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HOUSEHOLDS, COMMUNITIES, AND DIMENSIONS OF SOCIAL IDENTITY IN THE EARLY IRON AGE AT TALL AL-ʿUMAYRI

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For my parents, José and Sylvia Acosta

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ABSTRACT

The Early Iron Age Southern Levant was a place in transition. The various Late Bronze Age city-states were collapsing and the New Kingdom Egyptian empire, part of a Mediterranean world rich in interactions, was dwindling to a close. Populations were shifting and a number of small, agro-pastoral villages were emerging in the highlands and plateaus on either side of the Jordan River.

This dissertation studies one such village, Tall al-'Umayri, located on the Central Plateau of Transjordan. Excavations uncovered a portion of this 1.5-hectare village, including five domestic structures, a deep refuse pit, and an impressive fortification system. Around 1200 BCE an intense conflagration consumed the settlement and sealed houses, domestic artifacts, and even some of the inhabitants under burned mudbrick. The well-preserved assemblage provides a wealth of information on life before the destruction. To build a picture of that life, this study uses the functional-ecological approach to reconstruct the inhabitants' activities and the identity-practice approach to explore the social importance of those activities.

The independent village at 'Umayri had well-defined architectural boundaries between households, which formed self-sustaining units for production of everyday necessities like food and clothing, as well as other items, such as seals. At the community level, socioeconomic inequality is evident in the range of sizes and complexity of the domestic structures and the presence of certain artifacts, such as administrative and ritual items, only in the larger houses. Compared to some other settlements in the region, 'Umayri was more organized and cooperative, as evidenced by the fortification system and the shared walls between houses. The inhabitants would also have needed to cooperate to reduce agricultural and pastoral risks, and they participated in community ritual. Such cooperation may have helped build solidarity. Interestingly, 'Umayri and the other settlements in the region that demonstrated cooperation through fortification systems simultaneously have evidence

of individual households making greater efforts to protect or hide their grain stores from other households.

Contextualizing and comparing these household and community practices with contemporary sites elsewhere in the Southern Levant thus allows for a discussion of the active ways in which villagers organized their societies and economies. This study is an important contribution to understanding the Early Iron Age Southern Levant, and Transjordan in particular, where little is known about everyday life at the village level. Rural settlements like ʻUmayri provide windows of opportunity in which to analyze households, communities, and the development of social identity across the region.

CHAPTER 1

INTRODUCTION

The Early Iron Age Southern Levant was a place in transition. Late Bronze Age city-states were collapsing and the New Kingdom Egyptian empire, part of a Mediterranean world rich in interactions, was dwindling to a close. Populations were shifting and a number of small, agro-pastoral villages were emerging in the highlands and plateaus on either side of the Jordan River.

In this same time period, well-known ethnic groups from the later Iron Age are sought with the hallmarks of their eating habits, housing styles, and deities derived from the refuse pits, piles of stones, and mysterious artifacts excavated over a thousand years later. While the "Proto-Israelites" and "Sea Peoples" elbowed out the Canaanites in the land west of the Jordan River, the new settlements to the east stood in the background, brought into the discussions of emerging identities only when an errant Israelite tribe or Sea People mercenaries can be spotted in the debris. Many of these identities, however, are extrapolated from later texts – projections onto the past from the future.

Later in the Iron Age, the nation-kingdoms of the Ammonites, Moabites, and Edomites emerged in Transjordan while the Israelites and Judahites emerged in the west. However, in this in-between time with a lack of contemporary, local texts, there is archaeological opportunity for studying emerging identities without the distraction of later ethnic attributions. Archaeology provides the best clues about the residents of these rural villages, their daily life, and the practices that were shaped by their worldview. To determine the identity of these common villagers, one must not ask if they were Israelite or Ammonite, but rather, look at the way they built their settlements, constructed their houses, as well as at how they went about growing, storing, preparing, and cooking the grain for their daily bread. Considering the multitude of seemingly insignificant daily interactions between these villagers – within their homes and their communities – and contextualizing

these practices within a larger regional perspective gives a glimpse of a more significant description of Early Iron Age peoples.

This dissertation studies one such small village excavated at Tall al-'Umayri, located on the Central Plateau of Transjordan. To date, only a small portion of this village has been excavated, consisting of five domestic structures, an immense refuse pit, and an impressive fortification system. This settlement, from the transitional Late Bronze/Early Iron I period, was consumed by an intense conflagration around 1200 BCE which sealed houses, artifacts of everyday life, and even some of the inhabitants under layers of burned mud-brick. This well-preserved assemblage provides a wealth of information on life before the destruction. Focusing on the assemblage and the practices involving the grinding stones and spindle whorls, one can seek a better understanding of how these inhabitants daily constructed their own identities.

This study will contribute significantly to the discussion of social identity in the Early Iron Age Southern Levant, and in Transjordan in particular. Inspired by approaches that have become prominent in New World archaeology – especially the "identity-practice" paradigm – this study starts with the archaeology of individual households and progresses into a discussion of community-building practices and resultant shared identities across the broader region. The importance of this study rides on its focus on the transitional period between the urbanized Late Bronze Age and the nation-states of the Iron II period. The small, rural settlements in the Southern Levant such as 'Umayri provide a window of opportunity in which to analyze households, communities, and the development of social identity across the region.

This study is limited to a single site and a single period of occupation. As such, it does not address questions of diachronic change from the Late Bronze Age and into the later Iron I period except in tangential instances. Instead, the destroyed Stratum 12 assemblage is a well-preserved example of everyday life in a single moment in time.

The organization of this dissertation is as follows: Chapter 2 starts with a review of the literature and a presentation of the theoretical and methodological framework. Chapter 3 provides a detailed summary of the case study, Tall al-'Umayri Stratum 12. Chapters 4 (Households), 5 (Community), and 6 (Regional) present the body of this tripartite discussion on social identity in the Early Iron Age, building from the smallest unit – the household – and the aggregated unit – the community – to a region-wide comparison of household and community practices. Finally, Chapter 7 provides a summary of the conclusions from this research.

CHAPTER 2

THEORY AND METHODOLOGY

2.1 Introduction

This study of the Iron IA Stratum 12 village at Tall al-'Umayri uses a combination of two approaches to studying households and communities: the "functional-ecological" and "identity-practice" approaches. The study begins by focusing on the social and subsistence functions of material artifacts and the local ecology of the settlement. This is then the basis for reconstructing the habitual practices of the inhabitants. These approaches are used to understand how these practices contributed to the formation of social identity in the Early Iron Age. This approach differs from the traditional culture-historical approach to the Early Iron Age Southern Levant, which focuses primarily on ethnic identities known only from later historical texts. The practice-identity approach in particular has been extensively developed for use in New World archaeology and much of this work inspires my own. My study of identity is based on three levels of practice derived specifically from the work of Yaeger: practice at the household level, at the community level, and at the inter-community regional level (Yaeger, 2000).

2.2 Theoretical Approaches

2.2.1 Previous Approaches in the Levant

For the historical periods of the Southern Levant, household archaeology studies have become popular in the past thirty years. The earliest fall under the functionalist-ecological approach because they focus on architecture and identifying the role of various rooms within a dwelling. Braemer studied domestic architecture and presented a typology of architectural plans for the Iron Age Southern Levant (Braemer, 1982). Unfortunately, his

typology was based on morphology, without taking into account any of the material assemblages. Daviau's important study on Bronze Age houses moved beyond architectural considerations and statistically analyzed artifacts and archaeological features by room to identify the major activities (Daviau, 1993). Daviau concluded that five activities are clearly identifiable in the archaeological record: food preparation and consumption, storage, pottery production, textile manufacturing, and weaving (Daviau, 1993, p. 437). Both Braemer's and Daviau's studies are important to consider for comparative purposes, as no other large-scale architectural or activity-based studies like theirs have been performed in the Southern Levant since.

Stager's 1985 *Archaeology of the Family in Ancient Israel* delved into the origins of the Central Highlands villages in Iron Age Palestine, their pillared dwellings, and their spatial patterning into the patriarchal "multiple family compound" (Stager, 1985, pp. 18, 20). Stager's work draws upon not only the archaeological evidence of representative sites but also ethnographic sources from modern Palestine and textual references from the Hebrew Bible.

Recently, a series of studies have been published that take advantage of detailed data collection and spatial reference tools to reconstruct a single household through time, using the diachronic approach toward change that the practice-identity model encourages (Waterson, 2000, p. 187). Notable among these are Gadot and Yasur-Landau's study of an Early Iron Age courtyard house at Megiddo (Gadot and Yasur-Landau, 2006), Hardin's study of an Iron II pillared building at Tell Halif (Hardin, 2010), and Gilboa, Sharon, and Zorn's study of a "Canaanite" courtyard house at Tel Dor (Gilboa et al., 2014). All three houses were preserved by heavy destruction layers that sealed their floor assemblages, allowing spatial analysis of the artifacts by room. This in turn allowed the researchers to reconstruct the activities and the social and economic organization of household production and change over several phases. A series of studies in the Southern Levant that are

also built on careful spatial analysis are included in the volume *Household Archaeology in Ancient Israel and Beyond* (Yasur-Landau et al., 2011). Examples include an examination of pottery for determining household wealth and composition (Panitz-Cohen, 2011), the determination of household family types through ceramics and small finds (Brody, 2011), and an investigation of household religion and its practitioners through ritual objects (Nakhai, 2011). While the single-phase settlement at 'Umayri does not permit the diachronic approach that these studies engage, it is useful to consider using detailed spatial studies in order to look at household practices.

Previous studies on communities in the Levant range from the Neolithic to the Iron Age. Based on his study of Neolithic Beidha in southern Transjordan, Byrd argues that the transition to agricultural sedentism included restricted sharing in production and consumption and the development of "institutionalized mechanisms for integrating the community as a whole" (Byrd, 1994, p. 640). His diachronic study illustrates how private storage increased and the degree of visibility and access between domestic and exterior spaces decreased over time (Byrd, 1994, pp. 640, 658). At the same time, however, non-domestic buildings served to integrate the community through "suprahousehold" or ceremonial gatherings (Byrd, 1994, p. 657). Düring and Marciniak reconsider central Anatolian communities and reject the idea of the autonomous household as the foundation of Neolithic society. When they looked at floor space, hearth distribution, and boundaries, they failed to identify clear domestic units. This led them to argue that households were "embedded in larger social associations" and that society had a different basis than the household (Düring and Marciniak, 2006, pp. 167, 174). Chesson studies Early Bronze Age households using a practice approach based on Lévi-Strauss's house society model (Chesson, 2003). Analyzing residential and public features in walled settlements led her to propose a heterarchical model for social organization. She bases her case on the lack of standardization among non-domestic structures, on the lack of differentiation in artifact

and mortuary remains, and on ethnographic parallels for forms of heterarchical leadership (Chesson, 2003, pp. 92, 93). These studies are good examples of using the archaeological evidence for households and communities to approach key issues like social organization and urbanism. For the Iron II period Brody has studied households at Nasbeh, creating a pattern of material correlates to an ethnic identity (Brody, 2015). He discusses an archaeological approach to identity based on diet (cooking pots), ritual (household religious artifacts), language (inscriptions), dress (fibulae), architecture (house styles) and fortifications.

From the Iron I period there are three studies in particular that use a practice approach to the archaeology of community in the Southern Levant. Ilan investigates *habitus* at Iron I Tel Dan through architecture, installations, and evidence for socioeconomic organization (Ilan, 2011). The result of his study includes a list of emic expressions of the inhabitants' "dispositions", including preferences for certain architectural layouts, tools and working conditions, communal storage, and eating and mortuary practices (Ilan, 2011, pp. 152–153). In Gadot's study, he compares four settlements along the Yarkon River using a practice-identity approach (Gadot, 2011). He questions whether there were clear boundaries between ethnic identities as typically designated in historical-based studies. He looks at architectural composition, layouts, and the placement of courtyards and entrances. Gadot concludes that each settlement had its own distinct pattern and that ethnicity cannot be identified in this mixed region based on traditional ethnic markers, *e.g.* specific house and ceramic styles (Gadot, 2011, p. 180). Benjamin Porter's research (Porter, 2013) comes the closest geographically to this study, focusing on sites on the Central and Karak Plateaus, including Tall al-'Umayri. However, his research focuses on the Karak Plateau site of Khirbat al-Mudayna al-'Aliya, and the nature of complex communities established in marginal zones of the later Iron I period. He introduces an approach he terms the "complex adaptive systems" approach "to articulate the communities' development

over time", a way of explaining the appearance, growth, and collapse of the single-phase settlements along the Karak Plateau (Porter, 2013, p. 134).

These studies are all important for the developing discussions of everyday life in the Iron Age, for understanding households and communities, and for building models on the development and varieties of societies in the Southern Levant. This current study will contribute to these discussions by further pressing the exploration of social identity from functional- and practice-based approaches, using a single stratum's wealth of information for exploring daily life, and making suggestions about the organization and worldview of one village's inhabitants during the Early Iron Age.

2.2.2 Functional-Ecological Approach

There are two approaches to the archaeological study of households and communities that are utilized in this dissertation. The first is the "Functional-Ecological" approach, which focuses on the functions of social behavior within households and communities in relation to the natural environment (Wilk, 1997; Murdock, 1949; Arensberg, 1961). The second is the "Identity-Practice" approach, which focuses on habitual non-verbal practices that socially constitute the community and build identity through shared understanding (Ortner, 1984, p. 144-160; Yaeger and Canuto, 2000; Yaeger, 2000). Both of these approaches have been developed and critiqued in the realm of household and community archaeology. Using aspects of both will lead to a productive discourse on households, communities, and social identity.

Within the functional-ecological paradigm, studies have primarily centered on understanding the household from an external, cross-cultural perspective as a social, economic, and physical unit. One of the classic definitions of a household is:

"the most common social component of subsistence, the smallest and most abundant activity groupcomposed of three elements: (1) social: the demographic unit, including the

number and relationships of the members; (2) material: the dwelling, activity areas, and possessions; and (3) behavioral: the activities it performs. This total household is a product of a domestic strategy to meet the productive, distributive, and reproductive needs of its members" (Wilk and Rathje, 1982, p. 618)

All three elements the social, the material, and the behavioral can be investigated archaeologically. The preserved architecture allows us to estimate the number of people that lived in one house based on dwelling size. The artifacts left in rooms lend "insight into household behaviour and relationships between social action and material" (Allison, 1999, p. 6). This mode of analysis provides a blueprint for investigating the data on the ground and for reconstructing it into a social and economic picture of a living household.

In the functional-ecological paradigm it can be difficult to understand the dynamics of change across time and space. Wilk addresses the problem of organizational variation across households by arguing that different systems are a result of households adapting to local economic and ecological situations within a specific historical context (Wilk, 1997, p. 9). However, exclusively environmental explanations are now mostly discarded as overly deterministic. Nonetheless, the study of the interaction of humans and their natural environment is still important for understanding how a human population adapts in such a way that it endures and continues to reproduce, even in marginal ecological zones. Faunal and botanical studies provide useful datasets for understanding systems of food production and the site's relationship to the environment. It is important to study and understand the survival strategies of the settlement's inhabitants within their landscape, as they balanced concerns for defense, water procurement, access to arable land, and routes connecting their village with the outside world.

In this paradigm a traditional definition of community is "the maximal group of persons who normally reside together in face-to-face association" (Murdock, 1949, p. 79). Community identity derives from this face-to-face interaction, as when members "assist one

another in the activities which gratify basic drives, and provide one another with certain derivative satisfactions obtainable only in social life, there develops among them a collective sentiment of group solidarity and loyalty" (Murdock, 1949, p. 83). This definition has been critiqued as too limiting by Arensburg, who proposes that communities are "basic units of organization and transmission within a society and its culture" (Arensberg, 1961, p. 248–250). In Arensberg's definition a community must have a biological ability to reproduce and an "enduring temporal pattern of coexistence" (Arensberg, 1961, pp. 248–250). However, these approaches take community integration as a given, as a "natural social entity", and fail to "problematize the community's origins and maintenance" (Yaeger and Canuto, 2000, p. 2). Critics also stress the isolationism of such views, which "reify the community as a closed, bounded, and homogeneous social entity" and fail to investigate divisions within the community and external political and historical factors (Yaeger and Canuto, 2000, p. 124). However, the basic understanding of a community as a place where members interact on a regular basis is foundational to later approaches.

2.2.3 Identity-Practice Approach

The identity-practice paradigm builds on practice theory, which argues that "society and history are not simply sums of ad hoc responses and adaptations to particular stimuli, but are governed by organizational and evaluative schemes" (Ortner, 1984, p. 148). Here the focus is on the individual or agent, who makes choices and acts strategically within the "constraints" of culture (Ortner, 1984, pp. 150, 153). This approach is particularly useful to archaeologists because it focuses on the ordinary, daily practices that reproduce the system, the "little routines people enact, again and again, in working, eating, sleeping, and relaxing" (Ortner, 1984, p. 154). These are the kinds of activities that an archaeologist can trace. The practice-theory approach explores "how social practice shapes society by concentrating on the taken-for-granted routines of daily life, or *habitus*, within which peo-

ple create and become structured by institutions and beliefs beyond their conscious awareness or direct control" (Dobres and Robb, 2000, p. 5).

In the identity-practice paradigm the household is both a physical and a social place: "the physical house as place a specific location in a spatial network and the social house as place a locus within a network of relationships. These two allied concepts of house as place anchor people within society in both practice and ideation" (Gillespie, 2000, p. 136). Gillespie uses ethnographic, ethnohistorical, and archaeological information to support her theory of the Mayan house as a reflection of the cosmos, a "microcosm of the universe" (Gillespie, 2000, p. 152). Practice theorists like Gillespie focus on ethnographic studies of living houses, exploring the way the cosmos is represented in the house and how the house and the daily practices reflect this cosmos (*e.g.* Bourdieu, 1973; Donley, 1982; Waterson, 2000). Many of these studies are heavily reliant on living communities and ethnographic studies to understand the cosmological associations of the physical dwelling. To apply practice theory it is thus advantageous to have an understanding of the larger world of thought surrounding the archaeological context.

The identity-practice paradigm is especially helpful in the archaeological study of communities, which "promises to yield unique insights on identity and group membership, social organization, and socioeconomic integration" (Yaeger and Canuto, 2000, pp. 1–2). My actualization of this paradigm in the context of community archaeology relies on Yaeger and Canuto's "modified interactionalist" approach. They define the community as "an ever-emergent social institution that generates and is generated by suprahousehold interactions that are structured and synchronized by a set of places within a particular span of time. Daily interactions rely on and, in turn, develop shared premises or understandings, which can be mobilized in the development of common community identities" (Yaeger and Canuto, 2000, pp. 5–6). Social identity in this paradigm is more than just Murdock's shared "solidarity and loyalty" but subscription to an underlying shared world-

view that both shapes and is shaped by daily practices.

Yaeger's study of the social construction of a Classic Maya community provides a clear archaeological case study to demonstrate this theory in action. Here he uses agency to focus on the community's "dynamic functioning as a social construct, constituted and continually reconstituted by its members' practicespractices that represent certain commonalities and affinities among individuals in a community" (Yaeger, 2000, p. 125). The boundaries across the social and physical landscapes that result "establish the community as an explicit identity with a definite membership" (Yaeger, 2000, p. 125). Yaeger divides his study into three categories of practice, including the everyday practices in which everyone is engaged to create the "local habitus," interactive practices between community members constructing "local community identity", and then external interactive practices, "practices of affiliation" that identify with an "extra-local" entity (Yaeger, 2000, pp. 129–131). The everyday practices include production and consumption, the spacing of houses, and shared resources, all of which suggest the creation of a unique "local habitus" (Yaeger, 2000, pp. 129–130, 133). Community-level feasts, including meat consumption, ritual ceramics, and decorated serving vessels, were restricted in location to certain elite houses. Acting out and reinforcing certain relationships in this manner foster a sense of community (Yaeger, 2000, p. 131). Finally, practices by which a community identifies with an external polity show up archaeologically in "material symbols" (Yaeger, 2000, p. 133). For example, these may be exotic material adornments and unique architectural features with restricted distribution in the village.

For an Early Iron Age settlement in Transjordan, many of Yaeger's approaches do not translate, including his study of hierarchical regional relationships. In the rural community represented at ʻUmayri, the inhabitants were not directly tied into a political or social hierarchy outside of their own settlement. However, the basic framework of Yaeger's approach is useful for investigating Early Iron Age social identity. Therefore this study uses

his trifold approach as a starting point, looking at three distinct dimensions of society: 1) in the household economic activities of everyday life; 2) in community activities and ritual practices; and 3) in the shared and varying practices of households and communities across the wider region, and use of external identifiers.

2.3 Methodological Approaches

This study is based primarily on archaeological, ethnographic/ethnoarchaeological, and, to a much lesser degree, textual materials. It works within the functional-ecological paradigm described above to reconstruct patterns of behavior at ‘Umayri and related sites. From these reconstructed patterns, the identity-practice paradigm is used to infer meaningful practices that were the basis of social identities at the household, community, and regional levels.

2.3.1 Types of Evidence

Throughout this study, the archaeological evidence forms the core, serving as the primary evidence to research households and community. A discussion of households and their interpretation must begin with an understanding of the formation processes behind the exposed remains. The archaeologist cannot expect to find an undisturbed house perfectly preserving the activities of its household, but must instead recognize the ancient and taphonomic activities that form and re-form the archaeological record. A domestic structure has four formative stages: construction, habitation, abandonment, and post-abandonment, each phase made up of processes contributing to and subtracting from the artifacts in the archaeological record (LaMotta and Schiffer, 1999, p. 20). Understanding these processes helps in reconstructing behavior, keeping in mind that the archaeological record is constantly being affected by humans who perform activities, clean up after themselves, abandon their abodes, and later disturb the remains.

The construction of a house can often incorporate older material in the foundation or floors of a structure. During the habitation phase artifacts can be removed from their original use loci as debris, swept up or otherwise removed to a midden for disposal. Precious objects can be reused, even when broken, or stored in a special place that does not indicate their primary function (LaMotta and Schiffer, 1999, pp. 21–23). Abandonment processes include unexpected destruction, rapid departure, or an extended period of abandonment, each of which leaves a different pattern. A house destroyed suddenly by an earthquake can preserve both house contents and inhabitants in the exact positions of their interrupted activities (the ideal "Pompeii" situation). Abandonment after a long siege can give a skewed picture of "normal activities" preceding the end, as reduced access to resources and locked town gates restructure daily activities (Rosen, 1986, p. 92). A slow abandonment gives the occupants plenty of time to "curate" or cache any portable objects, or use a neighbor's already-abandoned house as a garbage dump (Schiffer, 1987, pp. 92-111; Routledge, 2008, p. 149). After abandonment, reoccupation, salvaging, and use of refuse for fill layers in a new settlement can also affect the deposition of artifacts (Schiffer, 1987, p. 104). The patterns of disposal, types of abandonment, and later disturbances are crucial processes in understanding the nature of the preserved record. The following chapter considers the case study site in light of its unique history of formation, carefully distinguishing different levels of preservation and taphonomic patterning when comparing assemblages.

The archaeological evidence is enriched when considered with the aid of modern ethnographic studies. While ethnographic and ethnoarchaeological comparisons do not solve the problems of interpreting the archaeological record directly, they do provide useful insights into interpreting the practices of ancient communities through comparison with modern communities living in similar conditions. These ethnographic studies can help construct models to be tested by the archaeological evidence for best fit. Ethnographic/

archaeological contributions of particular relevance to 'Umayri's rural highland community include Kramer's studies on rural villages in Iran, which, though not untouched by the modern world, still provide a good parallel for an agro-pastoral-based economy. Kramer's discussion of the correlation between household size and wealth in matters of dwelling space per person, storage, and family types have provided useful insights into interpreting variations in domestic architecture and the social relations of the occupants (Kramer, 1979). Other studies that provide close parallels include Cohen's study of the Arab border villages in Palestine (Cohen, 1965), Dalman's monumental eight-volume study of Palestinian Arabs at the beginning of the twentieth century (Dalman, 1987), Kamp's study of a Syrian village (Kamp, 1993), Lutfiyya's study of a Jordanian village (Lutfiyya, 1966), Geertz, Geertz, and Rosen's work on Moroccan society (Geertz et al., 1979), and Watson's work on rural Iranian villages (Watson, 1979).

There is virtually no written material directly related to the Iron I period in central Transjordan to provide a window into the inhabitants' world of thought, which is an important part of discussing social identity. What does exist is textual material that reflects elite political perspectives in the Late Bronze Age, including the Amarna letters between the Canaanite city-state rulers and the Egyptian rulers, and the Ugaritic archives. Later Iron Age inscriptions also exist, including the Mesha Stele from the king of Moab, ostraca letters, and a number of inscriptions. The Hebrew Bible, though written later than the Iron Age, does provide some perspectives on the Iron Age worldview. The "house of the father", "house of David", "house of Omri", and idealized elite perspectives of the ancient household have generated an abundance of research to be drawn on and compared to the reality of an ordinary household (*e.g.* Stager, 1985; Schloen, 2001). Though none of this textual material was written by the common householder in the ancient world, what we do have provides insights into the social world in which the common householder acted in the periods before and after the Iron I.

2.3.2 Categorizing Practices & Inferring Identity: Three Levels of Practice

The organization of this dissertation's main themes proceeds with: (1) the everyday household practices concerned with producing and consuming basic commodities; (2) the interactions among community members that create a shared identity, including work on village defenses, season agricultural and pastoral concerns, and ritual activities; and (3) regional level shared practices, as well as interaction with and participation in external identities.

Household Practices

Studying daily practices involves archaeology at the level of the dwelling, developing a sense of the structure itself, the activities engaged in production, consumption and ritual, and the household that occupied the dwelling. The archaeological evidence from 'Umayri currently includes four nearly complete domestic structures that represent only a fraction of the original settlement. The four houses are located on the highest part of the tell, along the northernmost edge of the village's perimeter wall. The remainder of the settlement is still hidden under layers of later occupation. While the number of houses for study is limited, it is still possible for these four houses, a small portion of a 1.5 ha settlement, to demonstrate a great deal about household practices.

Studying domestic structures involves cataloging shape and size, as well as considering the interaction between the architecture and the culture that builds it. How are social messages of identity and power reproduced in brick and stone? Studies on this relationship between architecture and social messages have asked about the meaning of various built forms and the relationship between space and power for social institutions (Lawrence and Low, 1990, pp. 454–455). They also seek to explain the social process behind structural design, especially how social inequality can be displayed so that elites "can define and reinforce architecturally their dominant positions in the social system" (McGuire and

Schiffer, 1983, p. 282). Archaeologically this means investigating the construction styles and techniques of the various dwellings. Are some better built than others, requiring extra labor and building materials, or are all of the houses constructed in the same way and with the same amount of effort (Webster et al., 1997)? This ties into a general discussion of household "wealth," which is discussed below in both the households and community chapters. Household archaeology also includes the spaces around the houses where inhabitants would have carried out their daily activities. By considering visibility and spatial segregation, it is possible to analyze whether the society is characterized by a concern for privacyhiding activities behind enclosing wallsor if it is characterized by communal visibilitywith activities taking place out in the open (*e.g.* Robin, 2002; Ilan, 2011; Gadot, 2011).

