	Stone	Chariot wheel	Diameter of Wheel: 8.9 cm, Diameter of Hub: 3.4 cm, Diameter of Hole: 1.0 cm, Width of Wheel: 0.7 cm, Width with Hub: 4.1 cm
TSW 2008.0604 *14-TSW-0046* **Context** 102 / 16 / 3	Counting Stone	Stone	Counting stone.	Diameter: 2.2cm
TSW 2008.0095 *14-TSW-0048* **Context** 103 / 10 / 2	Counting Stone	Stone	Counting stone. Dark stone.	Diameter: 2.3 cm

	Type	Material	Description	Dimensions
TSW 2008.0306 *14-TSW-0051* **Context** 104 / 0 / 2	Chariot Fragment	Ceramic	Plain simple ware, self slip. Pierced ceramic object, possibly rein rings of a model chariot.	Length: 4.9 cm, Height: 3.0 cm, Width: 2.7 cm.
TSW 2008.0633 *14-TSW-0058* **Context** 102 / 2 / 3	Stone Vessel	Stone	Stone bowl fragment. Shallow calcite bowl with "zigzag" band on exterior. Possible join to 2009.0537 (15-TSW -0026).	Length: 5.4 cm, Height: 5.2 cm, Thickness of stone: 1.0 cm.
TSW 2008.0816 *14-TSW-0076* **Context** 102 / 23 / 2	Spindle Whorl	Stone	Spindle whorl. Flat end has thread lines worn in at 0, 90 and 270 degrees, but not at 180 degrees.	Diameter: 3.7 cm, Height: 1.7 cm.
TSW 2008.0814 *14-TSW-0077* **Context** 102 / 23 / 2	Spindle Whorl	Stone	Spindle whorl. Flat side is incomplete.	Diameter: 2.7 cm, Height: 1.8 cm.

	Type	Material	Description	Dimensions
TSW 2008.0817 *14-TSW-0079* **Context** 102 / 23 / 2	Spindle Whorl	Stone	Spindle whorl. One side is completely flat, the other is very slightly convex. Likely a spindle whorl and not a bead. On convex side, four slight lines of thread wear divide whorl into quadrants, roughly.	Diameter: 3.0 cm, Height: 0.8 cm.
TSW 2008.0810 *14-TSW-0080* **Context** 102 / 23 / 1	Bead	Stone	Square stone bead. Object is pierced in the center of one side, and off center on the opposite. Decoration is a series of small incised circles with an incised point at center of each on both the larger sides.	Length/Width: 2.7 cm, Depth: 0.8 cm
TSW 2008.0672 *14-TSW-0082* **Context** 103 / 17 / 2	Stone Object	Stone	Leg of white stone carved into a column shape: square base around a square pillar.	Width of base: 2.5 cm, Width of pillar: 1.8 cm, Height: 3.4 cm.
TSW 2008.0960 *14-TSW-0095* **Context** 104 / 6 / 7	Spindle Whorl	Stone	Spindle whorl. Flat surface is abraded and uneven. Abrading seems natural, not due to wear. When wet, white stone was very mottled.	Diameter: 4.0 cm, Height: 1.2 cm.

	Type	Material	Description	Dimensions
TSW 2008.1042 *14-TSW-0100* **Context** 102 / 23 / 5	Whole Vessel	Ceramic	Bowl. Wheel made, wheel marks easily visible on interior. Pot mark on exterior, on lower part of body, below shoulder: on vertical line with a series of three curves (a very wide "u" if you will) below it.	Diameter of base: 3.7 cm, Height: 7.6 cm, Diameter of rim: 10.0 cm, Thickness of fabric: 0.2 cm.
TSW 2008.0690 *14-TSW-0101* **Context** 104 / 13 / 6	Sling Stone	Stone	Three weights or sling stones. A. Fragmented and pitted light weight white stone, B. Has visible striations as well as a "core," C. more oblong.	A. Diameter: 4.0cm, B. Diameter: 4.0cm, C. Maximum Diameter: 5.0cm.
TSW 2008.1029 *14-TSW-0102* **Context** 102 / 20 / 5	stone Object	stone	Half of a white stone "ring."	Thickness: 0.4 cm, Width: 0.4 cm, Diameter: 2.0 cm.
TSW 2008.1047 *14-TSW-0103* **Context** 102 / 26 / 1	Stone Vessel	Stone	2 joining fragments of a calcite bowl-full profile. Flat rim with a zigzag pattern and on exterior of vessel around the rim is a pattern of incised triangles.	Thickness: 1.6 cm, Height: 7.5 cm.