Throughout the history of household archaeology, scholars have emphasized that the household is a center of activity; from early studies that defined households "as groups in which there is a high density of activity" (Wilk and Netting, 1984, p. 5), to more recent studies where "the investigation of household activities, their spatial distribution and their changing temporal patterns are appropriate levels of inquiry for the nature of the archaeological record" (Allison, 1999, pp. 5–6). While keeping in mind that the excavated surface assemblage is not a "fossilized" record of a household's activities, and that artifacts can be reused or repurposed before being discarded outside of the house, finding assemblages of artifacts on the surfaces of destroyed houses can help identify in which activities a household engaged (LaMotta and Schiffer, 1999, pp. 20-23; McKee, 1999, pp. 36-38). Activities are identified by studying the spatial distribution of archaeological features, artifacts, and organic material by room and by specific locations within rooms. The artifact assemblages preserved in the houses at 'Umayri are fairly standard for the period, with a full range of cooking, serving, and storage ceramics, lithic and groundstone tools, textile implements, and other small artifacts like seals and figurines. Studying ceramic and groundstone types helps locate and identify storage rooms, kitchens, and general living

spaces (Arie, 2006; Ebeling and Rowan, 2004). Studying lithics, groundstones, seals, and ceramics can shed light on whether each household is producing their own necessities, with evidence for manufacture in each house, or whether there were specialists at work in the settlement for certain items (Rosen, 1997, p. 103; Ebeling and Rowan, 2004, p. 113; Killebrew, 1996). Cultic assemblages, including special ceramic types, foods presented or involved in ritual, figurines, cult stands, and cultic corners, can be used to help reconstruct the domestic practice of ritual (Daviau, 2001; Zevit, 2001; Ackerman, 2003, 2008; Nakhai, 2011; van der Toorn, 2003).

Botanical and faunal materials provide windows on herding and agricultural strategies as well as adaptations made to the local environment (Lev-Tov et al., 2011; LaBianca, 1990). The use of specific species, sexes, or body parts can also lend insight into social differentiation, feasting, and the trade of exotic fauna (Hesse and Rosen, 1988; Lev-Tov and McGeough, 2007; Marom et al., 2009; van Neer et al., 2004). At 'Umayri, the identified faunal remains from the shared refuse pit (over 4,000 specimens) include a wide range of species, but the majority (95%) are from those domesticates expected from an agro-pastoral economy, including sheep, goat, and cattle (Peters et al., 2002, p. 312). The remaining 5% include mostly other domesticates like pig, dog, and donkey, but a small fraction also includes wild game that would have made a small contribution to the diet. The numerous sheep remains at 'Umayri indicate a specialization in wool production, which contrasts with other Iron I sites in the Southern Levant where more equal ratios of sheep to goat show a focus on herd security (Lev-Tov et al., 2011, p. 85)

Sheets studies the artifacts of a settlement to distinguish the production of goods for a household's own use, the production of surplus items for the use of other households in the village, and the acquisition of externally-produced goods (Sheets, 2000). He characterizes these different aspects as examples of "household", "village", and "vertical" economies, respectively (Sheets, 2000, p. 218). These various aspects of economy contribute to people's

sense of identity. Everyone sharing the same economic activities would have unconsciously "fostered a sense of sameness" at the local level, while the acquisition of external material markers would have helped create a membership with an external identity (Yaeger, 2000, pp. 131, 133).

After considering the dwelling and the evidence of activities within and around it, it is appropriate to consider the inhabitants themselves. For example, it is sometimes possible to detect archaeological expressions of gender (Conkey and Gero, 1991, pp. 14-15; Tringham, 1991). Within the Southern Levant, Meyers has made a determined effort to study gender in the Iron Age, taking advantage of ethnographic, historical, and iconographic materials to look at the gendered roles of tasks (Meyers, 2003b,a). The human remains preserved in a house at Megiddo provided an opportunity to test these theories of gender, as the various members of the household fell where they were working when the earthquake hit (Gadot and Yasur-Landau, 2006, p. 591). The human remains of adults and a juvenile trapped in the largest house at 'Umayri likewise provide details about the people at 'Umayri. Studying architectural plans and sizes of the dwellings can help determine the minimum and maximum number of inhabitants each dwelling could have held. Household composition and family types have also been studied using ceramic assemblages, ethnological examples, and textual materials (Schloen, 2001; Stager, 1985; Faust, 2000; Hajnal, 1983; Brody, 2011).

Community Practices

The interactions of individuals in "practices of affiliation" help in "constructing and reinforcing a local community identity while simultaneously highlighting the differences between the members of that community" (Yaeger, 2000, p. 131). Yaeger identified these practices in feasting events and in the construction of the largest houses of the community, which would have required extra labor. At 'Umayri affiliating practices might have

included feasts, maintenance of a special cult area, construction and maintenance of the village's defense system, and construction of houses with shared walls.

To discuss the issue of wealth in the community, there are indications that a house or group of houses was differentiated from the other dwellings in size and construction techniques, and also in the abundance and diversity of material goods and architectural features (Rathje, 1983; Shaw, 1992). Faust has argued for the highland villages in western Palestine that there was a strong egalitarian ethos that is represented by the simple, undiversified assemblages and houses, while Routledge has argued that there is a considerable amount of diversity among house sizes and contents in south-central Jordan, if not also in the rest of the Southern Levant (Faust, 2006; Routledge, 2008). Kramer's rural Iranian village showed a tendency for wealth to be expressed in greater storage space for agricultural surplus, so that wealthier households had more outbuildings or storage room (Kramer, 1979). One of the houses at 'Umayri had a large number of storage pithoi, raising the question of why one household controlled more agricultural goods than others. Is this an expression of individual wealth or communal storage? The same house was also larger and better constructed than the other houses, perhaps a sign of elite investment in visual status (McGuire and Schiffer, 1983, p. 282). Panitz-Cohen argues that in addition to house size and quality the quantity of contents reflects the social status of a household. She estimates wealth by the number, quality, variety, and volume of the ceramic vessels and relates this to the social obligations elites have within their communities (Panitz-Cohen, 2011, p. 96). Feasting has been proposed at 'Umayri, and if it was present, it could have been one of the affiliating practices that actively encouraged community identity, while still reinforcing the status of the hosts (London, 2009, 2011b,a; Yaeger, 2000).

At 'Umayri a cult corner dominates the front room of one of the structures. This is a feature not found in the other dwellings. Was this feature used solely by the inhabitants of that house, or did it play a larger role in the community? Herr suggests that it was a fam-

ily shrine maintained by a patriarch the religious leader of at least two households (Herr, 2009a, p. 196). Jameson argues in a Greek domestic context that there was a local leader in the community responsible for "community cults" that strengthened affiliation with traditional kinship structures (Jameson, 1990, p. 105). In Near Eastern contexts, Nakhai also argues for family shrines connected to the role of a kin group's leader (Nakhai, 2011, p. 352; van der Toorn, 2003).

Another approach to community identity building is through spatial analysis of the structures in the settlement, specifically looking at the spacing between units and how boundaries are demonstrated (Yaeger and Canuto, 2000; Joyce and Hendon, 2000; Yaeger, 2000). Joyce and Hendon suggest models for heterarchy where the community could have organized projects like constructing the village defenses jointly, without hierarchical supervision (Joyce and Hendon, 2000, p. 157). The shared house walls at 'Umayri point to a higher level of social integration. Yaeger pointed out that his case study site, when compared to other sites in the region, had houses that were spaced much closer together, suggesting a "higher level of interaction, both cooperative and contentious" (Yaeger, 2000, p. 130). When compared with other settlements in the Southern Levant, are the shared domestic walls unique or common? Is this architectural expression of closeness a defining practice of communities in this time and region?

Contextualizing Household and Community Practices at the Regional Level

The traditional approach to regional identities in the Southern Levant has focused on the issue of ethnicity. For example, many studies have been devoted to the phenomenon of Israelite ethnic identity. In contrast, this dissertation focuses on a variety of types of regional identity, based on shared social practices.

The Iron I period in Transjordan is an interesting transitional period to consider, caught between the urban Late Bronze period and the nation-states of the Iron II period. Later

in the Iron Age the national identities of the Ammonites and Moabites emerge in the region, but in this earlier period, without any textual information, we do not know how the inhabitants of rural villages like the one at ʻUmayri would have identified themselves. The campaigns of the Egyptian rulers Seti I and Ramesses II crossed the Jordan River, but most acknowledge there was little in Transjordan to capture Egyptian interest in the long term (Hasel, 1998, pp. 124-129; Kitchen, 1964; Warburton, 2001, pp. 61-62; Routledge, 2004, pp. 61-62; McGovern, 1986, p. 340). McGovern's study of the Iron I period in central Transjordan concludes that the area is characterized by a "relative self-sufficiency and independence from foreign domination" (McGovern, 1986, p. 336). This isolation, he argues, led to innovation in ceramic and iron technologies (McGovern, 1986, pp. 336-341; McGovern, 1987). While McGovern draws interesting conclusions about the formation of Iron Age Transjordan in this Iron IA period, most of his evidence is based on a single, large tomb and an iron-working site. Iron I settlements, like the one at ʻUmayri, were only beginning excavations when McGovern wrote in the 1980s. The excavators at ʻUmayri have written several articles on the Iron I period based on the first two houses excavated from the transitional period settlement (Clark, 2001, 2003, 2007; Herr, 1997, 1998, 2000, 2006, 2009a), but these focus mostly on ʻUmayri and not on other sites. Now, nearly thirty years later, the evidence upon which to found a study of Iron I Transjordan is available and ready for analysis.

Identifying affiliation with external identities at ʻUmayri requires the same kinds of evidence that Yaeger proposed, including rare and exotic goods and distinct architectural features. In this study, however, these items do not lead to a regional center of political elites, but might still be able to provide clues into the kinds of external identities available to rural villagers in a fairly isolated region. External trade goods have been found in the settlement at ʻUmayri, including goods from Egypt. Is this material evidence of an attempt to identify with the perceived elite or cosmopolitan Egyptians?

One of the debates on this period in the Southern Levant focuses on the problem of ethnic identities. Many designate four-room houses and collared pithoi as distinctive "Israelite" or "Proto-Israelite" ethnic markers in the central highlands. Faust has taken this identification a step further by interpreting the assemblage including both four-room houses and collared pithoi as the material remains of an "egalitarian ethos" (Faust, 2006). However, at 'Umayri there is an example of a four-room house with collared pithoi that also contains elite objects. There is also diversity in the size and plan of the houses at 'Umayri, as at the later Iron I settlements discussed by Routledge (Routledge, 2008). Likewise, Gadot shows that four settlements along the Yarkon River, a boundary area between Canaanites, Israelites, and Philistines, all have the traditional ethnic markers of pillared houses and collared rim jars. He indicates that factors like written languages and family organization are more indicative of where to draw the line between social identities (Gadot, 2011, p. 180). Ilan relies on household and community practices to explore social identity instead of the traditional ethnic markers.

Similarly, this study considers social identity as a more complex creation of household and community practices, based on patterns in house and settlement construction and in economic activities at villages across the Southern Levant. How does 'Umayri fit into broader creation of social identities in the Early Iron Southern Levant, and in Transjordan in particular? When bringing in the other Iron I settlements for comparison and analysis to 'Umayri, it is possible to discuss the evidence for distinctive regional identities.

2.4 Conclusions

This study significantly contributes to the discussion of social identity in the Early Iron Age Southern Levant in general, and in Transjordan in particular. Inspired by practice-based theoretical approaches, this study starts with the archaeology of individual households and progresses into a discussion of community-building practices and resultant

shared identities. The importance of this study is in its focus on the transitional period between the urbanized Late Bronze Age and the nation-states of the Iron II period. The small, rural settlements in the Southern Levant during this period, such as ʻUmayri, provide a window of opportunity in which to analyze households, communities, and the development of social identity across the region.

CHAPTER 3

STRATUM 12: AN EARLY IRON AGE SETTLEMENT AT TALL AL-'UMAYRI

3.1 Contextualizing 'Umayri's Stratum 12

The case study for this dissertation is Tall al-'Umayri during the Iron I period in the central highlands of Transjordan, specifically a single stratum dating to the transitional period between the Late Bronze and Early Iron Ages around 1200 BCE, also known as the Iron IA. The site of 'Umayri is located on the edge of the Madaba Plains just outside of Amman, the modern capital of the Hashemite Kingdom of Jordan (Fig. 3.1). The Iron IA settlement at 'Umayri is located on the western edge of the tell, where several seasons of work have revealed five domestic structures in a row against the settlement's fortifications a wall and a rampart rebuilt from the Middle Bronze Age and a shared refuse pit. The dwellings were well preserved under a thick destruction layer, leaving *in situ* storage jars, a full range of restorable ceramics for food preparation and consumption, stone grinding installations, textiles and other small artifacts, a cultic corner and ritual assemblage, and the remains of several humans crushed in the collapse of one of the houses. The excavations and subsequent studies of this stratum have been undertaken by the Madaba Plains Project.

For a number of reasons, 'Umayri is an ideal site for considering the dimensions of social identity. As already stated, the well-preserved and well-excavated condition of the dwellings allows for detailed spatial analysis of the rooms and their contents. The houses and public features, like the refuse pit and defenses, provide a portion of a village to explore as the products of community effort. Also important is the fact that little household research from the Iron Age has been performed in the territory of ancient Transjordan, though several households west of the Jordan River have been studied and published

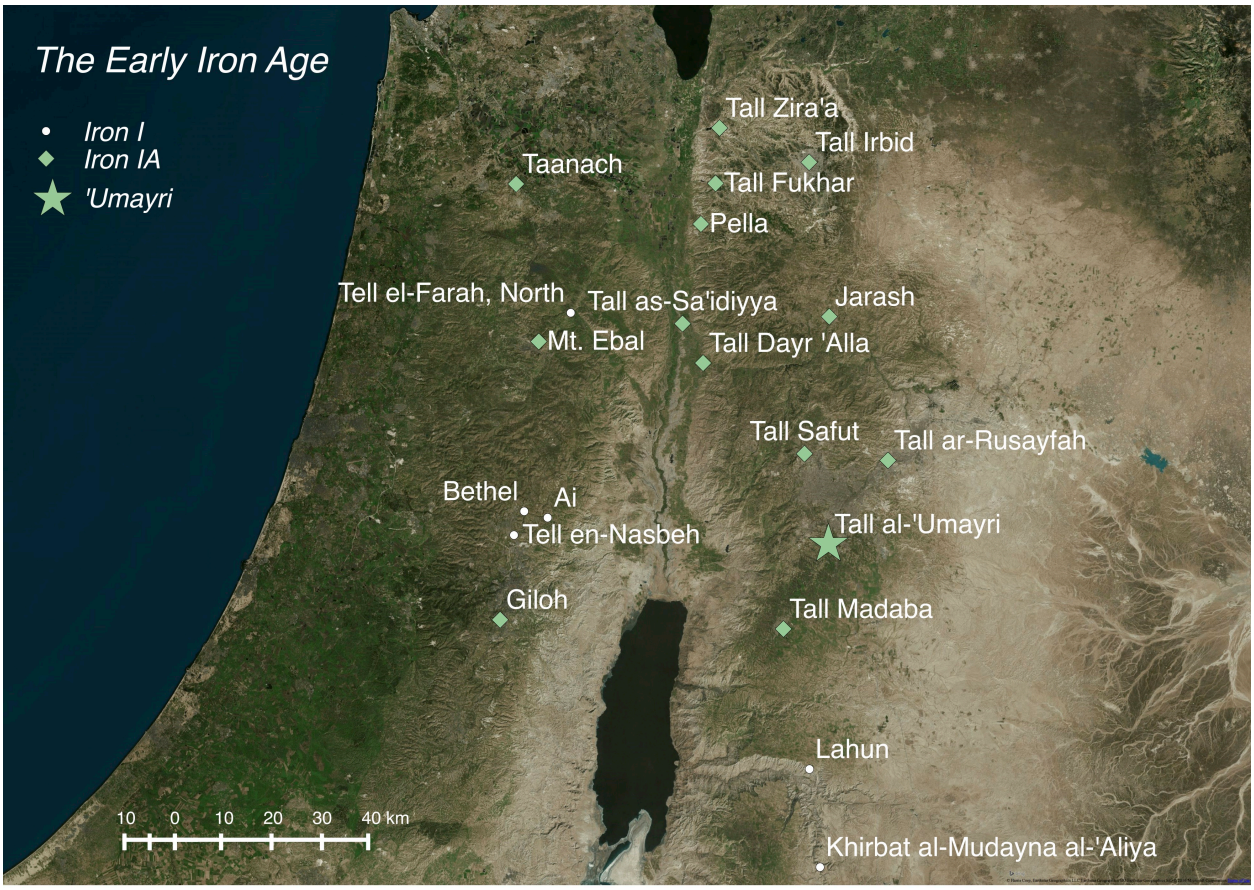

Figure 3.1: The Early Iron Age Southern Levant, including sites mentioned in text

(Yasur-Landau et al., 2011). Porter's study of an Iron Age village at Khirbat al-Mudayna al-'Alia is the only other study of this kind in Jordan, using both a household and community archaeology approach (Porter, 2013). More comparative data and analysis from east of the Jordan River furthers the study of households in the Southern Levant and the patterns of social development in the Iron Age in different regions. Routledge recently demonstrated the importance of analyzing such comparative data in a discussion of how material from Transjordan impacts our understanding of the Late Iron I period, which had traditionally been based on studies in Cisjordan (Routledge, 2008, pp. 172–173). The settlement at 'Umayri contributes significantly to understanding the social and economic diversities and similarities of households and communities across this wider geographical region during the formative early Iron I period.

This chapter briefly describes the history of excavations of 'Umayri's Iron IA settlement, including excavation methodology. It then introduces some of the problems and solutions that have arisen in trying to use the excavated data for a household archaeology approach. After covering this background material, it then places the settlement in its broader site context at 'Umayri, including locational and stratigraphic context. The main body of this chapter provides a detailed description of the settlement's features and buildings. The final section of this chapter discusses the taphonomic processes that have helped shape the excavated assemblages of the settlement.

3.2 MPP's Excavation of 'Umayri's Stratum 12

The Madaba Plains Project (MPP), under directors Larry Herr, Douglas Clark, and Kent Bramlett, has excavated at Tall al-'Umayri since 1984, after initial surveys in the late 1970s indicated it was a site rich in Bronze and Iron Age remains.[1] Excavations on the acropolis of the tell began in Fields B (northwestern corner and western slope) and A

1. For a recent summary of the project's excavations, see Herr and Clark 2009.

(western edge), and from the beginning, Early Iron Age remains were found in Field B. A thick and colorful destruction layer soon became the identifying feature of Stratum 12,[2] the Iron IA transitional period settlement. Remains of this settlement were excavated in Field B from 1984 to 2002, and briefly again in 2008. In Field A, a Late Iron Age/Persian period administrative center occupied the first seasons of work, and it was not until 1994 that the telltale destruction layer was first encountered. In 1996 stratigraphic connections were made with Field B's Stratum 12 and excavations continued through 2000. Starting again in 2008, the Stratum 12 features have been the main focus of excavations in Field A. Cumulatively, then, Stratum 12 has been excavated for twelve seasons at 'Umayri in either Fields B or A from 1984 to 2012, with the distinctive destruction layer tentatively identified elsewhere on the tell in Fields C (northern slope), E (base of northern slope), F (eastern acropolis), and H (southern acropolis). Future plans to continue excavation of Stratum 12 (and the majority of the archaeological site) were put on hold at the end of the 2012 season and currently depend on the ability of the Department of Antiquities of Jordan to obtain permanent access to privately owned land.[3]

3.2.1 Methodology

MPP-'Umayri's methods of excavation have remained essentially the same over all seasons of work, with strong continuity maintained under the archaeological supervision of Larry Herr from 1984 to 2008, and carried on by Kent Bramlett from 2010 to the present. A full description of excavation methods employed can be found in the *Excavation Manual* (Herr and Christopherson, 1998). The MPP excavates on a grid system in 6 m by 6 m

2. "Stratum 12" is the current site-wide designation for the main phase of the LB/Iron I transitional period at 'Umayri. This stratum is known by different "Field Phases", varying by field and season, in the published reports. See Table 3.1 for a current list of strata at 'Umayri, courtesy of Larry Herr and the Madaba Plains Project (MPP).

3. For a recent summary of these issues, see http://asorblog.org/?p=6461, which contains a report by director Douglas Clark presented at the ASOR 2013 meetings.

squares, leaving 1 m balks between squares. Each of these squares was individually supervised and was under the overall supervision of a field supervisor.[4] Each square was divided into distinguishable earth layers, architectural units, or installation features *loci* which were further broken down into recorded "pails." All excavated material was dry-sieved with a fine wire mesh for ceramic, faunal, lithic, and artifact remains. Wet-sieve/flotation samples were collected upon the judgment of the field supervisor in cases of hearths and other high-ash concentration areas, with intent to collect carbonized botanical remains. Ceramic material is "read" on a daily basis during the excavation season, recording for each "pail" the diagnostic and total sherd counts and the diagnostic types ("Iron I Jar") for the database. Representative diagnostic examples are then selected for publication. All diagnostic and publication sherds are retained, while non-diagnostic sherds are discarded back at the site, with the exception of mendable sherds. Faunal, botanical, and lithic material is analyzed by specialists on-site (faunal) or in their labs (botanical, lithic). Artifacts are cleaned and recorded by non-specialists on-site and then selectively shipped back to a sponsoring institution in North America, where some materials are studied by specialists.

Daily photographs of excavation progress, daily summaries written by square supervisors, and plans of each locus supplement the standardized locus records. All of the collected excavation data is openly available through an online database (http://umayri.opendig.org/).[5] The field supervisors submit their interpretative reports at the end of each season and these are found: 1) in summarized preliminary report articles in the Annual of the Department of Antiquities of Jordan and Andrews University Seminary

4. Field B has been supervised by Douglas Clark and Kent Bramlett; Field A has been supervised by John Lawlor, Robert Bates, and Stephanie Brown. I have not taken part in the excavation of Stratum 12 except its tentative identification in Field H. I have been part of excavations at 'Umayri since 2004 and have taken an active interest in the excavations of Stratum 12 in Field A since 2008. Excavation team lists are published in each season's preliminary and final reports.

5. At the moment this includes excavation photos and information from the standardized locus forms. The square and locus plans are currently being prepared for online distribution. Artifact records are also in the online database.

Studies following each season of excavation, and 2) as chapters in the final publication series, Madaba Plains Project (currently published through the 1996/98 seasons).

3.2.2 Problems and Solutions in the Dataset

A household archaeology approach ideally requires tightly controlled excavation, the systematic use of surface sampling for micro-artifacts, and accurately recorded provenience for macro-artifacts. While 'Umayri has been well excavated for the scale and resources of the project, with generally excellent stratigraphic control, a household archaeology approach has not been part of the research design of the project. This section presents the main problems encountered and the solutions devised in using "legacy" excavation data for this dissertation.

Space function and behavioral analysis relies heavily on studying the distribution of micro- and macro-artifacts. There has been no systematic collection of micro-artifacts from surfaces at 'Umayri, and it is left to the macro-artifacts and permanent features to relay the story of how the various rooms and spaces were used. Even with the macro-artifacts, the quality of information collected on artifacts and their distribution varies by season and square supervisor. During the early seasons, only a small handful of excavated groundstone artifacts were registered with detailed descriptions; the rest were collected on-site and noted in the locus record by the square supervisor (Platt, 2000, p. 204). Spindle whorls and ceramic disks were only registered during the 1984 and 1987 seasons; from 1989 to 2000 they were not registered but instead collected as unregistered samples. From 2002 on, however, all artifacts, including groundstone and ceramic artifacts, were collected, registered, photographed, and retained. To include non-registered artifacts from the early seasons in this analysis, copies of the original, handwritten locus sheets, top plans, and inventories of the artifact storage center (which includes samples) were consulted. While this fills in gaps, it is likely that some artifacts are still unaccounted for, and there are many

artifacts whose original find spots are impossible to determine more precisely than by locus. Because of this problem with artifact provenience, most spaces are analyzed for activities at the architecturally-identifiable room level instead of more tightly into specific areas of rooms.

Household archaeology also relies on the distribution of mendable ceramic vessels for information on household activities and even household composition (Panitz-Cohen, 2011). It should be noted that it is difficult to quantify a minimum number of pottery vessels based on the collected information described above. Even determining mendable vessel quantity and provenience is uncertain, as pottery vessels are not assigned a registration number until after they are selected for publication. Therefore, linking vessels marked on top plans with vessels back in the lab can be fraught with error. As Hardin has noted for his case study, pottery sherds can be introduced from construction materials and many other non-use contexts into the excavated assemblage, outnumbering the restorable ceramics (he noted that restorable vessels formed 29% of the sherds, though 65% of the weight, of the total ceramic assemblage) (Hardin, 2010, pp. 102, 105–106, 120). Hardin's study is particularly useful in understanding the ceramic assemblage, as he set out to investigate a single house with a clear household archaeology research design. Taking pains to save all ceramic material for refitting efforts, he could then distinguish between the number of sherds that were part of the original use assemblage, and those that were intrusive. An encouraging note from his study is that of the sherds found on surface assemblages, only 7.59% were not part of the restorable assemblage (Hardin, 2010, p. 120). Sherds were not saved at 'Umayri unless they were clearly part of a restorable vessel. This has given obvious advantage to the large pithos sherds, which were almost always saved and have been reconstructed to the point where there is a clear idea of how many pithoi were found in the houses. Fewer smaller vessels have been reconstructed, however, and vessels from upper floors that were smashed and scattered in the destruction might have been lost. The

data utilized here includes overall pottery type counts from the publications, which represent a non-random selection of pieces, and the database, which includes all diagnostic sherds as identified in the field. However, the two do not always agree, as some pieces are better identified when studied for publication, and many diagnostic sherds are not published. As not all of the mendable vessels are published, this study relies on the records from the reconstruction labs as well as the publication plates for identifying whole vessels. While the overall sherd patterns from the publications and the database are mentioned, only relatively whole vessels will be considered in artifact distribution analysis.

In short, this is not an ideal record from which to tackle the usual fine-resolution approach to households and their activities as "living spaces." However, this study relies on careful evaluation of the original excavation documents, summaries, and memories to create as complete a list as possible of artifacts and whole vessels and their locations. With these adjustments, the dataset can still be quite informative for the purposes of this dissertation.

3.3 The Context of Stratum 12

Stratum 12, as excavated thus far, consists of five structures occupying parts of 22 squares in Fields B and A. Stratigraphically, this stratum is preceded by an earlier, ephemeral Late Bronze/Early Iron I phase, Stratum 13, whose existence is based on debris found in repairs to the walls and rampart of Stratum 12. Just north of the northernmost Stratum 12 building a monumental public building from Stratum 14 (The Late Bronze Age II) was excavated. Presumably, more Late Bronze Age buildings hide below the structures of Stratum 12.[6]

6. This is conjectured by Kent Bramlett (personal communication), who excavated the Late Bronze Age building north of the settlement. The upper parts of the well-preserved walls of the monumental building were reused in the later Iron Age, and it is possible that similarly visible walls may have guided the Stratum 12 builders. This might have caused the slightly trapezoidal shape seen in Buildings B, C, and D. Only one probe, designed to investigate the structure of the perimeter wall, has been excavated

Following the destruction of Stratum 12 is Stratum 11 later Iron IA period which did not reuse any Stratum 12 buildings but started construction anew. In the Stratum 12 area later Iron Age to Roman period inhabitants dug into the destruction debris, especially in the easternmost parts of the buildings in Field A. The thick destruction layer was never penetrated to surface level except in the easternmost parts of the buildings, possibly their courtyards, where much evidence from Stratum 12 was obliterated. The main problem caused by later activity is pits and fill layers disturbing the upper layers of destruction debris. A Roman "trench pit" and pool complex were located above Building B, while a Late Iron II/Persian period administrative complex disturbed and created fill layers over the buildings in Field A. These pits and fills contained some material that most likely came from the upper debris of Stratum 12. Stone vessel fragments that fit together were found in both secure destruction debris and in the topsoil or disturbed later layers of Building B (#B945073, see Table 6.2). Similar stamped jar handles were found in secure loci as well as fill layers over several of the buildings. While material from insecure contexts like this cannot be included in the main analysis, some of it is brought in where it contributes to the discussion of similar artifacts, particularly in the discussion in Chapter 6 (see Table 6.2).

3.4 The Stratigraphy of Stratum 12

Stratum 12 does not have significant architectural sub-phasing to indicate long-term organic changes by the inhabitants. In some of the buildings, such as Buildings B and C, two phases of plaster or stone surfacing were detected, and in Building B the southern entrance was blocked up at one point. In 2012 excavation in Buildings D and E indicated the possibility of an earlier phase that could coincide with the material assigned to Stratum 13. The evidence in Building D consists of an upper surface with several small dividing

below the walls of Stratum 12.

walls, all assigned to Stratum 12. Excavation below this surface in the northeastern corner of the building indicated an earlier surface with signs of damage. The damage consisted of a hole found "repaired" with fill material (Fig. 3.2) and nearby wall stones with cracks (visible to the north of the hole in Fig. 3.2). The excavators compared this damage to a crack in the rampart attributed to an earthquake that separates Stratum 13 from Stratum 12 (Brown, ressa; Clark, 2014, p. 99; Herr, 1998, pp. 253-254; Clark, 2000, p. 66). The resulting suggestion is that an earthquake ended the Stratum 13 settlement, damaging the western portions of the houses and the rampart. The inhabitants then repaired the damage, including possible rebuilding, and embarked on the occupational phase attributed to Stratum 12. However, this evidence is tentative and debatable for an actual earlier stratum inside the settlement involving the known buildings. It is possible that the two phases in Building D are merely subphases like those found in the other buildings. This dissertation focuses on material from the latest phase of Stratum 12, with references to earlier phasing where necessary.

Figure 3.2: Building D (earthquake) damage. Source: MPP

The perimeter wall of the settlement has also been a matter for debate (Fig. 3.3). Larry Herr originally suggested that the wall could possibly have been built in Stratum 13, but that it was most likely built in Stratum 12 (Herr, 2000, pp. 170–171). The excavation

of a probe against the inside face of the perimeter wall established that the wall is set on a rocky layer laid directly on top of the Middle Bronze Age rampart (Fig. 3.4) (Clark, 2002, p. 57). On the inside of this wall and on top of this rocky layer, three earthen fill layers provide the foundation for the surface in Stratum 12 Building A. This rocky foundation layer and the three fill layers were attributed to the Stratum 12 inhabitants in their preparations for building the perimeter wall and the walls of their houses (Clark, 2002, p. 57). However, only the fill layer immediately below the Building A surface contained pottery, of only Middle and Early Bronze Age sherds. The lower fill layers contained no pottery at all. The argument that the wall was constructed by the inhabitants of Stratum 12 was based on how the Stratum 12 rampart earth layers on the outside of the perimeter wall matched the courses of the perimeter wall, therefore, they must have been built at the same time (Clark, 1991, p. 57). However, recent excavations against the perimeter wall further south and north have called this conclusion into question.

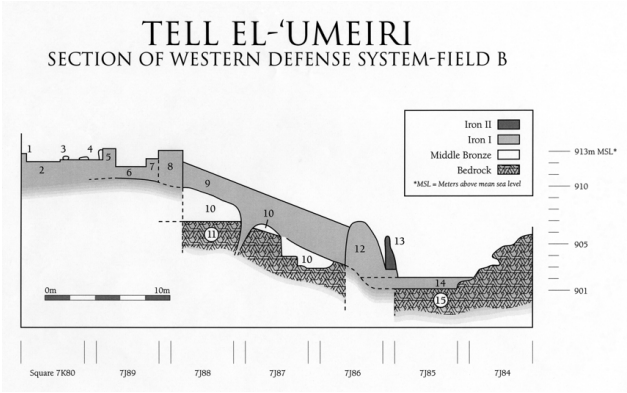

Figure 3.3: Defensive System. Those features attributed to Stratum 12 (re)construction are here marked as Iron I. Selected key: 12) retaining wall; 9) earthen rampart; 8) large, stone perimeter wall. Source: MPP

In Field H, a probe against the exterior of the southern extension of this perimeter wall has been excavated to a great depth, with pre-Iron I earth layers sealing against it, indicating its pre-Stratum 12 origins (Vincent, ressa). To the north of Building B, the perimeter wall continues north and then turns east, enclosing the monumental Late Bronze

Figure 3.4: Probe against the inside of the Perimeter Wall in Building A. Note small rocky layer (behind lower part of meter stick) atop the smooth MB earthen rampart layer (below arrow). The three identified fill layers are marked by the paper locus markers on the right. Source: MPP

Age building in the northwest corner of the acropolis. After excavations in 2002, this northwestern portion of the wall was called a "Crest Wall" to distinguish it from the Stratum 12 perimeter wall, and its construction was dated to either the Middle or Late Bronze Age. (Bramlett and Clark, ress, FP13); (Bramlett, ress, FP14). Directly north of Building B, a Late Bronze Age plastered pool sealing against the inside of the perimeter wall is detectable continuing under Building B (Bramlett and Clark, ress, FP13). The possibility, therefore, is great that there was already an extant perimeter wall that the Stratum 12 inhabitants rebuilt or reused for their purposes. The evidence for a Stratum 12 wall construction in this area results from limited probing. If an earthquake damaged the settlement in Stratum 13, it may have necessitated the visible rebuilding. Only further probes along the wall can reveal its full history of construction and use. It seems clear now that there was a perimeter wall already in evidence on the western side of the tell before the Early Iron Age. Fortunately, whether the inhabitants of this stratum rebuilt the wall in places or undertook renovations on pre-existing remains, they displayed considerable concern for renewing the defensive system, which is still useful in analyzing community organization and efforts.

3.5 Description of the Stratum 12 Features

Stratum 12 consists of several features and structures including: a fortification system located along the western edge of the settlement; a large refuse pit located northeast of the excavated domestic structures; and five buildings interpreted as domestic structures.[7] (Fig. 3.5) Beginning with the settlement-wide features and then focusing on each domestic structure, the following entails a detailed description of each, including main architectural

7. The five domestic structures have been designated with letters in order of discovery, starting with "A." There is some confusion in the published reports over the designation of the buildings here called Buildings C and F. Building C was first called Building E in the 2008 report, then Building C in the 2010 and following reports. Building E was first called Building F in the 2008 report, and then Building E in the 2012 report. This research uses the current designations.

features and, where appropriate, a mention of significant finds. The following description is based primarily on the published excavation reports appearing in the Madaba Plains Project series (Geraty et al., 1989; Herr et al., 1991, 1997, 2000, 2002, 2014), unpublished reports, the excavation records database (umayri.opendig.org), original field paperwork and imagery (plans, supervisor summaries, annotated daily photographs), and the memory of the directors.

3.5.1 Fortification System

The fortification system of Stratum 12 includes a large stone perimeter wall, an earthen rampart with stone retaining walls, and a "moat," (Clark, 1991, pp. 57-58; Clark, 1997, pp. 62-85; Clark, 2000, pp. 66-74; Clark, 2002, pp. 54-56; Bramlett and Clark, ress, FP14). These features are founded on a Middle Bronze Age (MB) system, with the Stratum 12 inhabitants partially digging out the old MB moat and rebuilding the rampart with new supportive retaining walls (Fig. 3.3). For a discussion of the origins of the perimeter wall, see above.

The excavated portion of the perimeter wall forms the western wall of Buildings B, A, C, and D, and the southern wall of Building E where the wall curves to the east (B7J99:002 = B7J89:022 = B7J88:006; Note: A7J78:003, 7J68:002, 7J59:003, 7K50:007, and 7K30:007[8] are all later rebuilds on top of the earlier perimeter wall, which has not always been separately identified with a locus number for the earlier phases of the wall). This wall provided a pre-defined space for construction inside its curve, a limitation that is clear in the non-uniform plans of the buildings tucked against it. The continuation of the wall further east at this point is unclear, but it appears to make a sharp turn to the south and continue in a straight line along the western edge of the tell to where it is preserved in Field H. It is also possible that it continues east to enclose the northern half of

8. The reference numbers of specific loci and features mentioned can be broken down as: B(Field)7J99(Square):005(Locus Number), and can be found referenced this way in all MPP publications.

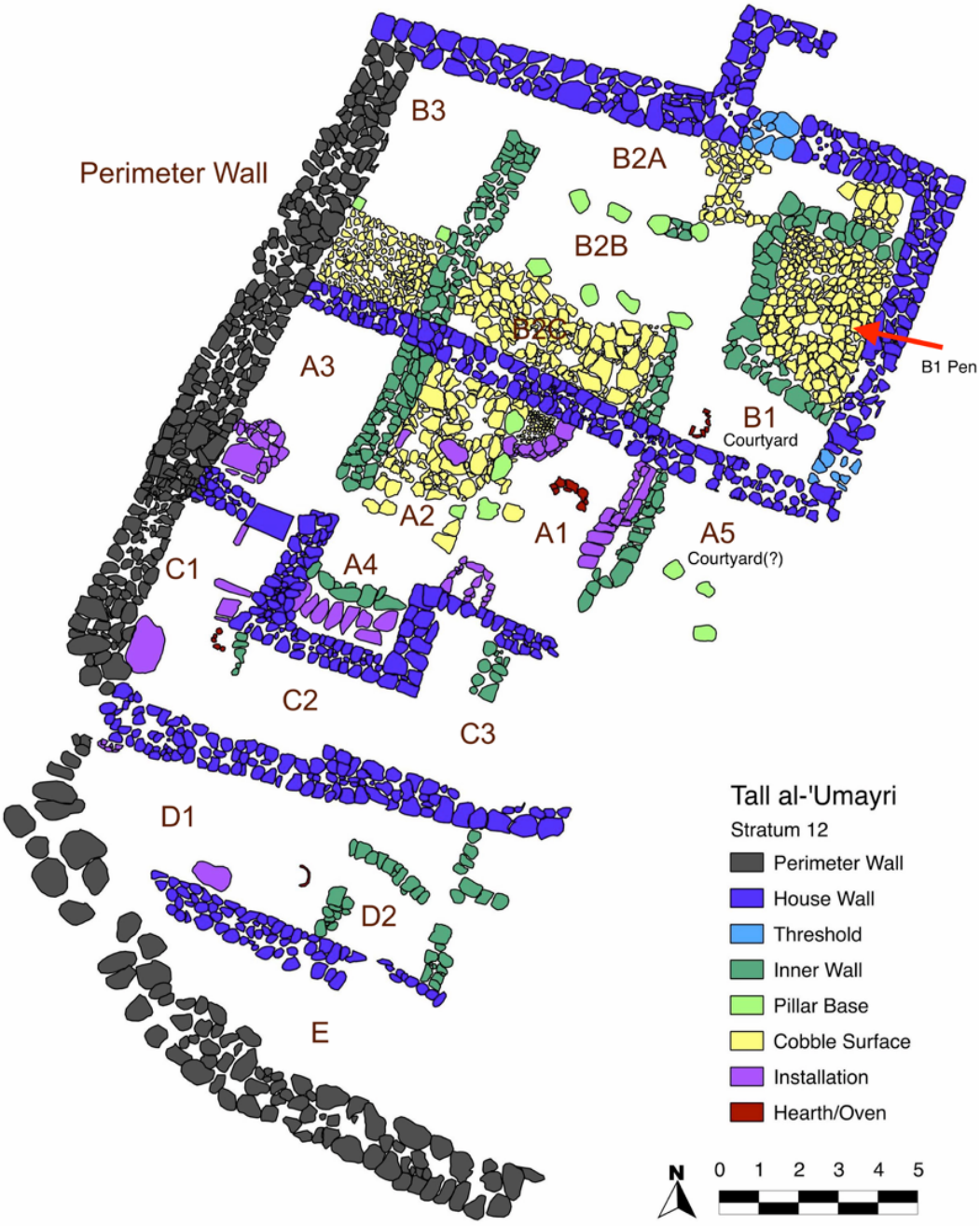

Figure 3.5: Stratum 12 Plan

the citadel, with the wall that continues south enclosing the southern half separately. Its greatest excavated in-phase height as recorded in association with the the Stratum 12 domestic buildings is 2.5 m (B7J89:022). A gate was proposed in the area south of the curve, but excavation in this area did not reveal any openings in the wall (Bates, ress). Unless later occupational activity eliminated the evidence for a gate here, entry was not gained on the western side of the settlement. The western side of the tell was apparently particularly vulnerable to whatever threats the inhabitants perceived, and was thus thoroughly shored up with defensive measures. It is not known at this point if the same wall and rampart system was maintained around the rest of the settlement, though excavations have found Stratum 12 rampart additions to the north (Bramlett, ress), and possibly to the south (Vincent, ressb). The perimeter wall continues north and then turns east, enclosing the ruins of a Late Bronze Age monumental building. Some earth layers and ephemeral walls belonging to Stratum 12 have been identified over the ruins of this building, but no structures (Clark, 2014, pp. 102–111).

Any artifacts found in the defense system (and there were several) would have been tertiary deposits, dug up from earlier refuse or habitations as part of the earth fill used on the slope of the rampart. With an intentional yellow clay layer used to seal in the surface of the rampart, it is unlikely that artifacts found inside the rampart represent garbage thrown over the wall from the Stratum 12 settlement. These artifacts and pottery will not be taken into account as representative of Stratum 12 activities.

3.5.2 Refuse Pit

To the northeast of Building B, 1.5 m away, the Stratum 12 inhabitants dug a deep pit between earlier Bronze Age walls, and then filled it with their refuse (Clark, 2014; Clark and Bramlett, ress; Bramlett and Clark, ress). Working between the walls, they dug down to a hard earlier surface and possibly built some small walls to shore up the older ones. The

entire depth of the filled pit measured 1 to 2 m, the length and width varied to a maximum of 8.5 m long and 3.7 m wide in a roughly rectangular shape (the northeastern part of the pit is not yet excavated). Excavators noted that there were no clear distinctions between the earth layers they excavated (B7K92:014, 19, 26, 30; B8K02:031), but that they could distinguish minor layering throughout, interlaced with large ash deposits (Fig. 3.6) (Clark, 2014). The deposit slopes from west to east, as one would expect for rubbish originating from the houses to the west. When the northern half of the pit was excavated, "tip lines" were described (Bramlett and Clark, ress). Judging by the pottery found in the pit, the ceramic repertoire fits well with that found in the houses. The inhabitants could have easily walked out of their houses, stepped over to the edge of the pit and thrown in their rubbish. The pit contained an enormous mass of animal bones that provide important insight into the subsistence patterns of the inhabitants of Stratum 12 (Peters et al., 2002). Other material in the refuse pit included broken pottery and nearly 100 artifacts, including food preparation items as well as seals and jewelry. This refuse is likely the result of both occasional disposal, as well as large, one-time events (as further discussed in Chapter 5).

3.5.3 Building B

Building B is the northernmost and largest of the series of domestic structures lining the western perimeter wall (Fig. 3.7). It measures 84 m^2 of interior space on the ground floor.[9] To the north of this house was an open area filled with the ruins of the Late Bronze Age temple from a preceding stratum. Building B is the only complete structure excavated, with all four exterior walls intact and encompassing the domestic structure and a courtyard. An entrance in the north wall faces the Late Bronze Age ruins and is protected by

9. The areas inside the buildings were determined without including the walls, providing a measurement that reflects actual use space. For a complete list of measurements by room and by building, see Appendix 2.

Figure 3.6: A section of the refuse pit excavations in progress in Square 8K02 in 2002. Source: MPP

an "L" shaped screen wall. An entrance in the eastern wall existed for the first part of the building's use, and then was blocked up. Building B was constructed in the typical four-room house plan, with a broad room against the perimeter wall and three adjoining long rooms divided by stone pillar bases (for the discussion of the construction methods and feature functions for these houses, see Chapter 4). The courtyard forms the eastern third of the house and contained a small, walled pen. The excavators discovered no evidence for a wall dividing the long rooms from the courtyard and instead suggested that textiles were used to block the ground floor from an easterly breeze if the courtyard was open.

None of the five structures had any evidence for a staircase. Access to upper stories and roofs would have necessitated the use of a ladder, easily constructed with available wood. Unfortunately, the evidence for second floors is unclear at this point. In Kramer's study of houses in "Aliabad" she found that mudbrick buildings with second stories generally had walls of about one-meter width at the base (Kramer, 1982, p. 99). All of the buildings

Figure 3.7: Building B, looking from the eastern edge of the courtyard (B1) back toward the broadroom (B3). Note the large basalt stone in the center of the image, which was found upside down above the surface. Source: MPP

at ‘Umayri had stone walls about one meter wide at the ground level, and could probably have supported multiple stories. In Buildings B and A, the stone courses are preserved to a higher level, which has further reinforced the idea of second floor living spaces, despite a lack of detailed stratigraphic evidence (due to excavation procedures). The lower preservation of stone walls in Buildings C, D, and E is more likely an indication of reliance on mud brick over stone during construction than the presence or absence of upper floors. Only in the more recent excavations of Building D has careful study revealed only a single layer of roofing material, indicating that in this building, at least, there was only one story (see more below).

Buildings B and A have been described and interpreted in several articles by Douglas Clark and Larry Herr (Clark, 1996, 2001, 2003, 2007; Herr, 1992, 1998, 1999, 2006, 2009a).

Room B3

Room B3 is the broadroom at the back of Building B, a rectangular room measuring 6 m by 2.8 m (Fig. 3.5). A large, 0.8 m wide stone wall (B7J99:005) separates Room B3 from the rest of the house, with a 1 m wide entrance providing access from Room B2A at the northern end. A well-made flagstone pavement (B7J99:008) covers 2 m of the southern length of B3, lining up with the cobble surface in Room B2C. In Room B3, the border of the stone surface with the beaten-earth surface (no locus designation) in the rest of the room is marked by two “pillar bases” (B7J99:009, 10). This stone surface may have served to keep stored goods raised above the earth, or perhaps had another, unknown function originally associated with a different use of this room. In this final phase, the room served as a storage space, denoted by the finds mentioned below.

The perimeter wall (B7J99:002) forms the western wall of the room. The southern wall of B3 (B7J99:006) is also the northern wall of Building A’s broad room, A3. All three

walls were preserved to varying , heights between 1 and 2 m, further supporting an argument that there was a second floor above these rooms, in addition to a roof (the buildings' walls were all wide enough to support second floors, see discussion in Chapter 4) (Clark, 2014, p. 110). The entire room was filled with collapsed debris (B7J99:003) and the remains of an extensive collection of collared pithoi (32 collared pithoi have been reconstructed to at least 75%, 42 to 50%, and 52 with only bases or bases with lower body sherds; other reconstructed ceramics from this room include 5 jars, 1 funnel, and 1 bowl). The excavators reported that the pithoi were found in two main layers, one on the surface and one above, suggesting storage on both the ground floor and on the corresponding upper floor (Clark, 2014, p. 105). A limestone "roof roller" was found standing on end in the debris above the surface of the room. The remains of four human individuals, four bronze spear points, and one bronze lance point were also found mixed in the debris excavated in this room.

The entire contents of this room were excavated from below the topsoil layer as one locus, over a meter in depth in some areas. An alabaster stone vessel found in the destruction debris mended with pieces found in the topsoil (B7J99:001), indicating some disturbance or erosion of the upper layers of destruction debris in this room. The nearly 300 pails of pottery excavated from this room contained predominantly Early Iron I pottery, with only a few later sherds in the first pails. The section drawings do not contribute to a better understanding of the stratigraphy of this room, precluding a discussion of evidence for a second floor or roofing material. Recording procedures in the other houses has allowed for such identification and will be discussed in those instances.

From the daily excavation plans, which record the finds at various depths in this single stratigraphic unit, it is possible to discuss the general distribution of the finds in the room. Some of the human remains were found in the uppermost layers with one weapon; others were found on the surface of B3 with the remaining three weapons. The human remains

were not articulated, but shattered and spread out as a result of the heavy burning and collapse of the house. Forty vessels are plotted above the surface of the room, including 39 "jars" (pithoi) and 1 "jug" (unpublished top plan, July 26, 1994). These vessels covered every square meter of the surfaces of the room, with the greatest concentration in the southern half of the room. About 20 of these were actually *in situ* on the surface of the room next to the walls, while the rest were tumbled from above (Clark, 2002, p. 97). Clearly, in the latest use phase of this room concern for storage predominated. The human remains have been interpreted as representing the defenders of the city in the collapse of the house before they could escape, falling with their weapons (Clark, 2002, p. 99). Two of the humans were initially identified as adults (one as a male); the other two were identified as a juvenile aged approximately 15 years old and the other as a child (Chase, 2002, p. 220) (though see the discussion in Chapter 4 on The Household for research currently underway).

Besides the objects concerned with storage and with defense, there was a surprising variety of other artifacts found in the destruction layer in Room B3. Their exact find locations in the room, either vertically or horizontally, are uncertain. The items may have come from the ground or upper floors, and only a general idea of the use of this space can be gained. These artifacts include four grinding stones, a basalt bowl, a loom weight, an alabaster vessel, two jar stoppers, and a fifth bronze spear point. These items are typically associated with food preparation, serving, and textile weaving, respectively, and could have been in active use in the back rooms of the house, or were waiting in storage for use elsewhere (See Appendix 2 for a detailed catalogue of the artifacts found in all of the houses and rooms).

Room B2A

Room B2A is the northernmost of three long rooms in the center of Building B (Fig. 3.5). It measures 4.5 m by 2 m and is accessed without obstruction from the courtyard, B1, and is only obstructed from room B2B by a series of four pillars (B7K90:022, 23, 24, and 28) and one low connecting wall (B7K90:026). Room B2A is the only room that provides access to the back room, B3, through an opening between walls in the northwest corner. The eastern portion of this room, next to the courtyard, was paved with stones (B7K91:024); the remainder of the room had a beaten-earth surface.

The only artifact recorded on the beaten-earth surface of this room (B7K90:021) was a chert pounder. The rest of the artifacts were found in the tumble of the debris that covered both rooms B2A and B2B. These artifacts included a mortar, another pounder, two hand grinders, a pestle, a piece of metal, and a ceramic handled bowl. Rooms B2A and B2B were filled with two debris layers (B7K90:005 and 19) and an ashy layer of surface buildup (B7K90:020, 25) above the surface.

Without any clear artifact deposits or installations it is difficult to determine the exact function of this room. From the artifacts found throughout the tumble it would appear that food preparation was taking place on the upper, and possibly lower, floors.

Room B2B

Room B2B is the central long room, measuring 4.8 m by 1.7 m (Fig. 3.5). It was accessed by rooms B2A and B2C between a series of pillar bases and opened directly onto the courtyard, B1. This room had an earthen floor. All of this room and its contents were excavated as one space with Room B2A; see Room B2A for a description of the combined contents.

Room B2C

Room B2C is the southernmost long room, measuring 5.2 m by 2.2 m (Fig. 3.5). The largest of the three long rooms, it was also the best defined spatially. Room B2C was accessible from B2B between three pillar bases (B7K80:077, 78, and 79) but was otherwise sealed off by walls from Rooms B3 and B1. The surface of this entire room was paved in stones. In places, the stone paving had two layers, which are possible evidence for two phases (B7K80:074, 75, and 76).

The artifacts found in this room came from the mudbrick debris (B7K80:037, 58), including a pounder, hand grinder, hand stone, a finely made basalt bowl, two lamps, and four pieces of possible metal. Mendable pithos sherds from at least two pithoi and two jugs were found tumbled in this area (Clark, 2002, pp. 96–97).

The artifacts and ceramics indicate yet more food preparation activity, but also a general use area, possibly on the upper floor. A clue to the use of the ground floor long room is the paving of the entire surface in stone, unlike the other two long rooms. As Stager and others have pointed out, this use of smooth stone floors in a side room of the ground floor provides easy clean up after animals, and is one factor to consider in declaring an area as a stable (Stager, 1985, pp. 12–14). The open nature of these three rooms to the courtyard to the east, despite the low wall separating B2C from the courtyard, could have helped provide air circulation if animals were kept in this room. A pen in Courtyard B1 may have supplemented this need for stabling space, especially for smaller livestock such as sheep and goats.

Room B1

The easternmost room of Building B has been interpreted as an open courtyard, providing access to the street via two entrances with stone thresholds, one in the north and one in the southeast (Fig. 3.5). Room B1 measures 7.3 m by 4.2 m, the largest area of the house.

The excavators interpreted a certain amount of complex phasing involving the southeastern entrance. From varying street levels outside of this entrance and the later introduction of material blocking this entrance, it was determined that an initial phase of the courtyard left it open to the east, without an eastern boundary wall. Shortly thereafter, the eastern wall was constructed, enclosing the courtyard, with an entrance left open in the south of this new wall. Finally, the street level rising outside of this wall, the southeast entrance was blocked and went out of use (Clark and Bramlett, ress, FP11).

The central feature of the courtyard is a large walled pen paved with stones. The pen takes up just over half of this area, measuring 5 m by 3.2 m. The pen was built against the eastern wall of the building, leaving narrow corridors of space around it on the other three sides. Due to the low walls, used for stabling, the pen was interpreted as a paved "enclosure" (Clark, 2014, p. 110). That additional stabling space would have been necessary if B2C also served as a stable is curious. Extra space may have been required by a larger household herd (see Chapter 5 for more on herding practices). The lack of artifacts on the surface of B2C, and B1's pen, does fit with their interpretation as stabling spaces, contrary to the wealth of artifacts found on the paved surface of B3.