	Type	Material	Description	Dimensions
TSW 2008.1030 *14-TSW-0104* **Context** 102 / 8 / 1	Bead	Stone	White biconical stone bead.	
TSW 2008.1027 *14-TSW-0105* **Context** 102 / 20 / 5	Stone Object	Stone	Possibly a mace head that was later used as a stone tool. The interior drill hole proves this is a very fine, smooth stone. However, the exterior shows use and wear consistent with a stone hammer. Originally thought to be a loom weight.	Interior hole diameter: 2.0 cm, Length: 6.5 cm, Width: 5.2 cm, Thickness at end near hole: 2.0 cm, Thickness at end away from hole: 4.0 cm.
TSW 2008.1068 *14-TSW-0111* **Context** 102 / 26 / 3	Bead	Bone	Burnt bone bead.	Diameter: 2.7 cm, Depth: 0.8 cm.
TSW 2008.1057 *14-TSW-0115* **Context** 102 / 26 / 2	Shell	Shell	Two mollusk shells.	A: 5.6cm long, 3.0cm tall; B: 4.3cm long, 2.1cm tall

	Type	Material	Description	Dimensions
TSW 2009.1353 *15-TSW-0028* **Context** 150 / 5 / 5	Stone Object	Stone	Pendant or polishing stone. Smooth, tapered at one end. May have had a drilled hole, for a pendant, but most likely is that this was used as a burnishing instrument.	Length: 5.8 cm Width: 2.9 cm, Thickness; 0.8 cm.
TSW 2009.1387 *15-TSW-0036* **Context** 150 / 8 / 2	Inlay	Shell	Inlay. Possibly an eye. Euphrates River shell with rounded edges.	Length: 3.5 cm, Height: 2.1 cm, Width of one end: 0.2 cm, Width of the other end: 0.1 cm.
TSW 2009.1378 *14-TSW-0051* **Context** 150 / 6 / 3	Inlay	Shell	Inlay fragment. Object has a small hole with a circle surrounding it incised on the shiner side of this Euphrates River shell.	Length: 1.8 cm, Height: 1.4 cm, Width: 0.1 cm.
TSW 2009.2082 *15-TSW-0052* **Context** 150 / 9 / 13	Stone Object	Stone	Soft white stone. Spherical token.	

	Type	Material	Description	Dimensions
TSW 2009.1631 *15-TSW-0055* **Context** 150 / 6 / 4	Stone Object	Stone	Possibly a die or a square token. Perfect cube.	Length: 1.8 cm each side.
TSW 2008.1056 **Context** 102 / 27 / 1	Bead	Stone	Rectangular quartz bead with four circles with point in center inscribed on each corner.	Length: 3.4 cm, Width: 2.5 cm, Depth: 0.8 cm.
TSW 2008.0088 *14-TSW-0109* **Context** 103 / 9 / 2	Spindle whorl	Stone	Half of a spindle whorl in two pieces. White stone.	Diameter: 3.0 cm, Depth: 2.1 cm.
TSW 2008.0107 *14-TSW-0012* **Context** 102 / 1 / 3	Sling Bullet	Stone	Sling bullet	Diameter: 5.4 cm, Weight: 310 g.