The rest of the courtyard had a beaten-earth surface (B7K81:033, 37), with stones in the north (B7K91:026, 24, 25; B7K81:043 was identified as a stone pavement in the south but the photos are not convincing (#96B81228, 96B81229) (Clark, 2014, p. 108). The courtyard was open to both Rooms B2A and B2B. The excavator proposed that "curtains or carpets" were used to close off these rooms from an open courtyard (Clark, 2014, p. 105).

The large amount of collapsed debris excavated above B1 was originally thought to indicate the presence of an upper story (Clark, 2002, p. 94). However, by the end of the next two seasons, the area was described as an open courtyard, though still identifying post bases in the walls of the pen in line with those inside the central rooms of the

house (Clark, 2014, p. 108). There is no solid archaeological evidence for which parts of the building were covered with a second floor and which were not. In reviewing photos of Room B1 in particular, it is difficult to determine whether the same kind of upper story debris covers B1 as is found in the other rooms. Clear outlines of bricks and heavy destruction debris are detected in the cross sections of Rooms B2A and B2B (Photos 94B91239, 94B90204), while the cross section of Room B1 does not show the same dynamic destruction debris, only a few bricks at the bottom amidst stone tumble (Photos 94B91235, 94B91240, 94B81127) (Fig. 3.8). The photographic evidence supports the conclusion that the pillared rooms were covered, and presents the possibility that B1 was not. Room B1 is therefore treated tentatively as an open courtyard for this research.

A hearth (B7K81:036) was tentatively identified in the southeast corner of B1 against the wall separating B2C from B1.[10] Three artifacts were found on surfaces in B1: a spindle whorl on the surface of the animal pen, a hematite weight on the surface south of the animal pen, and a pounder on the surface north of the pen. A variety of artifacts were found in the debris (B7K81:022, 31, 42, B7K91:012, 18, 20), including a hand stone, grinder, pounder, eight jar stoppers, four spindle whorls, a bead, a perfume holder, a basalt weight, a tool, a bronze figurine fragment, and an astragalus. A very large basalt stone (40 x 36 x 10 cm) was found in the debris well above the surface, reportedly upside down (the stone was never registered as an object and no photos or top plans record its original find location in B7K81:033, though it is visible in photos at the end of the season and remains in the building still today). The stone is shaped like a large quern or grinding stone and was found just east of Room B2B in Room B1. That such a large stone would have been stored on the upper floors of the house illustrates an impressive ability to move

10. A hearth is placed in the center of room B2A in many reconstructed illustrations but there is no recorded archaeological evidence for one in that location. It is likely that a later stone-lined pit illustrated on a top plan (1994 B7K90 June 29) from the Late Iron II period was mistakenly identified as a hearth in the Early Iron Age stratum, and is the foundation of this misunderstanding. The southeastern hearth is discussed by Clark (Clark, 2002, p. 95). Rhonda Root's well-known painting of Building B illustrates the unfounded hearth (Clark, 2003, p. 37).

Figure 3.8: Section of Rooms B2A/B (top) Section of Room B1 (bottom), illustrating the difference in building collapse. Source: MPP

large objects on the part of the inhabitants. Initial inspection by Jennie Ebeling in the field did not indicate any sign of use wear on its surface, leaving its function a mystery until further analysis can be performed. All of these various types of artifacts could have come from around the courtyard or have fallen from upper story debris that collapsed into the courtyard.

3.5.4 Building A

Building A is located south of Building B and north of Building C (Fig. 3.9). It has 64 m^2 of interior space on the ground floor and shares its major east-west walls with both Buildings B and C, and the same perimeter wall for the entire row of buildings provides its western wall. Building A varies considerably from Building B in floor plan, though both share a western broadroom (A3 and B3). To the east of broadroom A3 is a series of two other broadrooms (A1 and A2), and a possible courtyard (A5). A doorway in the south provides access to the western broadroom, and is situated next to a very small room (A4) jutting to the south of A2. Apart from this small southern room, the general shape of Building A is that of a rectangle. The easternmost portion of Building A is unfortunately lost to later building projects in the area. The wall that divides A1 from the potential courtyard (A5) is not as large as the other exterior building walls of any of the houses in the settlement; a larger eastern wall might have originally stood at some point further east, possibly in line with the eastern wall of Building B.

Room A3

Room A3 is a broadroom measuring 5 m by 2.7 m (Fig. 3.5). It is framed in the west by the perimeter wall, in the north by a shared house wall (B7J89:009) with Building B, in the east by a large wall (B7J89:011) that divides it from the rest of the house, and in the south by a shared house wall (B7J89:027) with Building C. An opening south of the east-

Figure 3.9: Building A, looking toward the broadroom (A3). Source: MPP

ern wall provides access from the hallways adjoined by Rooms A2, A4, and A1. Unlike Room B3, Room A3 was entirely covered in a beaten-earth surface (B7J89:033) and features a large stone installation (B7J89:032) in the southwestern corner.

A probe under the earth surface of this room provides a glimpse into the construction of the houses and their floors (Fig. 3.4). Below the earth surface was an earth fill (B7J89:040), then a nari and clay layer (B7J89:041, 42), and finally a limestone rubble layer (B7J89:043), all sealing against the inside of the perimeter wall. The earth fill was the only layer with any pottery, and all of the pottery dated to the Middle and Early Bronze Ages. The excavators interpreted these layers as intentional fill layers laid by the Early Iron I inhabitants when constructing the outer perimeter wall and other walls of the house (Clark, 2002, p. 57). However, only the thin surface of the room (B7J89:033) sealed against all four walls of the room; the other layers only sealed against the perimeter wall. The house walls, then, were laid directly on top of earthen fill layers without the use of foundation trenches. The exact date of these fill layers, and whether or not they were prepared by the inhabitants of Stratum 12 or were pre-existing, remains uncertain until further excavation.

The stone and plaster feature fit into the southwest corner of the room, with a rounded face of six courses of small stones reaching a height of about half a meter. A set of three "steps" rose from the base of the feature along the face to the flat top, which was covered in plaster (Fig. 3.10). The excavators proposed it was a platform used for the base of a ladder reaching to the second floor (Clark, 1997, p. 64). It could have served as a plastered work surface instead, or other unknown functions (further discussed in Chapter 4). The rest of the surface of the room was entirely filled with pithoi, at least thirteen of which rested directly on the surface, as well as a lamp, strainer jug, and flask. The collapsed debris (B7J89:030, 31) contained a wealth of artifacts, including fourteen groundstone tools, two pounders, two mortars, a stone bowl, two whetstones, two weights, two

jar stoppers, metal fragments, and gaming pieces. The northern half of the room was completely filled with the remains of several large storage pithoi, making it difficult to imagine many other tasks than storage taking place on the ground floor. The upper floors, represented by the material in the collapse debris, appear to have hosted numerous activities, including food preparation and consumption.

Figure 3.10: The plastered stone feature in A3. Source: MPP

Room A4

Room A4 is the smallest room in Building A, measuring only 2.8 m by 2.5 m, and protrudes out of the southern wall of the house as a side alcove (Fig. 3.5). The surface of the southern part of the room is covered by seven large, flat stones (A7J79:048), divided from an earth surface on the northern half (A7J79:051) by a crude line of stones (A7J79:049). The flat-lying stones have triggered the imagination, being proposed as a possible surface, or retired or future standing stones possibly connected to the standing stone in Room A2 (Lawlor, ress; Herr, 2006, p. 63; Herr, 2009a, p. 195). The cultic nature of this room and room A2 are discussed further in Chapter 5.

A grinder and a spindle whorl were found on the northern surface of the room, along with two jars. The debris above both surfaces (A7J79:032, 46, 47, 50) contained several more artifacts, including seven grinding stones, a stone bowl, another spindle whorl, a bead, a pendant, and a piece of unworked "tuff."[11] This is a surprising variety of material from such a small space, but much of it probably originated from an upper floor. Textile production, personal adornment, and the best evidence for the production of seals at the settlement (the "tuff" raw material), all add to the list of activities.

Room A2

Room A2 is the middle broadroom of the house, lying parallel to and in between Rooms A3 and A1, and across from Room A4 (Fig. 3.5). Room A2 measures 4.2 m by 2.7 m, with access to Room A1 between a set of pillar bases, open access to Room A4, and access to Room A3 through the opening between walls. The entirety of the room was covered in a stone-paved surface (B7J89:036/B7K80:061). Two notable features centered in the room: a standing stone (B7J89:038) against the western wall of the room and a large, flat-lying stone (B7J89:039) in front of the standing stone (Fig. 3.11). These have been interpreted as having a cultic function, with a pile of carbonized barley and a few chalice sherds found in the nearby debris (Clark, 2000, p. 76; Herr, 2006, p. 163; Herr, 2009a, p. 195).

The only artifacts found were in the debris above the surface (B7J89:029, B7K80:060). The inventory includes three hand grinders, a jar stopper, a bone weaving spatula, two spindle whorls, a "nail", and two pieces of possible metal.

Room A1

Room A1 measures 5 m by 3 m and forms the front room of the house, entered from the courtyard (A5) (Fig. 3.5). Room A1 is divided from Room A2 by three pillar bases

11. For the use of this term, "tuff", please see the discussion in the section on seals in Chapter 4.

Figure 3.11: The standing stone in A2. Source: MPP

(B7K80:062, 63, 64), with a wider opening in the south that provided easier access over a paved stone threshold (A7K70:057) to the space adjoined by Rooms A2, A4, and A3. Room A1 had a beaten-earth surface (B7K80:067) and several features, including a stone-lined bin (B7K80:065, 66) in the northwest corner, a pair of stone-walled bins (A7K70:059, 60) against the southern wall, a mudbrick and stone bench (B7K80:071) against the eastern wall, and a stone-ringed hearth (B7K80:068) in the central part of the northern half of the room.

Of the number of artifacts found on the surface of the room, the most notable was a large, circular, flat quern installed just north of the hearth (Fig. 3.12). Other artifacts found in the debris (B7K80:060, A7K70:029) directly above the surface include two hand grinders, two milling stones, a stone bowl, a lamp, and a pounder. More artifacts found further up in the debris filling the room (B7K80:060, A7K70:029, 43, 48, 51) included a figurine, a fragment of a cult stand, another stone bowl, a hand stone, a mortar, two jar stoppers, possible metal pieces, three more lamps, six spindle whorls, a pumice tool, and two more pieces of metal. The strong evidence for food preparation activities provided by the several surface finds and the hearth would indicate that this room was primarily used for cooking, while the several bins indicate storage. The other artifacts related to textile

production and ritual were perhaps the result of activities on the upper floor or nearby Room A2.

Figure 3.12: Stone bin, hearth, and quern in Building A. Source: MPP

Room A5

The area designated as Room A5 was possibly an open courtyard (Fig. 3.5). Only the northwestern portion of the area was preserved, and assuming a rectangular shape it would have measured about 4.8 m by 3 m. The eastern and southern boundaries of the room are missing. Three potential pillar bases (A7K71:052, 53, 54) in the center of the room do not shed much light on its use. The surface was beaten-earth with some plastering (B7K81:038, A7K70:067, A7K71:051). A bead and a jar stopper were found on the surface of the room, and a whetstone and a needle were found in the general debris (B7K81:024, A7K71:032, 39). The excavator describes finding a large smashed assemblage of pottery on the surface of this room, much like one found in the southern part of Room A1, showing an active use of this room before it was destroyed (Lawlor, ress, FP13).

3.5.5 Building C

Building C is the third house in the row (Fig. 3.13). It was built quite a bit smaller than the more northern houses at only 38 m^2 of interior space. Built in a rough "C" shape around Building A's Room A4, it shares walls with Buildings A and D, and like the other buildings, used part of the perimeter wall for its western wall. Building C's rooms are loosely interpreted, as no large interior walls divide space. Only a low curtain wall protecting a hearth divided the broadroom (C1) from the central room (C2). Room C3 is a disturbed room at the front of the house, missing the easternmost area of the room.

Figure 3.13: Building C. Source: MPP

Room C1

The broadroom of Building C, Room C1, is bordered on the east by the western wall of Building A's Room A4 (Fig. 3.5). Where this western wall ends, Room C1 opens into the long central Room C2, with a small curtain wall (A7J79:082) dividing part of that open-

ing. Room C1 measures 5 m by 2.5 m and is roughly rectangular in shape. The features in this room begin to break with precedents set by the broadrooms of Buildings A and B. While at least 8 reconstructable pithoi were found on the beaten-earth surface (A7J79:084) of Room C1, the northeastern corner of the room was taken up by a mudbrick-walled bin that held carbonized grain[12] (Fig. 3.14). A grinding installation (A7J79:074) just south of this bin was formed by a large basalt lower grinding stone held in place on either side by two limestone cobbles, and surrounded by mud plaster with an earthen base to keep the stone at a slight downslope toward the south (Fig. 3.14) (Bates, ress, FP13).

Figure 3.14: Mudbrick bin and grinding installation in Building C; grinding stone removed before picture, but the foundation is visible. Source: MPP

Just south of the grinding installation was a circular hearth (A7J79:080), composed of small cobbles, the southern end-stone of the grinding installation, and the curtain wall (A7J79:082) (Fig. 3.15). The largest feature in the room was a stone installation (A7J78:015) formed by a large flat stone supported by two rows of stones (Fig. 3.16). Similar in placement and size to the stone feature in the southwestern corner of Room

12. Only the southern wall (A7J79:075) of the bin was clearly recognized and excavated, but photographic images and top plans suggest a western wall as well (08A79434, 469, 470 show what looks like a "negative" from two mudbricks making a perpendicular line to Wall 75). The excavators initially thought the southern wall of the bin was a bench seat for the person using a grinding installation just to the south of the wall (Bates, ress, FP13)).

A1, the stone feature in Room C1 was also built against the western perimeter wall. The smoothness of the boulder forming the surface of this feature encouraged the excavators to suggest that it served as a table or bench (Brown, ressa, FP12). A large flat stone was embedded in the surface of the room just to the east of the stone feature; its function is unclear. Several artifacts were found in the debris directly above the surface of the room (A7J79:079, A7J78:014), including a hand grinder and three milling stones, as well as two sets of metal vessel pieces. More groundstone tools were found in the upper debris (A7J79:067, 71, 72, 73, 77, 78) in the room, including a mortar, two grinders, two more milling stones, and a spindle whorl. The storage bins, stone table, hearth, pithoi, and artifacts all suggest this area was used for food storage and preparation.

Figure 3.15: Hearth in Building C. Source: MPP

Room C2

Room C2 is a long rectangular area connecting Rooms C1 and C3 without any clear divisions of space (Fig. 3.5). Room C2 measures 5 m long and 1.8 to 2.5 m wide, widening from east to west. Room C2 is devoid of any identifiable features except for two layers or phases of plastered flooring that extended into Room C3 (A7J79:084, 85 in C2). De-

Figure 3.16: Stone and plaster table in Building C. Source: MPP

struction debris (A7J79:068, 69, 70) in the area contained two artifacts: a mortar and a pendant. A smashed jar was found amidst the debris, but only more smashed sherds were found on the actual surfaces of the room (Brown, ressb).

Room C3

Room C3 is only partially known, but measures at least 3.7 m by 3 m (Fig. 3.5). The earth excavated from much of the depth of this area was not the typical destruction debris but disturbed earth and fill layers from later phases of occupation. Some brick and ash debris was found in the eastern part of the room (Brown, ressb). A wall stub protruding from the north wall of the room partially divides the room into eastern and western sections, and could be part of the front wall of the house. A small wall (A7K70:078) that parallels the wall stub to the west might have created a bin in the northwestern corner of the room (Brown, ressb). The surface of the room continued from the plastered layers found in Room C2 (A7K70:074, 75). The small amount of mudbrick debris in the room (A7K70:030) contained no artifacts. A possible destruction layer just above the surfaces in the room (A7K70:071) contained several artifacts including two milling stones, a mortar,

a jar stopper, a shell, and a metal arrowhead. The easternmost part of the room remains hidden under a later, Iron II structure.

3.5.6 Building D

Building D is the fourth house in the line of houses, sharing walls with Buildings C and F, and a short stretch of the perimeter wall in the west (Fig. 3.17). Building D's area measures 40 m^2 in a long trapezoidal shape. A few low, single-row curtain walls divide the eastern part of the house into four small areas. The house has two major distinguishable areas or "rooms", with an open area in the west (D1), and an area with dividing walls in the east (D2). Careful excavation of this structure in 2012 allowed for better definition of the house's construction. A 10 cm thick white plaster and clay layer (A7J69:074) found just above the earth surface (A7J69:075) represents the collapse of the roof. In the northeastern corner of the house a layer of carbonized grains and pithos sherds (A7K60:078) on top of this roof debris is evidence for storage of grain-filled pithoi on the roof (Brown, ressa, FP12). No other ceiling/roofing layers were identified in the destruction debris, so an argument for a second story is not strong for House D.

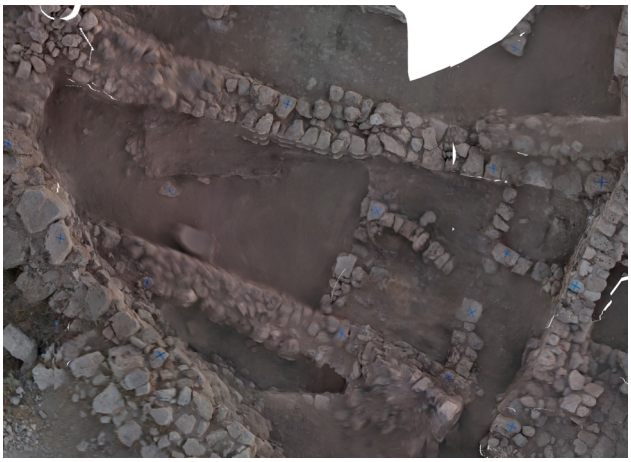

Figure 3.17: Building D (and part of E at bottom) from above (composite image). Source: MPP

Room D1

The western half of the house, designated Room D1, measures 6.7 m by 3 m (Fig. 3.5). Arranged as a large, nearly rectangular space, Room D1 broke from the pattern of broad-rooms found in the westernmost areas of Buildings B, A, and C. Resting on the surface (A7J68:013, A7J69:067) were at least two pithoi and several natural stones possibly collected for their bizarre shapes (Brown, ressa, FP12). An oven shaped out of reused pithos sherds and plaster (Fig. 3.18) was situated near the wall (A7J79:071) dividing Room D1 from D2.[13] A very small wedge-shaped stack of stones was found in the northwestern corner of the room and designated as a small stone platform (A7J78:019) (Fig. 3.19). A handful of artifacts were found in the ash layer (A7J69:065) covering the surface of the room, including a lamp, a milling stone, a mortar, and a spindle whorl. Many more artifacts were found in the destruction debris (A7J69:062, 63, 64), including two mortars, a grinder, four milling stones, five spindle whorls, and a piece of metal. Most notably, a very large basalt lower grinding stone (A100070) was found on top of a clay roofing layer, situated against the middle of the southern wall (Fig. 3.20). The oven and groundstone artifacts indicate that this room was probably used for food preparation, with more food preparation taking place on the roof above.

13. This oven was not recognized during excavation, but when I pointed out the half circle of sherds and plaster, as well as the extra-burnt spot on the encircled surface, in the photographs to the excavators, they agreed that it was an oven. This oven and the assemblage of pottery found with it were assigned to Stratum 12 in 2010, and in 2012 were reassigned to the earlier, Pre-Earthquake phase Stratum 13. However, further investigation of key photographs (10A69315, 10A69312, 12A69085, 12A69267) led me to argue that the oven was in use during the same phase as the low dividing wall behind and on the same level as the oven, and therefore these remains are indeed part of Stratum 12. Part of the problem of interpretation is that a very large lower grinding stone (A100070) was found against the center of the southern wall of Room D1, resting on what at first appeared to be clay ceiling collapse (A7J69:066). In 2012 this clay layer was reinterpreted as a later floor surface with the grinding stone on top of it. It is not impossible, however, that the grinding stone collapsed with the ceiling and landed upright. In House B, an equally large basalt stone was also found fallen from an upper floor, so the inhabitants did not shrink from the task of moving very large objects to the less convenient upper floors of their houses.

Figure 3.18: Oven in Building D. Source: MPP

Figure 3.19: Stone and plaster table in Building D. Source: MPP

Figure 3.20: Lower grinding stone in Building D. Source: MPP

Room D2

Room D2, measuring 4.7 m by 4 m, forms the eastern half of Building D (Fig. 3.5). It is set off from Room D1 by a low dividing wall (A7J69:071). The easternmost part of the room and house is hidden under later occupational phases. Room D2 is covered in a beaten-earth surface (A7K60:079), which had an ashy layer (A7K60:073) directly above it. The area of Room D2 is divided up into roughly four areas by a set of five small walls. Two single-row walls (A7K60:076, 77) set off the northeastern corner of the room. Another single-row wall (A7J69:076) runs parallel to the northern and southern walls of the house, dividing the main part of Room D2 into northern and southern sections. The southern half of the room is further divided into two areas by a larger two-row wall (A7K60:075), which abuts the southern wall of the house. The southern wall of the house ends just east of this wall, opening for a possible doorway south into the area defined as Building E. All of the artifacts found in D2 were tumbled in the debris (A7K60:068, 72), including two grinders, two pestles, a spindle whorl, a pendant, a spear, and a lamp.

3.5.7 Building E

Building E is the least well-known of the buildings excavated so far, with only small probes excavated directly south and southeast of Building D (Fig. 3.5). It shares a wall with Building D and could actually be a room of Building D (the thick layer of destruction debris makes it less likely that this was an open courtyard) (Fig. 3.17). The curving perimeter wall forms the only other known wall of the house. The excavated surfaces of Building E so far fill an area roughly 30 m^2 in size, an area large enough to compose its own dwelling if it is not another room in Building D. The artifacts found inside the house are evidence of a domestic space, and not a street. For the purposes of this research, it will be treated as a separate structure until further excavation evidence can identify its relationship to Building D.

No internal dividing walls were excavated in Building E. The southern perimeter wall was later rebuilt with an overhang so that excavation to the perimeter wall of this phase has not been possible without danger to the excavators. The surface in the room was beaten-earth (A7J69:072, A7K50:074, 75), with a thin ash layer (A7J69:070, A7K50:078) covering the surface beneath the thick destruction debris (A7K50:062, 65, 69, 72, 73). Several artifacts were found on the surfaces in this area, including three grinders, a footed stone bowl, a bead, two milling stones, a spear, a ceramic chalice and two ceramic flasks. A lamp and a grinder found in the collapse complete the assemblage.

3.6 Taphonomic Considerations for studying Domestic Assemblages: The Life Cycle of the Structure

These five buildings, the fortification system, and the refuse pit all provide a well-preserved glimpse into daily life in the Early Iron Age. Covered by a thick destruction layer and virtually undisturbed for over three millennia, this settlement would seem to

present a perfect example of a "Pompeii" situation, preserving daily activities where they were abruptly cut off. The archaeologist, however, cannot expect to find an undisturbed house with its activities frozen in time, but must recognize the cultural and natural taphonomic processes that form and re-form the archaeological record. This record is constantly being affected by humans who perform activities, clean up after themselves, abandon their abodes, and later disturb those same remains. To be able to interpret the evidence left by the inhabitants during their daily activities in the Early Iron Age, it is important to consider the full "life cycle" of the structures under study (Schiffer, 1972). Therefore, a discussion of households and their interpretations must begin with an understanding of four formative stages: construction, habitation, abandonment, and post-abandonment. Each phase is made up of processes contributing to and subtracting from the artifacts in the archaeological record (LaMotta and Schiffer, 1999, p. 20; Schiffer, 1987, Schiffer:1972aa). Understanding these processes can help to decipher between artifact patterns that are the result of ancient cultural activities, and those that are the result of other processes.

Hardin has recently adapted the classic models for understanding taphonomic processes, which are often based on New World sites, for the Southern Levantine Iron Age site of Tel Halif (Hardin, 2010). His outline of processes and process evaluations, based on the work of Schiffer and others, exhaustively considers the effects of human and natural agents on the archaeological record (Hardin, 2010, p. 98–123). Hardin's "Testing for Cultural Formation Processes" begins with a listing of three main processes: "cultural depositional processes, reclamation processes, and disturbance processes" in "behavioral, site, and archaeological contexts" (Hardin, 2010, pp. 95–101) (Fig. 3.21). He then goes on to test for the presence of these various possible processes, evaluates their effect on his particular case study, and makes a final conclusion about their "impact" (Hardin, 2010, pp. 105–116). He also evaluates natural formation processes (Hardin, 2010, pp. 116–123). While Hardin's adaptation is useful in considering different factors in assemblage formation, it is

crucial to note that his study is based entirely on one domestic structure. It is important to keep in mind the possible variations between sites and buildings. Hardin's study is used here as a starting point for evaluating the archaeological record at Tall al-'Umayri.

	Behavioral Context	Site Context	Archaeological Context
Depositional Processes	Agents active on floors: • Items lost on floors • Primary refuse deposited during use • Secondary refuse deposited during use • Refuse or de facto refuse deposited during the abandonment period (ritual deposits, siege specific assemblages, surplus storage, trampling)	Refuse deposited during abandonment • Refuse left by squatters • Secondary refuse deposited by remaining inhabitants • Refuse introduced by decaying structures upon abandonment • Trampling • Curation	
Reclamation Processes	• Looting • Reclaiming secondary refuse (recycling, scavenging)	• Occupational variability and reoccupation • Reincorporation and salvage • Scavenging • Pot hunting (collecting, looting)	• Archaeology (incomplete recovery, limited exposures, poor methodology through unsystematic collection or classification/misclassification) • Scavenging • Pot hunting (collecting, looting)
Disturbance Processes		• Earth-moving processes (foundation trenches, pits, cisterns, leveling) • Surficial processes (plowing, trampling)	• Earth-moving processes • Leveling activities • Surficial Processes (trampling)

Natural Formation Processes	• Water erosion
	• Wind erosion
		• Agents of wind and water
		• Pedoturbation
		  • Faunalturbation
		  • Cryoturbation
		  • Graviturbation
		  • Agriliturbation
		  • Aeroturbation
			• Water erosion
			• Wind erosion
			• Faunalturbation
			• Floralturbation

Figure 3.21: Formation Processes. Source: adapted from Hardin, 2010, pp. 98-123

The following discussion of taphonomic processes affecting Stratum 12, Tall al-'Umayri, and the Madaba Plains Project excavations of 'Umayri, will cover the depositional, reclamation, and disturbance processes that are possibly identified within a framework of the construction, use, and abandonment of the Stratum 12 features. Hardin's terminology, derived from Schiffer, will be used: 1) "de facto" refuse, those artifacts "which reach archaeological context without the performance of discard activities"; 2) primary refuse, "material discarded at its location of use"; and 3) secondary refuse, where "the location of final discard is not the same as the location of use" (Schiffer, 1972, pp. 160–161).

3.6.1 Construction Phase

The construction of a house can often incorporate older material in the fill layers used to provide a level space for the buildings, in the earth floors, the mudbrick walls, and the ceilings and roofs of a structure. When the house collapses after abandonment or is destroyed, the construction materials collapse on top of the surface assemblages. This mixes secondary refuse from construction materials with the de facto and primary refuse from the use phase of the building. When trying to understand the activities of the living household, it becomes crucial to separate out the origins of the various artifacts found during excavation.

Hardin identified two key processes during the construction phase that contribute misleadingly to the overall assemblage: the introduction of secondary refuse into the behavioral context through construction materials and the reuse by the inhabitants of stone implements as architectural elements (Hardin, 2010, pp. 102, 103). When he tested intact mudbricks from the structures he was excavating, crumbling the bricks through a sieve, he found pottery sherds that looked freshly broken alongside those that were heavily worn, evidence that they were used as temper in the bricks (Hardin, 2010, p. 106). At ‘Umayri, excavation of the collapsed debris in the Stratum 12 houses turned up Early, Middle, and Late Bronze Age sherds, indicating that the inhabitants also used older sherds as temper. It is also possible that the inhabitants performed their own excavations of the older settlement debris to retrieve earth for use in making mud bricks. The large refuse pit found to the east of the houses is the likely result of one such excavation. The discovery of more Bronze Age sherds in the destruction debris from Buildings A and B than Buildings C and D may indicate even different sources on site for the material used for making the bricks. If there was also an earlier Late Bronze/Early Iron Age transitional settlement at ‘Umayri, it is possible its pottery was mixed in as well.

Hardin’s solution to weeding out intrusive pottery was to collect and refit all pottery

sherds from his excavations (Hardin, 2010, pp. 105, 120). As discussed above, because this kind of effort was not carried out at ʻUmayri, only mendable vessels will be considered as part of the de facto assemblage, while non-mending sherds will be considered as secondary refuse (however, all known diagnostic pottery sherds of Late Bronze/Early Iron I date are counted in the tables in Appendix 2).

Hardin did not, however, mention that this process can also be true for animal bones. Any animal bones caught up in the construction process could easily blend with the Early Iron Age faunal material (Hesse and Rosen, 1988, p. 127). For this reason the faunal remains from the refuse pit will take precedence in discussing the dietary habits of the settlement. The caveat must remain that the faunal material from the houses could reflect long term dietary habits at the site as much as those during the Early Iron Age.

The reuse of stone implements, such as broken grinding stones, is easier to identify when the stones are found *in situ*. In at least one case this has been identified in Stratum 12, where a low dividing wall in Building A incorporated a broken basalt grinding stone. In some buildings, the large quantity of broken grinding stones calls into question their role in the everyday life of the household. Especially for grinding stones found in the tumbled debris of the houses, their original situation is difficult to determine. In the analysis, it is important to understand the location and condition of the groundstone implements, without directly assuming they were all in use at the same time.

During the construction phase, then, one can reconstruct a picture of the Early Iron Age inhabitants digging into earlier occupational layers and using soil and/or sherds dug from these areas to make/temper mudbricks. They were able to opportunistically reuse the giant pit(s) left for discarding their trash. They may have also ransacked earlier structures for groundstone implements to reuse as grinders or for architecture, as basalt is not a natural resource in the ʻUmayri region, but would have to be obtained by trade.

3.6.2 Use Phase

The use phase of a domestic structure includes the assemblages found on the corresponding floor levels, which indicate the various activities that people carried out during habitation. This includes crafts such as flint knapping or seal making, and the preparation of food. Each of these activities adds physically to the archaeological record, as small pieces of flint, stone, or animal bones get lodged into the surfaces of the buildings. On the other hand, artifacts can be removed from their original use areas as debris from activities is swept up or removed to a midden for disposal. The higher number of artifacts typically found in the courtyards or easternmost rooms of the Stratum 12 houses may indicate a pattern of sweeping "out" the house (see Chapter 4). The forced blockage of the street-facing entrance in Building B indicates enough garbage was simply disposed in the streets to raise their level significantly during the use of the settlement. Furthermore, precious objects can be reused, even when broken, or conserved for symbolic meaning in a place that does not indicate their primary function (LaMotta and Schiffer, 1999, pp. 21-23; Schiffer, 1987, p. 32).

When archaeologists look at the artifacts found directly on the surfaces of excavated buildings, they hope that a collection of cooking utensils in one area and craft working supplies in another will indicate how people divided up spaces in their houses for daily activities. Because larger artifacts are often shifted around or removed by various formation processes, especially in abandoned buildings, study of micro-artifacts gleaned from wet-sieving the surfaces has been used in specific case studies to more accurately determine the distribution of activities (Rainville, 2012, p. 145). These studies indicate that micro-artifacts are better at indicating activity locations, because of how micro-artifacts are incorporated into the surface over time. Study of phytoliths from thin-section samples of earthen surfaces have also provided information on possible stabling spaces or cereal storage (Albert et al., 2008; Miller-Rosen, 1999). In the absence of micro-artifact or

thin-section data, interpretation depends on macro-artifacts (which are more optimistically used in the case of a rapidly destroyed building), permanent features, and ethnographic comparison (Rainville, 2012, p. 143–145). To use macro-artifacts successfully, then, it is important to consider the various processes at work behind their excavated locations. Hardin identifies several processes at work during the use phase of a structure: artifacts that are "lost" or "discarded" (primary refuse), ritually discarded (de facto refuse), or left during a rapid abandonment (de facto refuse) (Hardin, 2010, pp. 103, 108). These processes are supplemented with Schiffer's concept of "reuse processes", which repurpose artifacts in a number of ways from their originally intended function (Schiffer, 1987, p. 28). This could include physically reshaping artifacts like the previously-mentioned basalt groundstones or by turning pottery sherds into spindle whorls.

For artifacts that are lost or discarded near their place of use or manufacture, Hardin argues they will be trampled into the floor and become deeply embedded, indicating they were not part of the active use assemblage (Hardin, 2010, pp. 103, 105). He tested for this by separating out artifacts that were well integrated in the surfaces. Such information is not easily obtained for the 'Umayri macro-artifacts, which are only recorded as being found on a surface or not. Also, the types of surfaces plays a significant role, as objects are less easily "lost" in a stone-paved surface than an earthen one. Given the size of the recorded surface artifacts, it is unlikely any were "lost" on surfaces. Finding primary refuse from lithic activities is more optimistic, however, as flakes from lithic shaping were collected and cataloged, allowing for the identification of dense lithic activity areas. With lithic remains however, it is then necessary to keep in mind that the sharp flakes might have been swept out of high traffic areas and would thus represent secondary refuse (LaMotta and Schiffer, 1999, p. 21).

Ritually discarded objects are "ceremonially/ritually abandoned to 'kill' or bring to an end their use"; they may also be "ritually broken to prevent their reuse" (Hardin, 2010, p.

103). Conserved artifacts are those preserved for their symbolic instead of functional value (Schiffer, 1987, pp. 32–33). In either case, the artifacts are being used in a way other than their forms suggest. Ritually broken artifacts may appear in refuse pits alongside everyday refuse, while broken prestige items may be maintained in an active use context. The first case is more difficult to detect than the second, but deposition patterns will assist in identifying objects that are not part of the de facto assemblage. At ʻUmayri, the case of the "tuff" seals, which are only found in a refuse pit, allows investigation of possible ritual deposition (Chapter 4).

The rapid destruction of the Stratum 12 houses resulted in the abandonment of many artifacts that were still usable. The scenarios of abandonment will be discussed in the next section, but here it is noted that the rapid abandonment left a large number of artifacts on the surfaces and in the collapse of the buildings. The deposition patterns of such de facto refuse is best tested against permanent features, microartifacts, and other site assemblages for confirmation of everyday activities (Hardin, 2010, p. 110). Both permanent features and parallel assemblages are used in the following discussions to determine activity areas, an important aspect of interpreting the everyday practices at ʻUmayri.

3.6.3 Destruction Phase

Abandonment processes include unexpected destruction, rapid departure, or an extended period of abandonment (with or without intended, if never realized, return), each of which leaves a different pattern. A house destroyed suddenly by an earthquake can preserve both house contents and inhabitants in the exact positions of their interrupted activities (the ideal "Pompeii" situation). Abandonment after a long siege can give a skewed picture of "normal activities" preceding the end, as reduced access to resources and locked town gates restructure daily activities (Rosen, 1986, p. 92). A slow abandonment gives the occupants plenty of time to "curate" or cache any portable objects, or use a neighbor's

already-abandoned house as a garbage dump (Schiffer, 1987, pp. 92; Routledge, 2008, p. 149). At ‘Umayri the evidence points towards a rapid destruction of the site, possibly after a siege. Hardin identifies processes at work during such an abandonment, which was the case at his site, Tel Halif, including rapid abandonment, abnormal pre-abandonment situations, and looting (Hardin, 2010, pp. 103, 106–107, 110).

Possible scenarios for the destruction of Stratum 12 include:

1. The excavators have generally regarded the demise of the settlement as the result of a “military” attack from outside entities. Their evidence is based on finding the remains of two adult humans in the back of Building B, fallen with the collapse of the house and found with several metal weapons in close proximity. No other house contained human remains, though metal weaponry was found in each structure, as well as numerous “pounders”, which could have also served as sling stones or projectiles.

a. Under this scenario, there could have been a siege, with preceding preparations.

b. There could also have been looting following the fall of the settlement, and before the structures burned (though it seems highly unlikely that looting much affected the assemblage, with the valuable weapons left behind).

c. As Hardin proposes, it could be a mixed scenario, with some inhabitants sticking around to defend the settlement while others fled (Hardin, 2010, p. 106).

1. No other proposals have officially been made for the cause of the settlement’s destruction, but another possibility could be an earthquake, such as at Megiddo (Marco et al., 2006), which would account for some of the inhabitants being caught off guard.

The evidence includes the abandonment of many portable, still usable artifacts in the houses, the complete burning of the settlement across the tell, and the presence of a number of weapons in the houses similar to the situation at Tel Halif (Hardin, 2010, p. 106).

Working with a siege, conquest, and destruction scenario as best fit to the evidence provides some direction for understanding the resulting assemblage.

First, if the settlement came under siege and had time to prepare for this siege, the activities and artifacts in the houses may reflect "abnormal behaviors" (Hardin, 2010, p. 108). This may be reflected in increased storage (Hardin, 2010, pp. 103, 109). Alternatively, it may have been a surprise attack, with little time for preparation (Mazar and Panitz-Cohen, 2001, p. 175). The possibility of looting, which would remove artifacts from the record, can be tested for by the amount of portable, attractive artifacts that remain.

The weapons found in each of the houses of Stratum 12 may represent part of the defense, or weapons normally kept on hand for various tasks, such as hunting. The chert pounders/sling stones and broken grinding stones could have been gathered as part of the defense as well.

The archaeobotanist's results from a study of samples from Buildings C and E argue that the inhabitants were experiencing a famine or other time of food difficulty, with stores of barley but limited cultivated foods otherwise. An overrepresentation of wild flora could be the result of desperate pickings or come from animal dung used for fuel (Ramsay and Mueller, ress). The zooarchaeologists discovered intentionally dismembered and stored donkey bones in the front room of Building A. While some donkey bones were found in the larger animal pit, this consumption of donkey bones in Building A might be an indication that the inhabitants were resorting to last measures. If the botanical and faunal material is evidence that unusual food was being consumed right before the settlement was destroyed, it would suggest that perhaps life was not "normal" right before destruction. This is important to take into consideration when looking at artifact distribution and proposing theories of the everyday social life at the settlement.

3.6.4 A House's Afterlife: Post-Abandonment Phase

The processes that affect a structure do not stop at its destruction or abandonment and collapse. Some of the many processes, both human and natural, that are active in the post-abandonment phase include squatting by new occupants, use of old buildings as trash depositories, reincorporation or salvaging of the buildings' elements, the removal of earth for foundation trenches or pits, plowing or trampling of the buried structure, exposure to wind and water, animals and plants, and archaeological excavation (Hardin, 2010, pp. 111–117).

The Stratum 12 houses were buried too well by their own collapsing mudbrick walls for squatters to reoccupy, to rob all of the wall stones, or to use the buildings for garbage disposal. The stone walls were all preserved to several courses in height, especially in Building B, and the mudbrick debris completely covered their remains. The major disturbance of the Stratum 12 remains was later earth-moving processes, both the leveling of the debris for the construction of new structures, and the removal of earth for pits. In the Roman period a small pool (B7K80:024) and a large "trench-pit" (B7K80:003) were dug into the earth above Building A, though the report suggests it mostly affected post-Stratum 12 occupational phases (Stratum 12=FP11) (Clark, 1997, p. 95–97), (Stratum 12=FP10) (Clark, 1991, p. 72). The Roman pit must have dug into some of the destruction debris above Building A, however, as a Thutmose III stamped jar handle that is possibly from Stratum 12 was found in its fill (Clark, 1991, pp. 72–73). Similar stamped jar handles were found in Iron II fill layers above Building D's destruction debris as well as in destruction debris, indicating the Iron II inhabitants disturbed the destruction debris as well (Brown, ressa, FP12).

Because of these later building activities over the destroyed remains of Stratum 12, there are some artifacts obviously removed from their original locations. Because of the uncertainty surrounding ambiguous fill layers and pits, artifacts are broken into three cat-

egories: 1) artifacts from surface assemblages, 2) artifacts from sealed destruction debris, and 3) artifacts from pits and fill layers in the Stratum 12 destruction debris. The first category represents those artifacts found on or just above surfaces, where they rested when the houses burned down. This includes both de facto and primary refuse, with potential intrusions of secondary refuse from the collapse material. The second category includes those artifacts that fell with the general building collapse, which will include de facto and primary refuse from upper floors, as well as secondary refuse from building materials. The third category will include artifacts excavated from Iron II-Roman fill layers and pits, some of which are possibly dated to Stratum 12. This third category consists of an indiscernible mix of refuse and requires great caution in using it in analysis. During the discussion of household activities, these categories of artifacts are clearly distinguished for making conclusions about rooms and spaces in houses and general settlement practices.

Natural and modern forces have not left Stratum 12 untouched. Situated on the western edge of the tell, the settlement has probably been affected by exposure to wind and water, especially in the years immediately following its destruction. The wind at ‘Umayri comes primarily from the west. This would have made this location ideal for the ancient inhabitants, who would have appreciated a cooling breeze on hot days. However, the upper layers of destruction on the very western edge, without much cover from later structures, especially over Building B, would have suffered the most from wind and water erosion (Hardin, 2010, pp. 117–118). The topsoil layer (B7J99:001) covering the broadroom (B3) of Building B indicates it might have been part of the destruction debris that has been eroded over time, having contained artifacts that mended with those in the destruction debris below. Otherwise, the thick later occupational layers have protected the destroyed remains of Stratum 12 from natural exposure over the centuries. Likewise, the herds of sheep and goat that cross the tell periodically have mostly stumbled over later stone architecture.

3.7 Conclusions

This chapter has introduced the history of excavations, the context and features of 'Umayri's Stratum 12, and the taphonomic effects most likely to be at work in the Stratum 12 assemblage. This introduction has been necessary before it is possible to move onto discussing the identification of social practices at 'Umayri based on this evidence. It is important to realize the foundational dataset and its inherent problems for a household archaeology approach due to excavation methodology, past cultural activities, and the natural environment. Though it is necessary to proceed with caution in drawing conclusions from the arrangements of artifacts and features in the Stratum 12 settlement, the overall impact of the taphonomic processes has not completely hidden the activities of the Stratum 12 inhabitants from view.

CHAPTER 4

HOUSEHOLD PRACTICES

4.1 The Everyday at ‘Umayri

At the heart of this approach to studying social identity in Early Iron Age Transjordan is the household. Investigating the daily practices of the domestic group is possible because of the evidential remains of their activities preserved in the archaeological record. This chapter begins with a general description of the physical structure of the buildings at ‘Umayri, their construction styles and techniques. From this basic information it is possible to reconstruct and estimate the nature and size of the social groups that inhabited the buildings. Based on the nature and distribution of the contents, or activity area analysis, in the buildings, it is possible to argue that they were used for domestic purposes.

Having defined the physical house and explored the social groups that might have occupied them, the household is then established as the physical and social foundation from which to consider domestic practices. In the functional-ecological model, this establishes the social and material aspects of the household. The next step is exploring the economy of this domestic unit as another way of defining the household the group that works together toward survival within the bounds of the architectural structure. Finally, by focusing on the household practices as identifiable through the physical structure and the economic activities, the evidence can provide information on the people and their social identity. This step moves from the functional-ecological approach to the identity-practice approach, by glimpsing the patterns behind the practices and trying to understand the motives and worldview behind the actions, the social and physical house, as described by Gillespie intertwined in a spatial and relational web (Gillespie, 2000, p. 136).

4.2 Domestic Context The Physical House

The physical structure of the house is one expression of the community's social system, built to conform with the ideas and needs of the population, whether these are ideological, functional, or both (Lawrence and Low, 1990, pp. 454–455). Studying the design of the structure, and how elites can "reinforce architecturally their dominant positions in the social system" allows an exploration of inequality and the possibilities of hierarchical organization (McGuire and Schiffer, 1983, p. 282). These expressions of inequality can be investigated through the construction styles and techniques of the various dwellings. How they are built, whether some require extra labor and building materials, or whether they all exhibit the same amount of effort (Webster et al., 1997). Households are also not entirely bounded by the four walls of their dwelling, but use the spaces around them. By considering visibility and spatial segregation, it is possible to analyze whether the society is characterized by a concern for privacyhiding activities behind enclosing wallsor if it is characterized by communal visibilitywith activities taking place out in the open (Robin, 2002; Ilan, 2011; Gadot, 2011).

At 'Umayri, the five domestic buildings are all similarly constructed, built with semi-hewn limestone walls at the bases, with the rest of the superstructure topped by mudbrick. Large wooden posts helped support the structures from the interior, while reeds and plaster formed the ceilings. The construction of these buildings has been discussed in previous publications, and only pertinent points to the current study will be reiterated (Herr, 1998, 2000, 2006; Clark, 1997, 2001, 2003). All five dwellings are built against the western perimeter wall of the settlement. The shared walls of the buildings join the buildings together, indicating a high level of initial cooperation during construction. The bounding walls and walled courtyards, on the other hand, indicate a concern for individual family separation.

4.2.1 House Size, Labor, and Layout

The same basic construction method was used for all of the houses, with stones brought in from the fields or exposed limestone shelves, earth brought for mudbricks from older parts of the settlement (likely the source of Bronze Age pottery sherds found in the destruction debris), and plaster for floors and roofing made in local kilns (Clark 2003 provides a detailed study of the time, materials, and amount of effort needed to construct Building B). Reeds and trees for the roofing and pillars were brought from nearby wooded areas or river systems to complete the structures. In all, the larger the house, the more human (and donkey)[1] hours of labor needed to haul or drag raw materials onto the site, build, and finish the houses.

The five buildings are, from north to south, Buildings B, A, C, D, and E (Fig. 3.5). Each structure has a different floor plan. Building B, the northernmost and largest house excavated, follows a four-room house plan, with a broadroom against the perimeter wall, three pillared long rooms, and a walled courtyard in the front. Building A has a broadroom with two pillared front rooms, an alcove, and a courtyard in front. Building C has a broadroom and then a long room, wrapped around House A's alcove. Building D forms an approximate rectangle, with small dividing walls in the eastern half of the structure. Building E has been only partially excavated, but forms a narrow room tucked against the perimeter wall.

Buildings B and A are the only structures that utilize pillars, presumably to support a wider roofed area. The widest areas in Houses A and B measure 5 to 7 m in width, though pillars break this up into more manageable 2 to 2.6 m widths. Buildings C, D, and

1. While donkey/equid bones are a small percentage of the faunal assemblage (1–2% of identified bones, settlement-wide, based on NISP and weight; (Peters et al., 2002) recorded their presence as 2.4% of NISP from the refuse pit), their presence, especially in a set of articulated bones in Building A, does testify to the fact that donkeys/equids were a part of the animal economy at 'Umayri. Donkeys/equids in the Iron Age could have been used for a number of purposes, including packing, riding, and even plowing when necessary (Borowski, 1998, p. 90–98). Their assistance in the construction process for hauling heavy materials would have been invaluable.

E range from 2 to 2.8 m at the most, widths easily spanned without the use of pillars (see Appendix 2 for detailed room measurements). Studies of Iron Age houses in the Southern Levant have roused discussion on spacing and the use of pillars for structural support. In this regard, Stager has remarked on the structural function of even pillar spacing, such as is seen in Building B at 'Umayri, as well as a range for room widths between pillars of 1.5 to 4 m. He further notes that tall tree species, reaching up to 10m, such as "oak, terebinth, pine, and cypress" were available for roofing in these regions, though testing of archaeological specimens at the time was lacking (Stager, 1985, pp. 15, 20, n. 6). A study of modern and possible ancient tree species around 'Umayri determined that oak was the most likely forest species in ancient times, though today pine and cypress are also found (Younker, 1989, p. 33, 36). Fritz notes that 2.4 to 2.6 m is the "maximum distance that could be spanned by beams" in antiquity, as part of his argument that the central rooms of four-room houses were too wide and were therefore unroofed courtyards (Fritz, 2007, p. 115). However, studies in Egypt argue that room widths up to 4 m are possible without the use of pillars or other structural supports, noting ethnographic observations of room widths up to 3.7 m roofed using palm trees (von Pilgrim, 1996, p. 202, n. 555). The presence of at least tall oak in 'Umayri's region would have made roofing easier, though perhaps other factors, such as access to the tallest trees, would have limited a house's width.[2]

Each house shares a wall with a neighboring house. The shared walls would imply a certain amount of community organization in order to coordinate cooperation during construction. Determining whether one house was built before the others is not possible in this stratum, as all of the shared walls between the houses abut the western perimeter wall of the settlement. Order of precedence then is less important at 'Umayri than the more

2. Stager also notes that the middle long room of four-room houses were usually 2.5 4m, while side rooms were 1.5 3m. The 'Umayri houses are, in relation, on the slightly wide side in general, which is perhaps due to better access to trees for timber beams. 'Umayri's "four-room" house, Building B, had a central long room that was the same width as the two "side" rooms, and not wider as in Stager's and Fritz's examples. (Stager, 1985, p. 15, 29 n.6), (Fritz, 2007, p. 115).

likely scenario of concurrent erection of living structures for the families in this area of the settlement. The variation in house plan is evidence that there was no fixed idea of how a house should be organized architecturally, but instead each house followed a flexibly realized plan of inner room, outer room, and courtyard, executed as each builder found convenient and as restricted by their location in relation to the other houses and the perimeter wall. The range in architectural complexity and size suggests an unequal access to the skills, labor, and resources necessary for constructing houses with larger spaces, wider roofs, and pillars. Though the size variation could reflect household size at the time of destruction, rather than status or wealth, concurrent construction and size taken together with the differences in construction styles do indicate disparity among the inhabitants at the household level.

The plan of Building B, as mentioned, fits the typical Iron Age house plan known as the four-room or "pillared" house. This particular plan is known in variants as early as the end of the Late Bronze Age and continues late into the Iron Age, though 'Umayri's is considered by some to be the earliest fully developed example of this house type (Mazar, 2009, p. 333). Another Early Iron Age site in Central Transjordan with a four-room house plan is Lahun. Several other sites have "pillared" houses, with house plans that utilize pillars, though not in the same layout as the four-room plan. Porter discusses the pillared building manifestations in Central Transjordan in the Iron I period, concluding that the "replication" of pillared building designs "was embedded in communal traditions and entangled with social relationships", passed on from one generation to the next (Porter, 2013, pp. 74–78). At 'Umayri, where some of these earliest pillared designs are brought to life alongside non-pillared buildings, the pattern may have been developing with only some families beginning to use this plan or able to command the resources to do so.

There would have been cooperation in the conception and construction of these houses, as the shared walls and even the reconstruction and integration into the western perimeter

wall indicate. At Iron II Nasbeh, where houses also shared walls, this fact was used as part of an argument, along with non-replicability of certain domestic features across houses, that the group of houses was occupied by an extended family (Brody, 2011, p. 254). Stager also applied his concept of the "multiple family compound" to Nasbeh (Stager, 1985, pp. 18–19). 'Umayri does not entirely match this profile, since each house does fully replicate the necessary domestic features of hearths, grinding installations, and storage areas, as clarified below, and did not appear to share courtyard space. When more of the settlement is excavated, it will be easier to tell if there are clustered groups of "neighborhoods" at 'Umayri, as at Nasbeh, and so a possible smaller-subset of the settlement, or if, as at Late Iron I settlements in Jordan such as Khirbat al-Mudayna al-'Aliya and Lahun, the general pattern is of a larger ring of connected houses, without clear separation into "neighborhoods." While the group residing in these structures at 'Umayri may have been closely related, there still is evident concern for household privacy, as the walls separating the buildings and the walled courtyard of Building B attest. The next chapter will return to interpreting the significance of cooperative community construction events.

What is appropriate to emphasize at the household level is that there was a tight-knit group settling along the western edge to work together in constructing their area of the settlement. It is possible they were tied together by kinship, fictive or real, in setting up house here. The variation in construction complexity and size among the buildings, especially of the larger two buildings which also had increased storage capacity and greater diversity and number of moveable artifacts (discussed more below), would indicate disparity between the families.

4.2.2 Dwellings at 'Umayri

The nature of the five structures excavated at 'Umayri has been discussed in the literature with various interpretations. The excavators have interpreted the structures as do-

mestic buildings occupied by families on a year-round basis. London, who has excavated at the site periodically and has worked extensively with the pottery from this stratum, has proposed different interpretations over the years. Her earlier suggestions were tied into the origins of the four-room house plan in the Late Bronze Age, when she suggested they developed from highland workstations. ʻUmayri in this instance was an example of a full-fledged settlement developing from a highland workstation, which was only seasonally occupied (London, 2003, pp. 76–81). More recently she has interpreted ʻUmayri's Stratum 12 structures as a seasonally-occupied feasting or ritual center (London, 2011b,a, 2009). She bases the ritual nature of the site on the ritual artifacts in Building A, the large number of storage jars in Building B, but most of all the contents from the pit. She sees ʻUmayri as a gathering place for a large number of semi-nomadic peoples from around the region, gathering at a place sacred since the Early Bronze Age, due to the presence of tombs, ritual buildings, and a natural spring throughout ʻUmayri's history.

While London's assertions regarding the special nature of the refuse pit and its evidence for feasting activities are clear, her evidence regarding the settlement is based on only Buildings A and B. She remarks that "[l]iving quarters for a large resident population at ʻUmayri, or nearby, during the LB/Iron I have yet to be identified" (London, 2011b, p. 33). She was writing these conclusions based on earlier information, before Buildings C, D, and E were fully excavated, and more of Stratum 12 was potentially identified in Field H. Stratum 12 at ʻUmayri did not consist only of the two houses, fortifications, and a refuse pit, but represents a full-scale settled village during this period. While she may be correct about ʻUmayri as a center point for regional gatherings in this period, it is important to note that the increasing number of domestic structures strengthen the claim for ʻUmayri as also a year-round occupied site.