	Type	Material	Description	Dimensions
TSW 2008.1067 *14-TSW-0113* **Context** 102 / 26 / 2	Stone Disc	stone	Stone has been worked as if it were going to be pierced all the way through--rounded with a hole started on each side. However, it is not complete. so, worked stone object.	Diameter(ish): 3.7 cm, Depth: 3.2 cm.
TSW 2010.2002 **Context** 102 / 100 / 0	Stone Vessel	Stone	White limestone fragment of a vessel-small portion of rim remains.	Length: 2.6cm, Max width: 1.5cm, Max thickness: 0.7cm.
TSW 2008.0632 **Context** 102 / 8 / 1	Textile	Textile	Textile threads from grave 6.	
TSW 2008.0051 **Context** 103B / 0 / 1	Grinding Stone	Stone	Loaf grinder.	

	Type	Material	Description	Dimensions
TSW 2008.0060	Grinding Stone	Stone	Mortar.	
Context 103C / 1 / 1				
TSW 2008.0117		Shell	Shell.	Height: 3 cm; Length: 5.6 cm.
Context 102 / 7 / 2				
TSW 2008.0164	Stone Object	Stone	Loaf grinder.	
Context 101 / 7 / 1				
TSW 2008.0184		Shell	Opalescent center.	
Context 101 / 2 / 1				

	Type	Material	Description	Dimensions
TSW 2008.0188 *14-TSW-0034* **Context** 101 / 7 / 2	Whole Vessel	Ceramic	full "jarlet"	
TSW 2008.0259 *14-TSW-0040* **Context** 101 / 4 / 2	Personal Ornament	Stone	5 more beads that connect to bracelet, see Tag 2008.0196.	
TSW 2008.0265 **Context** 101 / 5 / 2	Stone Object	Stone	Stone grinder.	
TSW 2008.0627 *14-TSW-0056* **Context** 102C / 14 / 1	Textile	Textile	Textile fragment. Flax.	

	Type	Material	Description	Dimensions
TSW 2008.0630 *14-TSW-0056*	Textile	Textile	Textile strands. Flax.	
Context 102C / 14 / 1				
TSW 2008.0656	Whole Vesse	Ceramic	Whole vessel.	
Context 103B / 1 / 2				
TSW 2008.0662	Whole Vessel	Ceramic	Nearly whole cup	
Context 103 / 9 / 4				
TSW 2008.1037	Grinding Stone	Stone	Standing grinder.	
Context 102B / 10 / 6				

	Type	Material	Description	Dimensions
TSW 2009.0537 *15-TSW-0026* **Context** 101C/76 / 3	Stone Vessel	Stone	Alabaster bowl fragment. Double carinated pattern on top of rim and chevron pattern around exterior. Possible join to 2008.0633 (14-TSW -0058).	Width: 3.9 cm; Height: 4.2 cm; Width of rim: 2.0 cm; Depth of stone: 1.1 cm.
TSW 2009.1106 **Context** 150 /1 / 2	Grinding Stone	Stone	Loaf grinder.	
TSW 2009.1131 **Context** 150 /1 / 5	Grinding Stone	Stone	Grinding stone.	
TSW 2009.1186 **Context** 101 /51 / 7	Stone Object	Stone	Loaf grinder.	

	Type	Material	Description	Dimensions
TSW 2009.1308	Stone Object	Stone	Loaf grinder.	
Context 101 /51 / 6				
TSW 2009.1413	Stone Object	Stone	Grinding stone.	
Context 101 /56 / 2				
TSW 2009.1435		Ceramic	Body fragment of a human figurine? Or just a broken sherd?□□Broken sherd.□□DISCARDED	
Context 101 /61 / 1				
TSW 2009.1902	Shell	Shell	1 seashell.	
Context 102 /60 / 8				

	Type	Material	Description	Dimensions
TSW 2009.1905	Grinding Stone	Stone	Grinding stone.	

Context
102 / 61 / 2

TSW 2009.1937	Bead	Shell	Possible bead fragment.	

Context
102 / 52 / 8

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