To further work on distinguishing the buildings at ʻUmayri as domestic instead of special-purpose public buildings, it is important to consider a variety of factors. One ap-

proach would be to say that a house is the place where a household resides. Several archaeologists have emphasized that a household is not constrained by the limits of a physical dwelling, so they should not be equated (Robin, 2002, pp. 246–248). However, a building where the household dwells and carries out the activities necessary for the reproduction of Wilk and Rathje's social demographic unit can be identified (Wilk and Rathje, 1982, p. 618). As for distinguishing a house from other types of buildings in a settlement, it is important to contrast the evidence for domestic habitation with alternative options, such as a communal storage center, a ritual center, or a public seat of power. One factor expected in common of non-domestic buildings would be that they would present themselves as unique in relation to the other buildings of a settlement in regard to "the architectural character (*i.e.*, size, quality of building, etc.) and layout of the building, and the human activities that took place in the building and in its immediate surroundings", as discussed in regards to differentiating public and residential buildings at Late Bronze Age Tell es-Safi (Shai et al., 2011, p. 111).

While the five buildings at 'Umayri are dissimilarly conceived in quality of construction and in spatial layout, as mentioned above, they were all built with the same basic materials and all contain evidence of similar human activities, as discussed below. All four complete buildings contained artifacts related to food preparation and consumption, food storage, textile manufacture, personal adornment, tools and weaponry. Where the buildings differ in assemblages, it is mainly by degree. Buildings A and B, which stand out from the others the most in size and quality of architectural construction, also contained additional categories of artifacts, such as ritual and administrative artifacts. However, these artifacts do not suggest a use other than in a domestic setting, and do not detract from the otherwise domestic nature of the assemblages. The everyday, domestic nature of the activities related to these artifacts only strengthens the tie between household and house in these buildings, and allows the argument that these buildings were primarily domestic

structures. It is possible that Buildings A and B may have served, in addition to residence, special functions in the local community, as will be further explored in the following chapter. At this point, the cooperative nature of the house construction, the size of the social groups that occupied the houses, and the range of domestic artifacts found in the houses suggest that the households were similarly engaged in the daily practices necessary for survival and reproduction within and around the identified, excavated structures.

4.2.3 The Household

Calculating the size of an ancient household has been attempted in numerous ways relying on ethnographic comparisons of pre-industrial societies or using data from ancient literary sources. For ancient Egypt, archaeologists making use of literary sources that document the ration of grain extended to individuals combined with calculations of granary storage capacity estimates has allowed demographic estimates for whole towns (Kemp, 1986). In ancient Greece and Rome literary-based estimates are compared with modern ethnographic work in the same region to determine how much grain a person needed on a daily basis (Foxhall and Forbes, 1982).

The traditional way of calculating household size in the Southern Levant has relied on calculating the amount of physical space in a building and dividing it by the number of square meters ethnographically-determined to be necessary for each resident. The classic formula is provided by Narroll, whose study of numerous traditional societies produced an average estimate of 10 m^2 per person of roofed "dwelling area" (Naroll, 1962) This has made it fairly easy, once a dwelling area is demarcated, to divide the total square meters by 10 and produce a number of possible residents. Refinements have been made for ancient Near Eastern societies based on geographically-closer ethnographic work in Iran (Schloen, 2001, p. 168ff). These studies result in a range of 6–10 m^2 per person, depending on various factors including the urban/rural setting, with 10 m^2 at the generous end

of interpretation. The difficult part is not the math, but the determination of what constitutes a roofed dwelling area. Looking at ancient buildings with only the foundations of walls still visible, one is uncertain where space was roofed or unroofed. If one takes as a starting point that walls built 1 m thick are capable of supporting a second story (Kramer, 1982, p. 99), then all of the houses and rooms at ʻUmayri fit this description, even the interpreted courtyards. Schloen's work at Late Bronze Age Ugarit relies on a hypothetical second story for calculations, marking out a dwelling area above the storage and animal areas on the ground floor as living space, and not including the courtyards (Schloen, 2001, p. 323). This is equivalent, in area size at ʻUmayri, to Narroll's Roofed Dwelling Area. With the Iron Age "four-room house" plan, debate has centered on whether the central pillared room was roofed or not, though ʻUmayri's central pillared room was narrow enough to be roofed and was likely not left open given the amount of collapse in this area. If calculations are based on a hypothetical second-story, and have only a partial ground plan with uncertainty over what was roofed or unroofed, the estimate becomes more difficult.

A number of methods are used here to calculate household size for the four mostly-extant dwellings at ʻUmayri. For the method relying on the size of each building, the complete area of each building was first calculated by tracing the exterior of the domestic walls, including the courtyards. Then a "roofed dwelling area" was calculated which excluded large walls. As the possibly-identified courtyards in the front of two of the buildings are not clear as to whether they were roofed or not, and possible courtyards for the other three buildings are yet unexcavated, estimates exclude courtyard space. For a method based on the grain storage potential of each dwelling, the number of pithoi and their combined storage potential with measureable bins was calculated for each building.[3] The re-

3. Grain storage estimates, like those of Barry Kemp for Egypt, were only possible to calculate for pithoi at ʻUmayri and one of the storage bins. The storage bin features at ʻUmayri were not properly measured, making it difficult to accurately reconstruct their volume. The bin in C1, which contained grain remains, was calculated as containing 180 liters using field notes and so I have included this bin in the ca-

sults of these various calculations are presented in Table 1. The total size of each house ranges from 70–130 m^2, and is compared with other Iron I settlements in Transjordan in Table 2. The houses at 'Umayri fit within the general range of Iron I houses in Transjordan and Cisjordan (Routledge, 2009, p. 49).

Calculating grain-storage based demographics provide a comparison point, but are ultimately weak for a rural village in the Southern Levant. The grain calculations used in Egypt are based on a centralized economy with communal storage of grain rations in large mudbrick silos, or large patrician households with private grain storage. The parallel with a rural, decentralized society like that found in early Iron Age Jordan is tenuous.

Research on ancient Crete, where pithoi were also the predominant grain storage vessel, provides a closer comparison, and modern ethnographic studies among rural farmers strengthen the parallel. However, these studies do not calculate the size of a household, but instead assume an average household size of six to then calculate volume for understanding the security of food supplies and length of time they could last. The same is the case with a study on early Mesopotamia, which calculates grain storage capacity to determine the amount of surplus held in one ancient village (Schwartz and Falconer, 1994), and with a study of Iron Age Izbet Sartah, where agricultural land and faunal remains were brought into the equations (Rosen, 1986). In a study of an Iron I courtyard house at Megiddo with several storage jars, Arie estimated the storage capacity to be around 1000 liters, and argued that at 180 kg of wheat per person per year, the stores would have supported 5–6 people, a nuclear family (Arie, 2006, p. 243). The estimation of storage capacity was based on precise measurement of the volume of the reconstructed vessels found the in the house (Zapassky and Rosen, 2006).

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pacity measurements for Building C. One of the bins in A2 was better measured in the field and would have also held 180 liters. However, I do not include it in the calculations as no grains were found in the bin and its use for holding grain is therefore uncertain. Pithoi counts were based on published pithoi from Buildings B, A, and C, and rim counts for Building D. Smaller storage jars were also found in the buildings but were excluded from this calculation, though they likely held other staple goods such as beans, lentils, chickpeas, etc.

However, this reverse use of ethnographic findings to then calculate household size leads to circular reasoning for the purposes of the current study. The numbers provide an idea of how many people each dwelling could have supported, based on ethnographic parallels, over the space of a year based on grain supplies a time period suggested as even generous considering the vast majority of ethnographic examples on Crete (Christakis, 1999, pp. 7–8). What the storage numbers instead provide is a useful way of comparing the food stocks of each building at ‘Umayri. In this case, storage shows that each house, with full pithoi, could have supported the estimated number of household members based on house size, and that Buildings B and A had more than necessary Building B to an extreme.

One aim of calculating household size is to determine the type of household a building contained. Small households of 3–4 were likely composed of nuclear families only, while larger households of 6–8 people could include extended family members or unrelated retainers. While a statistically-appropriate large sample is not available at ‘Umayri, the four houses do fall into two size categories. Buildings B and A are both large enough to hold a range of five to eight individuals. Buildings C and D, on the other hand, are much smaller, with only room for three to four individuals. Basing family type on the number of individuals indicates that Buildings A and B could have held extended or joint family households, in contrast to the smaller houses, which more likely held nuclear families. The dynamic nature of household composition and size is emphasized by Meyers in her research of ancient Israelite households based on biblical textual material. The households, and individuals who made up the households, were always changing, expanding, and contracting based on births, marriages, deaths, and the introduction of unrelated members to a social pattern that often included more than a single generation in one house (Meyers, 2013, pp. 109–113). It is important to emphasize that what is excavated is the household at a particular moment within this flux.

Other methods of determining household type at a given moment in time include look-

ing at the pattern of living rooms, or even examining the pottery. Kramer's ethnoarchaeological study noted that with a virilocal extended residence pattern, where son's bring their wives to live in the family compound under their own father, that each nuclear family often had their own living room in the larger compound (Kramer, 1982, pp. 117–119). She recommended then looking for added rooms or converted spaces that would have been made into a living space for the new family (Kramer, 1982, p. 119). Unfortunately, such identification of individualized living spaces is difficult when the entire second floors of the houses are missing in the archaeological record. But looking for duplicated spaces in a single structure, whether kitchens or storage spaces, might signal the presence of extended families in one building. The presence of storage pithoi on both the ground floor and upper floors of Buildings B and A may be one such hint. Panitz-Cohen too considered Kramer's work when discussing household wealth and composition in the Late Bronze Age. In her study, she cited possible correlations in ethnographic studies between household size and the number of ceramic vessels in a house (Panitz-Cohen, 2011, pp. 97, 101). For her case study, she used this information to suggest that a smaller house with more pottery and a larger house with less pottery could indicate a change in family composition or social obligations (Panitz-Cohen, 2011, pp. 101–102). A full study of the Stratum 12 pottery will ultimately provide another way of understanding household dynamics.

Of the four buildings, one contained human remains that test our assumptions about family units in the Southern Levant.[4] In Room B3 of Building B, skeletal remains from four individuals were recovered. As mentioned in the previous chapter, these remains were

4. The skeletons are extremely fragmentary, and it is possible that: a) the rest of the skeletons were entirely burned in the very hot fire that consumed the houses, b) the survivors were able to retrieve some of the bones in antiquity, or c) the natural taphonomic processes that clearly affected the upper story remains of Building B also eliminated some of the skeletal material. Further aDNA, piecing, and radiocarbon studies are being conducted on this material and were presented in preliminary format at the ASOR 2015 Annual Meeting, in a paper titled "aDNA Profiles of Four Humans from Bronze and Iron Age Jordan", written by Douglas Clark, Suzanne Richard, Christian Anderson, Lee Greer, Lawrence Geraty, Ervin Taylor, Meagan Miller, Ronald Nance, Karimah Richardson, Kent Bramlett, and Kristina Reed. Results so far appear to agree with (Miller, Miller).

burned, scattered, and unarticulated. Two adults, both likely male, a 15-year old juvenile, and a child were identified (Clark, 2002; Chase, 2002, p. 220)(Clark personal communication March 2015). aDNA studies performed on the four human skeletons returned unexpected results for the nature of the occupants of the household, which were expected to be members of one family. Of the four skeletons, three were sampled, including the two adults and the juvenile. The tests indicated that the individuals did not share a matrilineal inheritance (Miller, Miller). These were not siblings, then, though they may otherwise have been related through marriage ties (the pattern of females marrying out would prevent matrilineal continuity past two generations in one house). The results do indicate a degree of genetic variability ruling out direct descent from a single line. If the individuals were all members of the same household, then they were more distantly related through marriage or there were unrelated retainers living in the house. It is also possible that in the events leading up to the destruction of the settlement, the individuals caught in the burning building were not the actual residents of this building, but were gathered there for other purposes, such as defense. The presence of a child, however, would not likely thus be explained. That all of the other houses were vacated before destruction would suggest there was some warning of impending doom, and most individuals were able to escape their homes. The unrelated individuals, if they were all members of the household in Building B, reinforce the notion of a household as a diverse group that could include even non-kinship members.

The households at ‘Umayri, fitting into the larger Southern Levantine pattern in construction and size in the Early Iron Age, also likely fit the pattern of having a range of family types and sizes. The grain storage potential in each house would have been sufficient to feed the estimated members for a year. The problem of Building B and its excess storage will be dealt with below and in the following chapter. The aDNA results suggest that there was a greater diversity in relationships among the settlement's inhabitants, with

at least three individuals unrelated matrilinealy, an unexpected result from what is generally assumed to be a patriarchal society with close kin ties at the clan level. This glimpse into the social groups that lived in the houses is helpful in determining the small nature of the households at ‘Umayri, composed most likely of nuclear or extended families, but without removing the possibility that unrelated retainers could have also been part of the social group.

4.3 Household Practices

As described in the previous chapter, a site-wide conflagration burned through the houses at ‘Umayri, thoroughly destroying them. This destruction sealed the houses under one to two meters of solidly burned mudbrick, mostly undisturbed by later activities except in the eastern edges of the buildings (Fig. 4.1). The well-sealed nature of the buildings' surfaces provides a unique opportunity to study an Early Iron Age assemblage that was hastily abandoned, without time for the inhabitants to carry off their possessions. The large number of excavated small, portable artifacts, some of considerable value, like metal weaponry, indicates that most inhabitants were unable to retrieve more than their lives while escaping the burning settlement, and the large amount of burnt collapse made it impossible to retrieve after the destruction.

While keeping in mind that even under these circumstances, the excavated surface assemblage of a destroyed house is not a “fossilized record of a household's activities” (LaMotta and Schiffer, 1999, pp. 20–23), the artifacts left behind do help focus on the household as a center of activity. Not all objects were left in their original location of use; some probably originated from secondary refuse or curatorial practices. However, the study of artifact distribution in combination with the permanent features allows for analysis of the use and function of various spaces in the houses (LaMotta and Schiffer, 1999). Also see Kramer's study, in which she also states that “rooms could be identified at

Figure 4.1: The thick destruction layer, best seen in this section of Building D. Source: MPP

least in terms of their primary functions", based on "built-in features (such as ovens, bins, hearths, and troughs) and some evidence of semi-permanent features (like looms' post-holes)" (Kramer, 1982, p. 116). She notes three main functional areas: unroofed courtyards, storage room, and a room for sleeping, cooking, eating, and entertaining. This is a key point that sets the dataset from 'Umayri apart from other Iron I studies in the region, as many of the other Iron I settlements, such as those further south on the Central Plateau of Transjordan, were slowly abandoned over time, providing opportunity for the removal of valuable and portable artifacts.

The household contents and analysis of activities confirm that these structures are domestic. Analysis of room functions also provides interesting information regarding the similarity and variability of daily practices across the households. The houses at 'Umayri had a number of objects preserved on the surfaces, but the majority of the artifacts were found in the destruction debris above the surfaces. While this material could have originated from shelves or furniture on the ground floor, it is more likely it originated from second floor or roof activities, and will only be taken partially into consideration of specific

ground floor activities.

A series of charts based on all artifacts found in the physically distinct areas or rooms of the domestic structures, surface and debris, is presented to provide a general idea of artifact and ceramic distribution (Fig. 4.2). This is intended only to give a broad picture, as this includes both pottery and artifacts found in the debris, and both restored ceramics and diagnostic pottery sherds. Some of the patterns that are immediately identifiable are storage areas, usually located in the innermost rooms of the house, except in Building D. Courtyards or outermost rooms typically have the most diverse range of artifacts, perhaps a result of refuse disposal patterns in which the houses are swept outward. Alternatively these activities were carried out in these spaces because of better availability of light and visibility with neighbors. A lack of pattern is that artifacts associated with food preparation and consumption are spread fairly evenly throughout the entire domestic structure. In Buildings A and C however, where a hearth installation has been identified, there is a slightly higher percentage of food-related artifacts in the room with the hearth (A1/2 and C1).

Comparing artifacts across the houses indicates disparity in quantity more than in diversity. All of the buildings contained artifacts associated with food storage, preparation and consumption, textile manufacture, personal adornment, and weaponry (with the exception of Building E having no textile-related artifacts, probably due to the small area of excavation). This full range of artifacts, when taken into account with the permanent features such as hearths, storage bins, and grinding installations found in many of the houses, indicates that these buildings, as domestic structures, were the center of numerous activities related to feeding and clothing a household. In addition to these everyday activities, Buildings A and B also contained artifacts related to cultic and administrative activities, which will be explored further in the following chapter.

If we remove the artifacts found in upper story debris and consider just the surface

Figure 4.2: Building Contents Compared

finds, in tandem with the permanent installations, it is possible to identify particular activity areas of food storage and food production.

In Building B, the floors were mostly clean of artifacts except in the broadroom (B3), where ceramic pithoi covered the stone-paved surface. The surfaces of the three central long rooms were bare except for a single chert pounder. In the courtyard (B1), a cooking potsherd was found near a potential hearth.

In Building A, the broadroom (A3) contained pithoi as well as a strainer jug, a flask, and a lamp, with a stone and plaster feature in one corner. In the front room of the house (A1), two stone-lined storage bins, a hearth, and a bench were accompanied by several jars, basalt grinding stones, a basalt bowl, and a lamp. A quern sat near the hearth and bin, while a lower grinding stone sat in the middle of the room.

In Building C, the broadroom (C1) contained several basalt grinding stones and the shattered remains of two bronze artifacts, possibly vessels. These were found next to a hearth, a mudbrick bin, a grinding installation, and a stone and plaster feature. The front room (C3) contained further groundstone artifacts and an arrowhead.

Building D had few artifacts on its surfaces, with only a mortar, a grinding stone, a spindle whorl, and a lamp found on the surface in the same room (D1) as a large grinding installation and a small stone and plaster feature.

No permanent features have been identified in Building E, but a bronze spear point and several groundstone artifacts, a bead, and two flasks were found on the surface.

These artifact and installation clusters suggest that each family organized their daily activities in a similar manner, storing food in back rooms, and preparing food in the broadroom near stone tables and grinding installations, and/or in a front room with similar features. Domestic activities centered on the household, each household storing and preparing their food individually in enclosed spaces without evidence for shared facilities. In contrast, the range of artifacts found in outermost rooms or courtyards suggest other ac-

tivities were done in slightly more visible locations. The replicative instances of grinding and cooking installations, found in each house, and in the inner rooms in some cases, suggest that each family engaged similarly in their daily routines to prepare food in enclosed spaces without evidence for shared facilities. This would have limited the interaction of individual households with each other in the matter of their most necessary commodity, food, and perhaps suggests some concern with keeping and preparing it privately over a desire to share resources and preparation space. However, the participation in the daily grind, even if separated spatially, would have been an element that would have joined them in a common view of the everyday.

4.3.1 Food Storage

The practices of food storage and production deserve a closer look. One of the most practical concerns of a household is storing their grain, pulses, and legumes. In an article on storage among the Maya, Hendon seeks to move beyond the mere functional aspect of storage, and consider the social and spatial implications of storage (Hendon, 2000). One aspect of storage that she explores is the variation in how different status groups among the Maya store their surplus, with the higher status individuals storing in hidden, inner spaces, and lower status peoples storing in external, special-purpose buildings (Hendon, 2000, p. 44). While an Early Iron Age rural settlement in Jordan is not expected to have the same dramatic social differences, it is important to think about the social aspects of storage types. What did it mean to an ancient inhabitant at 'Umayri to store grain in a pithos versus a bin? This question will be returned to, along with the significance of storage patterns at 'Umayri in general, after a review of the evidence for storage.

Storage in large, collared pithoi is detectable across the dwellings. Large numbers were found in the innermost rooms of Buildings B, A, and C. At least 32 and possibly as many as 74 pithoi were found in Building B, most in the back room, though some likely origi-

nated from an upper story.[5] The broadroom (A3) of Building A also contained a number of pithoi, at least 13 on the surface. Several smaller jars were found in the front rooms, and in one room, the base of a pithos filled with burnt seeds was identified in the debris from upper story collapse (Fig. 4.3). Storage took place, then, not only in the back room of the ground floor, but in the upper rooms or roof as well, as has been noted ethnographically (Wilson, 1906, p. 69–70) The broadroom (C1) of Building C contained at least 8 restorable pithoi, though the pottery reconstruction efforts are incomplete for Buildings C, D, and E. Each house contained fewer than 20 pithoi each, however, based on diagnostic rim counts. In the front room of Building D, a layer of burned seeds was found on top of a clay layer identified as the collapsed roof (Fig. 4.3). Pithos sherds were found mixed in with the seeds, and perhaps the seeds had scattered when the pithos fell and broke. Alternatively, the seeds may have been drying on the roof near storage jars when the building burned.

Figure 4.3: Base of pithos filled with burnt seeds from upper story in Building A (left); Layer of burned seeds from roof in Building D (right). Source: MPP

5. Of the 94 reconstructed pithoi from Room B3, only 32 of these are 75% or more preserved, from base to rim. 42 are preserved at least 50%. Over half of the pithoi, 52, represent only the base or base with some of the lower body. These percentages were evaluated by looking at photos of the restored pithoi. This high percentage of bases may represent a situation in which old, broken pithoi were left on the floor where the bases served as holders for new pithoi or were simply un-removed refuse (London, 2011b, p. 19), (Clark and London, 2000, p. 105). Many of these pithoi have been or will eventually be published in the final publication volumes.

Another method of storage was the use of various types of bins, both mudbrick and stone. Building A contained two stone-lined bins in Room A1 and Building C had a mudbrick storage bin in the back room (Fig. 3.14). A small walled area in the front room of Building D may also have served for storage, though this is less likely.

This variation in storage practices of cereal grains is intriguing. The difference in quantity is quite notable with Building B containing over twice the number of pithoi found in the other houses. With only Buildings A and B to take into consideration, much has been made of this difference, from suggesting a patrimonial household compound or dependency on shared storage between the two houses (Herr, 2009a), to storage for special feasting occasions (London, 2011b), to interpretations of surplus grain storage as potential for authority in the settlement (Porter, 2013). But when the other methods of grain storage are taken into consideration, including various types of permanent storage bins, the question of grain storage and quantity becomes more complex.

Returning to the previously mentioned potential grain capacities in each house, we see that, if full, the pithoi found in each house would have been sufficient to supply the needs of each house's members. The bins, then, provided additional storage capacity, just as the extra pithoi do in Building B. The larger bin found in Room C1 contained the carbonized remains of grain. The floor plan of this bin measures 1.3 m^2 in area, with a preserved height of 15 cm. This would give a lower estimate of capacity at 180 liters, though with a higher bin wall that capacity would have been greater. This bin could have held more than a single pithos, the average capacity of which was 137 liters. The contents of the bins found in Room A1 of Building A are unknown. The larger one, whose stone wall was well preserved, would have also held 180 liters. The other bin's internal measurements were not recorded, and so a calculation of its capacity is not possible. Whether or not some of the small stone walls preserved in Building D served as storage bins is unclear at this point, so they will be left out of this discussion.

The bins in Buildings A and C would only have slightly increased the total capacity of grain storage for the buildings, so why build permanent storage into the house instead of just using another pithos? In Building C, the mudbrick bin was found in the back room of the house next to a few pithoi and a grinding installation, with a hearth and a stone table nearby. This room, from these pieces of evidence, served as a very active space for both the storage and preparation of food. The grinding installation consisted of a lower grinding stone set into a mudbrick foundation, right next to the bin (Fig. 3.14). Perhaps it was easier for the working individuals to remove grain from an open bin and place it straight onto the grinding stone. Likewise, in Building A, the stone bin was found in the same area as a large lower grinding stone and a hearth, as well as a bench (Fig. 3.12). Perhaps again it was for convenience, especially since this area of the house was separated from the back storage room with the pithoi. The open bins would have served well as temporary storage locations, unlike the security of a closed pithos safely tucked away in a back room. These open bins could have held the everyday grain ready for grinding, or perhaps sacks or a variety of other household goods.

A recent brief review of storage practices in the Early Iron Age across the Southern Levant noted a difference in the pattern of dedicated storage spaces between house types. The "Canaanite Courtyard House" at Early Iron Age Tel Dor and a house at Iron I Megiddo, like other courtyard houses, included dedicated storage rooms, with limited access and storage jars (Gilboa et al., 2014, p. 69; Arie, 2006, pp. 232-237). The authors contrast this with the lack of storage space or numerous storage jars in other regions and house types, such as the houses at Tel Batash, Ashkelon, Ekron, and four-room houses in general, though noting Building B at 'Umayri as an exception (Gilboa et al., 2014, p. 70). They argue that the four-room houses were thus characterized by being smaller, with multifunctional rooms and less storage, in contrast to the "self-sustaining households" in the courtyard houses, which carried out "complex activities" and "various cottage industries"

in the larger and more compartmentalized structures (Gilboa et al., 2014, p. 71).

The buildings at ʻUmayri clearly straddle the boundary between these two ideological interpretations, being fairly small, with multifunctional rooms, but also supporting self-contained and self-sustained households with evidence for numerous activities and some small industry (such as the production of "tuff" seals and basic lithic tools discussed below), as well as large amounts of storage. As the authors remark, this was part of the transitional nature of the Early Iron Age, a transition they see as primarily a socioeconomic one (Gilboa et al., 2014, pp. 72–73). Storage, and who controls the household's basic resources, becomes one way of investigating the nature of society and economy, and marking the transition from the Late Bronze Age to the Early Iron Age.

Porter's discussion of storage practices in the Iron I period, based primarily on Khirbat al-Mudayna al-'Aliya, also identifies particular differences between settlements. He contrasts the sites of al-Mu'ammariyya and al-'Aliya, where special buildings functioned as communal storage spaces, with the sites of ʻUmayri and Lahun, where storage was found only at the household level (Porter, 2013, pp. 91–96). At al-'Aliya, storage was found both in a communal building, as well as in the individual houses. The presence of both "storage strategies," communal and private, at 'Aliya is interpreted by Porter as "symptomatic of households' anxieties over the community's self-efficacy in the face of potential scarcity" (Porter, 2013, p. 96). Maintaining private stores allowed the households to retain "resilience" in the case of food crisis.

While ʻUmayri is provided as an example of individual household storage, it does not entirely match this pattern, as each house had dramatically different amounts of storage. While Building B was a domestic structure, it contained well over twice the amount of storage of the other buildings. It would be possible to argue that this building also acted as a repository for community surplus, while the storage jars in the other houses allowed a measure of individual control. How this surplus was acquired, whether through voluntary

contribution by each household, or given under the guise of tribute to a head household, or whether the inhabitants simply controlled more farmland, is unknown.

In conclusion, storage practices are an important window into the nature of the settlement and the relations between individuals, with control over the community's resources a statement on individual versus collective authority. Uncertainty over whose surplus was stored in the excess storage of Building B blocks certain conclusions, but would seem to emphasize the primacy of the Building B inhabitants in the settlement, whether they had access to more resources for creating a surplus, whether they were trusted by the community to store long-term surplus from all of the households, or whether they received surplus as part of their role in leading the community, with such responsibilities as hosting feasts.

4.3.2 Food Production

Another household practice that is of particular interest is food preparation. Identifying areas with food preparation activities is based on surface artifacts and permanent installations. No fixed "kitchen" area was identified in Stratum 12 in a particular area of a house with any consistency, but associated features did tend to cluster together, including a hearth or oven and a grinding installation. Other food preparation features include possible stone and plaster tables. The location and number of grinding tools are also informative, including notably large and heavy grinding stones on at least two upper stories, as well as numerous smaller hand stones. Possible ways that women would have overcome the architectural separation of these activity spaces could have included carrying out grinding activities on the roof, where they would have had free visibility and communication between households. These parts of everyday food production provide insight into the thought and organization of the household group of a basic activity.

The ideal kitchen of Stratum 12 did not have a fixed location, but included instead a number of features that tended to congregate together. Building B had a potential hearth

ring in the southern part of the courtyard and a very large basalt stone possibly intended for grinding (measuring 40 x 36 x 10 cm) fallen from an upper story in the central room of the house (Fig. 4.4). No other artifacts were found on the surfaces to clearly indicate food preparation areas, which may have taken place on upper floors. Buildings A, C, and D, however, all had areas where permanent installations, basalt grinding stones, and pottery indicated clear food preparation areas.

Figure 4.4: Building B quern(?). Source: MPP

In Building A, Room A1 contained a stone-ringed hearth, a mudbrick bench, and two stone-lined bins (Fig. 3.12). A large scatter of crushed pottery covered the surface, from which several jars, amphora, and jugs were reconstructed, as well as a lamp, a basalt bowl, several basalt grinding stones, and a large lower grinding stone (Fig. 4.5). This concentration of features involved with food preparation indicates that this room was primarily a kitchen area. A second potential area of food preparation is the back room (A3). A plastered stone feature in the corner was identified as the base for a ladder by the excavators, but may have instead served as a surface for food preparation (Fig. 3.10).

Building C's broadroom (C1) contained a mudbrick bin (Fig. 3.14), pithoi, a plastered grinding installation, a stone-lined hearth (Fig. 3.15), and a plastered stone feature (Fig. 3.16). Several basalt grinding stones were found in this area as well.

The back area of Building D, Room D1, had a small stone feature and an oven made

Figure 4.5: Large lower grinding stone in Building A. Source: MPP

from reused pithos sherds and mud plaster (Fig. 3.18). A smashed pithos was found on the surface near the oven. A large, lower grinding stone (about 80 cm long) was found in this area as well, but most likely fallen from the roof (Fig. 3.20).[6]

Four features from these descriptions stand out as of particular interest. First, the hearths or oven, which can provide information on the sharing of an important cooking installation in a settlement. Second, the small plastered stone features, which have no known archaeological parallel, but which are interpreted here as work surfaces. Third, the material, distribution, and quality of grinding stones. Finally, the position and number of grinding stones found in the collapse of the houses.

The placement of hearths varies from house to house. While everyone prepared their food in a similar manner, with the same type of grinding stones and cooking with hearths or oven, there is no apparent established location for this activity from the evidence thus far. This irregularity of cooking installation locations is not unique to ‘Umayri, and was also the case with Iron Age ovens studied at a number of Levantine sites (Baadsgaard, 2008, p. 31). What does differ is that the hearths and oven at ‘Umayri were found in inner

6. Zorn 2009 describes a large grinding stone set on a platform or in a mudbrick enclosure, which may be a better interpretation of the large grinding stone in Building D. There was no clear separation between the mudbrick collapse from the ceiling around the grinding stone and the mudbrick that was under the grinding stone, which has led to the interpretation that it collapsed from the ceiling. It is possible, however, that a mud platform was simply impossible to distinguish. Unlike the grinding stone in Building B, which was found upside down, this one was upright and against the wall, but there is no reason it could not have fallen in such an arrangement from a single-story roof.

rooms of the houses, with the exception of the possible hearth in the courtyard of Building B. The ovens discussed in Baadsgaard's study were all located in the potentially-open long rooms, courtyards, or exteriors of the houses. The cooking installations in Buildings B, A, and C were all stone-lined hearths. The nature of the hearth in Building B is contested, but the hearths in Buildings A and C had evidence of burning and had clearly been used as hearths. The cooking installation in Building D was a closed oven, instead of a hearth, made out of reused pithos sherds. Again, clear marks of burning inside indicate it had been used for this function. This oven type, with pottery sherds "sandwiched" within clay walls and heated from the inside fits the description of "*tannur*" bread ovens in the Early Iron Age Levant (Baadsgaard, 2008, pp. 26-28; van der Steen, 1991, p. 139). However, it should be noted that the terms "*tabun*" and "*tannur*" have recently come under criticism as highly problematic for archaeological examples. Ebeling and Rogel argue instead that the terms "ovens" or "thermal features" should be used for all such features (Ebeling and Rogel, 2015, pp. 346–347).

Research on ancient ovens in the Iron Age Levant has shown that ovens are often a shared installation between houses, when ovens in the archaeological record are found in easily accessible spaces, whether in front rooms, courtyards, or even in the streets of ancient settlements (Baadsgaard, 2008, p. 42). Ethnographically this has been shown specifically in rural northern Jordan as well as the broader Levant and Turkey as a way to save fuel and promote inter-household socialization (McQuitty, 1984, p. 265; Baadsgaard, 2008, p. 20; Parker, 2011, p. 612-613). In contrast, McQuitty's study of twenty ovens at archaeological sites in Northern Jordan revealed the opposite, with no evidence for shared ovens (McQuitty, 1984, p. 265). The difference in functions between an oven and a hearth poses the question of why only one of the houses at 'Umayri had an oven, the typical method of baking bread. If the oven in Building D were located in the front of the house, one could argue that it was shared by all of the houses. But instead, the oven is located

in the innermost room of the building, a place not easily accessible as with ethnographic and archaeological examples of shared ovens. This lone oven then, is not likely evidence of a shared baking facility in this settlement. While it is possible to bake bread over an open fire, such as that produced in a hearth, Avitsur argues that bread baked in embers would not have been the preferred daily method of baking bread due to its rough preparation and "unpleasant taste" (Avitsur, 1975, pp. 234–235). However, he does point out that pebbles, stones, or even broken millstones, heated in the hearth fire, would provide baking surfaces (Avitsur, 1975, p. 235). There was certainly no lack of broken millstones found in the houses, and this may have been one way they were used. It is also possible that as the front courtyards of the houses have not been completely excavated, more ovens would have existed in exterior areas with better ventilation. On the current evidence, it appears that baking over hearth or oven was an individual household activity, and not something shared at the community level.

The three stone and plaster features, possible work surfaces or tables, excavated in Buildings A, C, and D, were all found in the innermost rooms. No clear archaeological parallels have yet been identified, though it is possible that the smooth plastered surface would have been ideal for kneading dough or other food preparation activities (see Zorn, 2009). No unusual artifacts were found directly in association with the stone platforms to indicate a use other than food preparation. The excavators originally interpreted the feature in Building A as the base for a ladder, with three 'steps' leading to the top of the platform (Fig. 3.10) (Clark, 1997, p. 64). However, the feature would have provided a precarious base for such a ladder being so close to the wall, and the fine plastering would be unnecessary. In Building C, the stone feature is also finely plastered on top and no 'steps' are apparent (Fig. 3.16). Here the feature is in close proximity to the hearth and grinding installation, unlike in Building A. In Building D, the stone feature is quite small in comparison, though likewise tucked into a back corner, near other food preparation fea-

tures (Fig. 3.19). If these stone features were a key part of the "kitchen collection" in the minds of the 'Umayri inhabitants, it is curious that no similar feature was found in Building B. As with other familiar features missing from this building, such a feature may have been located on the second floor and lost in the collapse. For the other buildings, at least, a stone platform with plastered surface seems to have been an essential element of daily activity.

The naturally-occurring stone material for groundstone tools at hand to the ancient inhabitants at 'Umayri was limestone. Limestone bedrock shelves are today visible around the site, and likely would have been as accessible in antiquity, as this is the primary building material (Clark, 2003, p. 37). In discussing the trading patterns of ground stone tool materials, Ebeling and Rowan note that basalt was usually the preferred material, though it had to be imported, with limestone and sandstone, though more locally available, serving a secondary purpose in groundstone tool assemblages (Ebeling and Rowan, 2004, pp. 112–113). Recycling of basalt material from earlier strata at the site, however, must be taken into consideration of the assemblages (Ebeling and Rowan, 2004, p. 114). In 'Umayri's Stratum 12, taking into consideration only registered artifacts (excluding unregistered, discarded artifacts from the early seasons) from in and around the houses and the pit, a total of 105 groundstone artifacts were identified (Fig. 4.6).[7] Of these, 70% were basalt, 15% were limestone, and 8% were sandstone. Chert pounders account for 5% of the assemblage. There are some correlations between artifact type and material. Limestone, which was easy to access and carve, was favored for large objects such as mortars and door sockets. However, basalt was overwhelmingly favored for creating grinding stones, both upper and lower, as well as "bowls." Sandstone was primarily used for artifacts of uncertain use but which have been designated as "tools" or "whetstones." While it is pos-

7. Not all of these groundstone tools were still actively in use. The small wall demarcating Room A5 in Building A included a broken grinder being reused as an architectural element. Photo A79501, from the 2000 season, clearly shows a broken grinder fragment acting as part of wall A7J79:049. That other broken groundstone tools may have similarly been reused must be taken into account.

sible that some of the basalt material may have been recycled from previous basalt at the site, this large number of basalt used intentionally in grinding materials, where it is preferred across the Levant, would suggest that the inhabitants also had access to basalt from their regional trade networks.[8] Temoin, who studied a selection of groundstone tools from 'Umayri, argued that the majority of the Iron I assemblage (of which a handful came from Stratum 12) were small, "expediently" designed multiuse handstones (Temoin, 2004).

All of the buildings, and the refuse pit, contained groundstone artifacts, and all contexts contained a higher proportion of basalt artifacts, with fewer limestone, sandstone, and chert artifacts (Fig. 4.6).[9] That people in every household were involved in the grinding preparation of their own food is clear by this distribution, though notably, Building A contained twice as many basalt groundstones as any other context. Perhaps additional grinding activities took place in this building, as 15 of the 21 known basalt groundstones were complete or nearly complete, indicating the excess was not simply broken discards. As discussed further in the following chapter, cultic activities may have taken place in Building A. These cultic activities may have led to additional production of grain-based offerings, such as bread or cakes, that would have required extra grain grinding. Grain and flour offerings, as well as even finished grain cakes, have been associated with divine offerings in the ancient Near East, especially from the perspective of the biblical corpus, where such offerings are made in temples as well as in less formal contexts and associated by archaeologists with domestic religious practices (Leviticus 2, Jeremiah 7:18; 44:17–19) (Albertz,

8. Jennie Ebeling visually inspected the large basalt quern found in Building B and suggested that it was never used as a grinding surface, lacking telltale signs of grinding. She suggested it could have been dug up from an earlier stratum and was being used as an architectural element, or with intent to turn it into a grinding stone, as it is a very large basalt stone.

9. Because artifact collection policies changed from the earlier seasons to the later, for purposes of the groundstone distribution count I did include unregistered groundstone tools for the earlier excavated buildings, bringing the total count to 127. As many groundstone tools were only noted in excavation sheets for Buildings A and B and then discarded on site, a comparison by count would be otherwise inaccurate with the other buildings, where total collection was practiced. However, as these earlier artifacts were only roughly noted on the sheets as "grinder frag", for example, confirming the actual artifact material and type now is impossible.

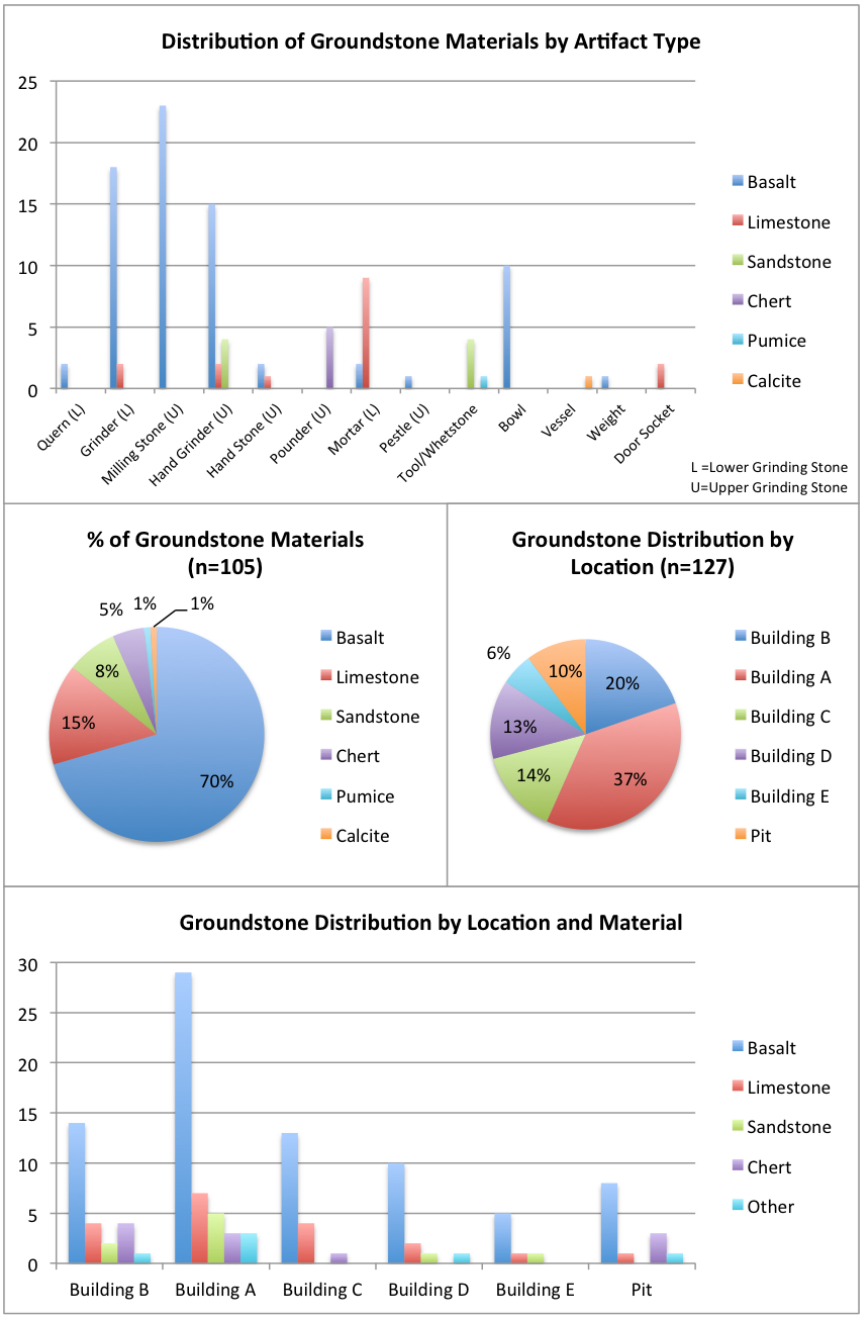

Figure 4.6: The Groundstone Assemblage

2012, p. 404; Ackerman, 2008, p. 141).

Stone bowls are a broad category at ‘Umayri, composed primarily of bowl-shaped basalt vessels that may have functioned in a number of ways, including as mortars (the designation of “mortars” at ‘Umayri is usually reserved for limestone vessels). The basalt stone bowls of Stratum 12 are one of the groundstone types that does exhibit variation across the buildings (Table 4.6). Instead of presenting a difference in sheer quantity, as with the comparison of all groundstone tools, comparing the bowls allows for a clear identification of difference in quality. The finest bowls in the assemblage are those found in Buildings B, A, and C, though the bowl in C is fragmentary. Buildings D, E and the Pit contained the crudest examples of bowl craftsmanship. The only bowls with intentionally carved bases, whether ring or tripod, were those found in Buildings B and C. Only 6 of the bowls were complete, and two of those appeared to be carved from previous groundstone fragments. The simpler bowls are not unlike those found in other assemblages, labeled as bowls or mortars, such as examples from Late Bronze and Iron Age Dayr Alla (Petit, 1999). The finest bowl in the collection, Bowl #3181, has a slight parallel with a limestone tripod bowl at Tell Jemmeh (Rowan, 2014, p. 936, Fig. 23.10f) and better parallels at Jezreel (personal communication with Yorke Rowan, December 2014; Rowan also suggested that Bowl 3181 may actually be a re-carved tripod vessel from an earlier stratum, as the relief carving and knobby legs could be remnants from this type). The tripod vessel type exists throughout the Bronze and Iron Ages (Rowan, 2014, pp. 935, 937). The larger ring-based shallow-bowls (5215 and A100011) have parallels with basalt dishes, mortars, shallow vessels, or platters found typically in Late Bronze Age contexts, including mortuary and sacred (Rowan, 2014, p. 937, Fig. 23.10f). Similar examples derive from the nearby Late Bronze Age temple/structure at Amman (Hankey, 1974, p. 177, Fig. 3.51–52 and further references) and Late Bronze Age temple contexts at Bet Shean and Hazor (Ebeling, 2001, p. 62, Fig. 1.2, p. 65, Fig. 1.4). Stone Bowl #1989 with distinct walls and a flat

base, fits with Wright's classification of a "Platter", though she is writing on prehistoric vessels (Wright, 1992, p. 75, Fig. 11.114).

With a strong presence of Late Bronze Age types, especially in fragmentary or modified form, it is likely that some of these vessels are reused from earlier strata onsite, and not recently produced. The simpler forms may have served the actual function necessary for bowls/mortars, as each building, with the exception of Building C, contained a complete stone bowl. Where more than one bowl was found in a building, they did not concentrate in a single room of the building. Some were found on the surface (Bowl 6823/3130 in Room A1), while others were found in the debris off the floor, indicating an origin in an upper floor (Bowl 3181 in Building B). Without further studies of these bowls, their actual function cannot be determined. However, their differences do assist in noting that there in inequality in the distribution of finely carved, possibly heirloom basalt bowls. While everyone had access to imported or reused basalt, the quality differed.

Groundstone tools are an important part of identifying areas of food preparation activity (Ebeling and Rowan, 2004, p. 114). The high number of grinding stones found in the debris tumbled from upper stories or the roof in the Stratum 12 buildings raises an interesting point. Though heavy, it is possible these tools were brought up to the roof and that grinding grain took place on the roofs as well as on the ground floor. As Meyers notes in her study of Iron Age women, grinding grain was "the most time-consuming part of a woman's workload" and for a family of two adults and four children, would have required at least two hours of work each day (Meyers, 2013, p. 130). As spaces that were visible to other households, spaces where the women could gather in the open-air, and spaces where they would spend a significant amount of time preparing the household's most essential food item bread rooftops should be taken seriously into consideration in an ancient village. With only one courtyard preserved, that of Building B, found walled and entirely private, it would be curious if the women of the houses chose to do their daily chores on

the rooftops as a way of circumnavigating the intense isolation of doing all of their own chores without communal facilities to gather around for daily interaction. As shown in the literature, shared facilities were one way of socializing, with shared neighborhood facilities at Tel en Nasbeh (Brody, 2011) and communal ovens as a social gathering place for women (Lutfiyya, 1966, pp. 30–31). Without shared facilities, rooftop activity may have added a much-needed social component for the women of the households. If some of the grinding activities could be taken to the roof where the women could share in their activities, it would have provided a venue for inter-household interaction among the women, as the attached nature of the houses would have allowed for very close proximity between rooftops. Meyers has emphasized the empowerment of women through gathering in "informal networks" while carrying out the daily food preparation or other productive activities (Meyers, 2013, pp. 139–146), and it is possible that the women of Stratum 12 were able to connect in this way.

While living in Egypt for a year, I visited one of the rural villages in Upper Egypt near Qena for a two-week stay with the family of three of my students. The house was a typical multi-floored extended family complex with nuclear family groups occupying each level. There was a small metal oven in one of the apartments that was used for specialty holiday baking, carried out together by the women. However, the main oven used for baking bread was on the roof in its own little mudbrick house, a four-walled, roofed enclosure, with an open doorway. Occupying most of the space in this room was a large mudbrick oven with a chamber below for burning wood and garbage and a chamber above for baking bread. The women of the household would gather up on the roof, stir together their dough in a giant bowl, and after allowing the bread to rise, they would bake it in the large oven. The roof was primarily the domain of the women. An elderly grandmother spent most of her days sitting up on the roof with her back to the oven shack. What stood out about this experience was the visibility of the rooftop community. From the roof of this particular

building, we could look out and see all of the surrounding, but separate, rooftops full of women going about their chores. Some were hanging out laundry or beating rugs, others were also baking bread.

While this was not an intentional ethnographic research study of rooftop activities, a similar experience of rooftop culture is found in ethnographic literature, including ancient historic sources on rooftop activities, particularly of a cultic nature (Reich, 1992, p. 14), (Daviau, 2001, p. 200), and for storage (Wilson, 1906, pp. 69–70). What has been more difficult to find is a record of the inter-house social role of rooftops. Kramer mentions rooftops briefly as pathways used to visit other households and as the location of extra storage space (Kramer, 1982, p. 88, 111). In Moroccan society, the rooftops were noted as a location where women spent much of their time, as well as "an important additional living space where the women and the children of the house relax" (Geertz et al., 1979, pp. 62, 321). Otto argued that food preparation activities such as "grinding barley or malt" took place in an upper room or on the roof of a Late Bronze Age settlement, though she attributes this location's choice to the fact it would have been "better ventilated" (Otto, 2012, p. 181).

What do we know about the inhabitants of ʻUmayri in regards to food production? They were not afraid of moving heavy objects. Not only did they haul numerous large pithoi, each weighing a considerable amount, probably over 55 kg while empty (Clark and London, 2000, p. 105), into the innermost rooms of their houses and then upwards to upper stories and roofs, but the two largest lower grinding stones found were both fallen from upper story rooms or the roof. The grinding stones and grain fallen from the roof are evidence that storage or drying and food preparation took place on the rooftops or upper rooms. If the women did gather on the rooftop for daily activities in order to allow easier communication between households, it provides a contrast to the strict separation established by the architecture.

4.3.3 Domestic Manufacture: Spindle Whorls

In regard to non-food-related activities, the artifacts do indicate a number of other economic activities taking place in the houses. Artifacts related to textile production were spread throughout each of the houses (except the partial Building E) including spindle whorls, a bone weaving spatula, a bronze needle, and perforated basalt weights. Most of the spindle whorls, 37 in number, were crudely made of reused ceramic pottery sherds. Two were carved crudely from stone, found in Buildings B and C. Three were finely carved from ivory and bone and were found in Buildings B, A, and C. The ratio of ceramic to stone/bone/ivory is similar to those spindle whorls and fragments found in the refuse pit, where 39 were ceramic and two were bone.

A single spindle whorl each was found on the surfaces in the courtyard pen of Building B, just outside of the alcove, A4, in Building A, and in the back room of Building D. This contrasts considerably with the number of spindle whorls and spindle whorl fragments found in the buildings' collapse, including 5 in Building B (and a further 13 found in the areas immediately to the north and east of Building B and which may have originated from collapse as well), 9 in Building A, 5 in Building C, and 6 in Building D. In addition, two large basalt weights in Building B, and a bone spatula and bronze needle in Building A were also found in the collapse. This distribution of textile-related artifacts points to textile production activities in the upper rooms or on the roofs of the houses, as was possibly also the case at Iron II Khirbat al-Mudayna (Wadi ath-Thamad), where loom weights were found fallen from an upper story or roof in Building 200 (Daviau, 2006, p. 20). Ethnographically, Kramer noted that women used horizontal looms in open spaces like courtyards and village alleys for weaving wool for domestic use (Kramer, 1982, p. 44). At the Iron II site of Tel Halif, Hardin identified textile activity in one room of a house, with loom weights from a likely loom installation, and other weaving and spinning equipment, including spindle whorls and perforated stones, on the surface of the room (Hardin,

2010, pp. 146–147). At Iron I Tel Dor textile-related artifacts were found in the courtyard of the house, though they consisted of only a single loom weight and stone spindle whorl (Gilboa et al., 2014, p. 58).

Cormack, who studies the lithic remains at 'Umayri, suggested that people were making their own lithic "*ad hoc*" drills that would have been used to fashion the reworked ceramic spindle whorls (Julie Cormack, personal communication, November 2012). While the study of the lithics of Stratum 12 is incomplete at this point, three of these *ad hoc* drills so far have been identified in Building A (Table 3.3).[10] The lithic tools combined with the wide distribution of textile-related tools in the houses indicates that textile production was not a community-organized industry at the site, but that people manufactured their own textile tools and textiles as needed on a household basis. The emphasis on wool production in sheep herding practices interpreted from the faunal remains found in the nearby refuse pit support the claim of a lively local textile tradition (Peters et al., 2002, pp. 319, 327).

4.3.4 Domestic Manufacture: "Tuff" Seals

An intriguing aspect of the local economy centered on the household production of "tuff" seals. Six complete seals made of a material traditionally designated "volcanic tuff" but which recent study has determined to be instead a "microporous chert," were found in the refuse pit, an unfinished seal of the same material was found in Building C, and a raw block of the material was found in Building A (Table 4.4).[11] In addition, further "ad hoc"

10. While lithics were collected in Building B as well, the lithics from several seasons were lost, which seems to include all lithics from inside Building B (personal communication with Larry Herr, January 2015). The lithics collected from Buildings C, D, and E are currently under study.

11. Since the first artifact carved from this material has been found at 'Umayri, it has been designated "volcanic tuff" in both the database and final publications. However, recent study by geologist Kevin Nick determined that the material is neither volcanic tuff nor calcareous tufa. It is instead a microporous chert, composed of mineral quartz with small amounts of calcite and clay. Further study on the possible origins of this raw material in the region are necessary, but it is probable the material came from the immediate vicinity, as it is so far unknown from other archaeological sites, even from nearby and near-contemporary

lithic tools, this time awls, were likely used in the carving process, and were found in both Buildings A and C (Table 4.3). Cormack suggested these awls were used to carve and drill the designs found on the seals (Julie Cormack, personal communication, November 2012). Rosen argued a similar engraving function of awls in his study of post-Stone Age lithics, where pointy-ended lithics were likely used "as engraving tools" due to the type of wear he identified (Rosen, 1997, p. 68). These tools, the unworked "tuff," and the seals found in two of the houses suggest that there was an active household-level tradition of seal carving at 'Umayri during the Early Iron Age. Herr had earlier proposed that 'Umayri was a center of seal production, but was not yet able to be conclusive without the evidence now present (Herr, 2000, p. 176). The discovery of further "tuff" seals and raw blocks of "tuff" in other locations and throughout the Iron Age indicate a long-lived local "tuff" seal production, one that may have experienced a transition in the households of Stratum 12 at 'Umayri, and one that made use of a unique local material.[12]

The "tuff" seals were made in more than one style of shape or decoration. Shapes include a human foot, cylinders, cones, rectangles, and amorphous shapes. Decorations range from clearly identifiable figures, such as a loaded quadruped on the base of the foot,

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Sahab. Methods of identification included the use of x-ray diffraction analysis to detect the presence of feldspar, which would be expected in volcanic tuff and which was absent; and SEM to view the crystal formation, which indicated a different arrangement from classical calcareous tufa (Personal communication with Kevin Nick, Loma Linda University, April 2016). For the purposes of this dissertation, the material will be referred to as "tuff" with parentheses to maintain continuity with the published records, but with the understanding that it is not actually volcanic tuff.

12. See the above footnote on the material. Larry Herr, January 2015, noted that "tuff" seals and raw blocks of "tuff" have been found around the site from various periods. I know of two raw "tuff" blocks that have been collected, the one from Stratum 12, and another one from an undated agricultural terracing wall near the surface. Herr's 2000 article on Stratum 12 at 'Umayri references the numerous "tuff" seals found and compares them to Keel's Philistine "anchor seals" and suggests here for the first time that 'Umayri was a production center for seals with a much wider distribution than Philistia (Herr, 2000, p. 176). In Eggler's publication of the seals from the 1984 to 2000 seasons, he dates all of the "tuff" seals (34 total) to the Iron Age, with the exception of three, including seal #B966184 from the Stratum 12 refuse pit (Eggler et al., 2002). These three seals he dates to the LBIIA "or somewhat later"; the seals include two cylinder seals, including #B966184, and a rectangular seal with slight markings. These seals may indicate an even earlier start on the seal-carving tradition at 'Umayri, with reproductions of other styles in local materials. More seals have been excavated since and await final study and publication, though I have listed all Stratum 12 seals in Table 4, published or unpublished.

to illegible/abstract linear markings. The cone and amorphously-shaped seals are reminiscent of the more finely-carved, pictographic conoid seals common from the Early Iron Age in the Southern Levant (Buchanan and Moorey, 1988, pp. 15–17), as well as Keel's "anchor seals", as pointed out by Herr (Herr, 2000, p. 176), (Keel, 1994). The foot and cylinder seals have parallels elsewhere as well (Eggler et al., 2002, p. 284). The "tuff" seals were found alongside seals made of "frit" and possibly ceramic, as well as limestone, and include the familiar scaraboid shape, though crudely worked. Conoid seals with patterns of incised lines and drilled dots are found in Early Iron Age contexts throughout Palestine, made of soft limestone (Blockman and Sass, 2013, pp. 909, 915): at Megiddo (Sass and Cinamon, 2006, pp. 412, 413), at Mount Ebal (Brandl, 1987, pp. 170–171), at Beth Shean (Brandl, 2009, pp. 655–666), and at Tell el-Farah, South (Braunstein, 1998, p. 205). Similarly simply carved seals, made of limestone, were also found at nearby Sahab (Ibrahim, 1983, pp. 47–48, 53). The range of styles found in Stratum 12 indicate that Late Bronze Age and Iron Age seal traditions were both being used at the same time at ʻUmayri, with well-known, internationally-influenced styles such as the cylinder and scarab sharing space with the crude amorphous/conoid/anchor-style seals, both carved out of a local material.

All of the finished seals were found in the refuse pit, with only the raw materials, tools, and unfinished seals found in the houses. The seals were perhaps not designed for functional use in Stratum 12. No impressions have been found with the same designs as on the seals, though other seal impressions have been found on jar handles (see Chapter 6). No seals were found on or near the bodies of the men and juveniles caught in the Building B destruction, so they were possibly not worn on a daily basis by such individuals. Seals have been found in Early Iron Age burials in Transjordan associated with the interred. In the LB/Iron I cemetery at Tall as-Saʻidiyya, Egyptian-style seals were worn with beads in "amulet strings" or as finger rings, and were associated with status (Green, 2013, p.

427). In the later Iron I/Iron II phase of the cemetery, where conoid-style seals first appear, Green notes that they may have shifted to a more protective function for juveniles (Green, 2013, p. 427). How these seals might have been used by the living at 'Umaryi is unclear, though they may have had a ritual function related to their provenance in the large refuse pit. In her argument for feasting at the settlement, London discussed the seals and other, valuable, artifacts found in the refuse pit as potential discards or donations made by wealthy, high status individuals or families during "important events" (London, 2011b, pp. 26, 27). While it is questionable that some of these seals, especially the cruder examples, would represent high status at 'Umayri, the concept of ritually-significant discard or donation patterns is worth exploring further as an action that could have been taken by all households of the community.

In her article on Mayan storage practices, Hendon offers one explanation of why valuable artifacts are placed beyond access in caches. She explains such deposits as "a kind of storage that focuses memory and practice within a particular spatial frameworkspots on the landscape that are remembered. Their presence informs a locale with meaning." Even though the artifacts disappear from sight, they "continu[e] to be part of ritual events carried out after their deposition" (Hendon, 2000, pp. 47–49). The identity of a particular household could be tied into the seals owned by members of that household, seals which might have then been discarded in the settlement's refuse pit during ritual events or feasts. These seals, discarded publicly in the spatially-meaningful communal pit, would have been remembered at each succeeding feast as ritual objects potent with the identity of the depositors.

Bringing seal practices closer to home in the Southern Levant, Chesson has argued that cylinder seals in her Early Bronze Age households "may have been used by house members to assert a particular identity within the household compound, or within the greater community. Cylinder seals could have acted as powerful representations of an individual's

or group's knowledge (of their use, or their making) or access to ideas and resources from neighboring regions. This knowledge, in turn, may have bolstered a house's or kin-group's status within the community" (Chesson, 1997, p. 208). Further, she argues that while this identity was not the same as that as the cultures from which the cylinder seal originates, "they may have simultaneously co-opted certain powerful symbols from these different cultures to strengthen their own position and authority within the urban community" (Chesson, 1997, pp. 207–210). Chesson sees cylinder seals as "house heirlooms and powerful legitimating tools which could have been worn as costume, handed down through the generations", a key part of "a house's immaterial wealth" (Chesson, 1997, p. 210). It is possible that some of the seals of 'Umayri's Stratum 12, especially those in older styles, may have been household heirlooms, while the new Iron Age-style seals represented new traditions and younger households, and were both deposited in the refuse pit as symbols of the members of the wider community, as well as provide a window into a time of transition in seal traditions at 'Umayri.

In the Iron IA stratum that shortly succeeds Stratum 12 at 'Umayri, a large domestic structure has been excavated on the southwest corner of the tell, less than 20 m south of Building E.[13] The total area of the house, at 170 m^2, is larger than any of the Stratum 12 houses, though the core of the building, which is based on a four-room house plan, is only 100 m^2. The house had two ovens and a hearth and numerous cooking pots, grinding stones, and textile-related artifacts that all point to a domestic function. The house, however, was also rich in small personal items, including several beads. Most remarkably for this study is that there were four of the locally-made conoid/anchor/amorphous "tuff" seals found in the building (Table 5). Two were finished, incised seals, one was incised and broken, while the third was unfinished, indicating the continuation of domestic

13. This building has been excavated under my supervision from 2008–2012. The information in this paragraph is derived from my unpublished excavation reports for the 2010 and 2012 seasons, and will appear in the final volumes associated with those seasons. The seals mentioned are Nos. B120006, A120056, A100072, and B100013.

seal production. The finished seals, however, were not thrown away outside of the house. The four seals came from distinct areas of the house, but because they were found in the mudbrick collapse, pinpointing their original locations in an upper or lower room is difficult. What is clear is that they were not being used in a single room at the time of the abandonment of the house. Two of the seals (B100013, A100072) form tapering cylinders with pierced holes in the smaller end and incised lines decorating the surface of the larger end. A third seal (B120006) is a "D" shaped pendant, decorated on multiple surfaces. The fourth seal (A120056) is an undecorated, highly polished pyramid, taken as an unfinished seal. These seals are close in form to Stratum 12 seals A020048 (also cylindrical), A020005 ("D" profile), and B020029 (tapered cylinder). The same local tradition of seal style carries through from Stratum 12 to the following phase, and from the plentitude of "tuff" seals found in later Iron Age layers, continued well into the late Iron Age.

The contrast of discard and non-discard of seals between the two settlements separated by a very short period of time would suggest that either the nature of seal use changed at ʻUmayri, or that we have different phases of seal-use represented in the two settlements: one phase in which seals were made and used or worn, and a second phase in which they were discarded in a public place. The pierced nature of the majority of the seals indicates they were made in such a way that they could have been worn, and if worn around the neck or wrist, would have been easily and visually associated with specific members of the community. The location of three such seals in the later Early Iron Age house may suggest that three seal-wearing individuals resided in this building.

The overlap between two differing styles of seals in the same refuse pit provides access to a unique moment at ʻUmayri, when the traditions of the Bronze Age were beginning to change and were being shaped into the practices that would continue at Iron Age ʻUmayri. The contrast of discard in Stratum 12 and the non-discard of seals in the following stratum in House M could be influenced by the small sample size. However, if this pattern

is maintained in future excavations, it does emphasize the complete discard of finished seals in Stratum 12, and the presence during this transitional period of overlapping seal traditions, as all non-conoid/amorphous seal types are lacking from House M. The seals in Stratum 12 could have been used to represent households or individuals, serving as an emblem of identity or even symbolic protection. If they were then deposited in the refuse pit during particular ritual events, they would have passed into community memory. In this scenario, the seals, though discarded publicly in a spatially-meaningful communal pit, would be remembered and connected to the identity of the depositors at future events, an act that would serve to join the community together. Creating and using their own type of seals, particularly those carved from a material that is likely unique to ʻUmayri and its environs, would have further strengthened a sense of local identity.

4.3.5 Rolling out the Roof(s)

A final interesting consideration is that only one roof roller was found among the five buildings. A limestone cylinder nearly a meter in length was found standing on end in the debris in the back room of Building B (Fig. 4.7). Archaeological and ethnographic accounts of roof rollers are plentiful, indicating their use for the upkeep of flat-roofed mud-brick houses after the rainy season (Holladay, 1992, p. 309; Curtis et al., 1993, p. 7; Yon, 2006, pp. 162-163; Daviau and Dion, 2002, p. 37; Meyers et al., 1982, p. 43; Bowman, 1937, p. 109; Barrows, 1872, p. 389; Rice, 1910, p. 249). From comparative Iron Age sites: at Iron II Khirabt al-Mudayna (Wadi ath Thamad) on the Karak Plateau, two roof rollers were identified, one each in Buildings 400 and 200 (Daviau, 2006, pp. 22-23; Daviau and Dion, 2002, p. 37). A single roof roller is identified at Tel Hevron in the collapse of a four-room house (Eisenberg and Nagorski, 2002, p. 92). At Late Bronze Age Ugarit, where many more houses were exposed, Yon states that roof rollers came from "nearly every house" (Yon, 1992, p. 32), while at Iron Age Tell Beit Mirsim they discovered so many

roof rollers that they stopped describing them after four examples, and state that there too, "many households had their own roof-roller" (Albright, 1943, p. 51–52).

Figure 4.7: Limestone roof roller found in the collapsed debris of Building B, Room B3. Source: MPP

Ethnographically, at Hasanabad, Watson remarks that only a few people had limestone roof rollers, she names two, and that "there is one at the Qala for use on the landlords' buildings", otherwise villagers made their repairs by foot (Watson, 1979, p. 119). During construction, she further notes, "Those who own, or can borrow, a roof roller use it to aid in plastering the floor. Dirt and mud are laid down and consolidated with the roller, or by tramping, to form a hard, smooth surface which is renewed whenever it is thought necessary" (Watson, 1979, p. 121). In contrast, at Shirdasht, "There were many more limestone roof-rollers lying about on and near houses" than at Hasanabad, and likewise, at Ain Ali, "Nearly every house has a cylindrical, solid limestone roof-roller, about 50 cm long by 20 cm in diameter. The roller has a wooden handle, and is used after heavy rains to pack the roof clay and keep it from leaking" (Watson, 1979, p. 241, 283). Dalman noted that every Palestinian home had, as "no house is without" its roof roller (Dalman, 2013, p. 196).

The solitary roof roller found in 'Umayri's Stratum 12 was likely shared by all of the houses attached in this one neighborhood, though it is also possible that its use was re-

stricted to the inhabitants of Building B and that the other households had to make do with their feet. Further excavation of other, unattached, houses at ‘Umayri would shed more light on the sharing or exclusivity of roof roller use in the Early Iron Age. If shared, the roof roller would be another point of cooperation and contact between the various households, a point that, as will be shown in the following chapter, would have been one of many.

4.4 Conclusions: Social Identity at the Household Level

At the very end of the Late Bronze Age at ‘Umayri, a temple went slowly out of use, a temple located just north of Building B. It is possible the inhabitants of Stratum 12 had also been the inhabitants of this previous stratum and were aware of the temple's location, as they did not build above it. Perhaps, as has been suggested for the transition from the Late Bronze Age to the Iron I period at Hazor, the end of the Late Bronze Age at ‘Umayri was related to social collapse, and not a cataclysmic event that relocated the locals (Zuckerman, 2009). The new settlement of Stratum 12, with its five stone and mudbrick houses joined along the western wall of the settlement, marked a drastic change from the monumental architecture of the previous phase. This new architecture focused on the household, enclosing the activities and stored goods of each. While the larger, better-equipped houses may represent predominant households or individuals, the overall picture is of closely-related households working visibly and invisibly side by side, each in their own work areas, to ensure their daily bread.

These five buildings are only a small portion of a dataset that is beginning to reveal intriguing patterns to help us understand the household and community practices of the Early Iron Age inhabitants at Tall al-‘Umayri. It is possible to gain a better understanding of this early society by looking at the practices around an object and its space, investigating first the functional meaning and then extracting possible social meanings. Looking

beyond the static remains, it is possible to imagine the flexible and changing world represented by the small amount that is left. Using the archaeological evidence and interpreting it with the assistance of ethnographic and historical sources, we are able to identity the ways that mundane, everyday practices contributed to the emerging social identity of this one small village as they opened the Iron Age in their region.

By using a household archaeology practice approach to studying these five domestic structures, it has been possible to recreate a sense of the households that lived in them, their group size and the relative status that the construction of their houses conveys. Using the domestic context as the setting of the everyday and considering production and consumption patterns as the practices of the everyday follows the identity-practice model for studying social identity at the household level. By studying the similarity of construction techniques and conceptual layout among the houses, as well as the spacing and boundaries between houses, one can begin to understand the thought behind the organization and realization of space. Stratum 12's houses were laid closely together, sharing walls that required cooperation. While built with the same basic concept of stone and mudbrick, the houses exhibited disparity in the use of certain materials, such as wooden pillars, as well as in size. The size variation and amount of storage in the buildings fit with the range of house sizes in the Southern Levant during the Early Iron Age, and likely supported both nuclear and extended families. The physical disparity evident among the buildings is the first of many points that set Buildings B and A apart from the other buildings. By focusing on the similarity of domestic activities, which were present in all five dwellings, one can probe methods of production for insights into the practices that united the settlement. The distribution of storage facilities, hearths, and grinding installations indicate that each household organized its own storage and production of food. The various types of food storage that occur in the settlement, including ceramic pithoi, mudbrick and stone bin, provide evidence of a flexibility in the concept of storage, possibly due to convenience of

storing grain and other goods near grinding and cooking installations. Here again, Building B is set apart by the surplus of storage included in its innermost rooms. The cooking installations, both hearths and oven, as well as the plastered stone features, are necessary elements of the Stratum 12 "kitchen" that each house included, except for Building B. Every household's inhabitants engaged in the same economic activities of producing textile tools and manufacturing their own textiles, using (and reusing) basalt for grinding implements, and crafting and using seals. The women of the houses may have further created their own shared social space on the rooftops for daily activities such as grinding grain. These elements all build a picture of a small agrarian village where each household was in charge of its own production of their everyday necessities, from food to clothing.

The production and use of seals are one way of looking at how practices in Stratum 12 fostered social interaction from the household to the community levels, helping to create and maintain a local social identity in the production and use of their own seals out of a unique local material. The choice of material may have been a matter of convenience, dug out of the caves and limestone shelves around the site. But as they used these seals in their rituals or everyday lives, the material choice would have been another element tying them to their specific landscape.

The higher status implied by the better construction and larger sizes of Buildings B and A is further reinforced by the larger amount of storage each contained, Building B in particular. In addition, Building B contained artifacts that were likely of an heirloom origin, including two finely carved basalt stone bowls. An alabaster vessel found in this house was likely another heirloom artifact, found only in Building B (see Chapter 6 for more details on this vessel). The inhabitants of Building B possibly curated these older artifacts, or may have claimed them when rediscovered on site during excavation for building material. However they came by them, their presence in Building B helps to further set it apart. These two buildings special natures will be further explored in the following chapter.

This research into the households at ‘Umayri is just a beginning. Further excavation is needed to continue to build the dataset, but these five buildings and their contents provide the basis for further questions and, as more structures are excavated, an initial set of patterns for comparison. For now, we have a basic understanding of the households and the everyday activities their members engaged in simultaneously, creating a shared idea of the everyday across the settlement. From this study of the daily activities of the households, based on the artifacts and installations, the next chapter takes a step back and looks at social identity at the community level, focusing on the practices that united and divided the inhabitants on a daily and seasonal basis.

CHAPTER 5

COMMUNITY PRACTICES

5.1 Introduction: Community Interactions and Shared Identity

The previous chapter on households at Early Iron Age ‘Umayri focused on the everyday activities of the households as individual units, though comparing their activities and possessions. In this chapter the households will be explored as members of a larger community that interacted together on a daily basis. These community-level practices could work to divide as well as to unite the households in the creation of their own local shared identity. At this point it is difficult to state with assurance how the community originated, whether the inhabitants came together from outside and built a new settlement at ‘Umayri during this period, or whether they were already established at the site and rebuilt upon the ruins of their previous settlement. What we can focus on here is how their daily interactions worked to maintain community ties, and how those interactions might have created a shared sense of purpose that wove the community together, even in the face of inequality and differences in how the individual households lived.

In his study of the Maya, Yaeger discusses interactions at the community level as “practices of affiliation” that help in “constructing and reinforcing a local community identity while simultaneously highlighting the differences between the members of that community” (Yaeger, 2000, p. 131). Yaeger identified these practices in feasting events and in the construction of the largest houses of the community, which would have required labor from outside the household.These two sides of community practices, the ones that divide and the ones that unite, are here explored at ‘Umayri. Community divisions are created around degrees of differentiation including wealth in its various architectural, material, or dietary manifestations, as well as spatial planning. Community unification is encouraged when activities bring the group together including building the shared defenses, taking

part in harvests and animal care, and joining in rituals or feasts together.

Looking closely at the archaeological remains at 'Umayri and using the approach developed in this research, it is possible to identify and interpret these different practices. In this chapter, comparative archaeological work and ethnographic and ethnoarchaeological studies prove particularly useful in interpreting the archaeological record left by a small, rural village in the early Iron Age. Drawing on a number of studies of architecture and artifacts in the ancient Near East helps to interpret the degrees of differentiation that existed in the settlement. Understanding the social and economic nature of twentieth-century rural villages can help interpret the scenarios that involved otherwise disconnected artifacts and recreate the pattern of village life and interconnectedness that surrounded community projects, the agro-pastoral system of subsistence, and religious ritual and feasting events. While there are a limited number of ethnographic studies that have provided useful information on these specific topics, resulting in a particularly heavy reliance on the work of Kramer and Watson, the value of their insights into the daily life of small rural communities outweighs the downsides (Kramer, 1979, 1982; Watson, 1979). There are shortcomings in using ethnographic analogy, and being overly reliant on two sources does pose the risk of succumbing to individual idiosyncrasies and interpretations (Wilkinson, 2010; Gould and Watson, 1982). Where possible, other ethnographic studies are brought in, including those by Dalman, Lutfiyya, and others who have observed life in twentieth-century Middle Eastern villages (Dalman, 1987; Lutfiyya, 1966).

5.2 Community Practices that Divide

5.2.1 Introduction

What divides a community, setting one household apart from another? Some examples explored here include differences in architecture and material goods, and boundaries set by

spatial organization. The variation in architectural size and quality, in the quantity and variety of household goods, and in how people moved between houses provide evidence that the Stratum 12 village was not a true egalitarian society, as some scholars identify an egalitarian spirit in the Early Iron Age highland communities (Faust, 2006). These differences may have been minimal in the face of the similarities they shared by the basic repetition of activities necessary for daily survival. However, they were differences that provide an angle to explore how the villagers set themselves apart in physical, concrete ways, setting their differences in stone, in the case of architecture. They also set themselves apart in ways that are less tangible but nevertheless available for study through the archaeological record.

The evidence for actual physical differences in architecture and material goods was presented in the previous chapter and briefly discussed. Here ethnographic and other archaeological studies will be brought in to broaden the discussion of what it means to have differences between houses and households. Finally, looking at the boundaries between the houses will help set the base line for comparison of spatial closeness and separation with other settlements in the following chapter.

5.2.2 Big House, Small House: Architectural differentiation

The variation in size and construction quality/labor expenditure of the five domestic structures at 'Umayri led to an argument in the previous chapter that there was a degree of disparity between the householders. This was evidenced in not only the inhabitants' access to the raw materials for building, but also in the skills and labor necessary to construct specific building types, for example, using pillars to create wider rooms in two of the houses but not the other three. Here it would be informative to take into account some of the aspects of architectural differentiation discussed from ethnographic and archaeological accounts.

From Kramer's ethnoarchaeological study of an Iranian village, she concluded that wealth, or variation in economical rank in the village, was less about money and more about "differential access to and control of the means of production", which included land and livestock (Kramer, 1982). Houses, and the "comparatively greater expenditures on building materials" for larger house complexes, could reflect this variation not because wealthier people simply had larger houses and more room, but because people rich in land and livestock needed extra space to store the produce of their land and stable their flocks, as well as housing more family members to work the land (Kramer, 1982, pp. 57, 262–263). Watson's study of another Iranian village noted that "housing in Hasanabad reflects relative wealth and social position rather closely" (Watson, 1979, p. 292). The poorer families occupied the smaller and more run down buildings, while the wealthier families occupied the larger, well-maintained buildings. There she noted expense of wood as one reason that only some families could afford "architectural extras" like porches or second stories on their houses (Watson, 1979, p. 292).

An archaeological study focusing on construction methods in the ancient Southern Levant further testifies to the variation in access to resources that added to the labor necessary for building larger structures, where rooms that were only 2 to 2.5 m in width could be relatively easily roofed using wood that was smaller and easier to find and transport. It was only when trying to roof larger spaces, say 4m, that you needed logs so large and heavy that transporting them was more than double the difficulty (Netzer, 1992, p. 24). The use of pillars allowed for the creation of larger spaces without needing to hunt down and transport mammoth trees, but still required an increased use of wood for the pillars and extended roof space. Along the same line, buildings with upper stories also increased the use of materials, wood included, and labor. Stager argues that a great deal of wood was used in upper stories in Iron Age houses, noting that the good resources of timber available in the highlands would have easily filled the needs (Stager, 1985, p. 15). Watson

and Kramer both noted the addition of a second story as an "extra" that distinguished a house from its neighbors (Watson, 1979, p. 292; Kramer, 1982, p. 94). As Kramer notes about two-story houses in Aliabad, "Houses are never constructed as two-story buildings; second-story rooms are only added several years into a compound's history" and are desirable because they are cooler in summer (Kramer, 1982, p. 94). Whether or not ancient houses at 'Umayri were designed as two-story from the beginning of their construction or not could be debated. What the ethnographic studies do emphasize for this study is a rather obvious statement: larger houses need more materials and labor, and not everyone chooses to allocate to, or has access to resources and labor time for, a larger house right off, or ever.

These examples, based on observation of archaeological parallels and rural, agro-pastoral villages in Iran, provide a comparative basis for examining and explaining the differences found in house size and quality at 'Umayri. Kramer in particular notes that it is not possible to base an analysis of economic wealth in a settlement solely on one factor or another, "that no single feature of material culture is a definitive or invariably useful measure of variations in households' rank", but that a range of factors, including architecture and material goods, help distinguish the economic position of households in a settlement (Kramer, 1982, p. 83). Here, taking into consideration the skills and labor necessary to build the larger houses at 'Umayri, the inhabitants of Buildings B and A show considerably greater "wealth" in the village than those of the smaller buildings C, D, and E. They also are the two houses with evidence of much greater storage space, and Building B shows potential animal stabling space both inside (B2C) and in the outer courtyard (B1) in the pen. These two factors, increased storage and stabling space, would fit with the model presented by Kramer for indications of greater economic wealth based on greater control of land and animals.

What would these differences in house size have meant to the inhabitants of the village?

Would the differences have contributed to a sense of jealousy and divisiveness between the families, one that would have threatened the cohesion of the community? Or were there socially acceptable reasons for the larger houses? One scenario would be that Building B acted as a communal storage depot for the settlement, keeping grain safe against hunger and the need for new seed. Herr has argued that these houses did form such a dependency based on the evidence of Buildings B and A, establishing a "patriarchal household" here (Herr, 2009a). However, each building did contain enough large pithoi for their own grain needs, as discussed in the previous chapter, and make it more likely that Building B kept large amounts of grain for other purposes. In Building A, perhaps there was a sense of community religious purpose in the domestic shrine identified in the front room, as discussed below. It is hard to argue much without a larger sample size of houses to explore. Though located at a high point on the tell, in an area previously associated with the large Late Bronze Age temple, it is not even certain that this was the center of community life in the Early Iron Age. If these two houses, with their significantly greater storage potential and possible ritual significance, were at the head of the village, or at least their neighborhood, it is possible they were responsible for hosting ritual activities (Building A) and regular community feasts (Building B) that helped maintain their role as leaders through patronage. This central role of a set of elders is not unlike what has been argued for the Late Bronze Age patriarchal system (Schloen, 2001) and applied by Herr to the two houses (Herr, 2006, 2009a). A system of feasting patronage has also been suggested for 'Umayri based on the evidence of the refuse pit nearby (Routledge, 2015), and for Early Iron Age Transjordan in general based on storage patterns (Routledge, 2004).

Yaeger argued that the elite owners of the bigger houses in his Mayan village were in charge of the feasts; the communal labor necessary for constructing a big house was balanced with the return responsibility of the householder for feeding the rest of the community during certain feasts (Yaeger, 2000). While strict social separation between "elites"

and "commoners" is not appropriate for the more socially flattened rural communities of the Early Iron Age Southern Levant, there are still noticeable differences in building size because it was functionally necessary to have the larger amount of storage (perhaps the produce of greater landholdings), more room for animal stabling, and extra space for the shrine. Kramer has noted that big pits were commonly dug near the residence of the hosts of big feasts (Kramer, 1982, p. 44) (see further discussion on feasting below), and the large refuse pit in the settlement is located nearest to Building B. More excavation is necessary to better understand the full range of house size and quality in Stratum 12, but these initial patterns fit with those in later Iron I settlements, such as Khirbat al-Mudayna al-'Aliya and Sahab.

5.2.3 Material differentiation

Daviau's study on Bronze Age households analyzed a number of excavated assemblages across the Southern Levant in order to functionally determine the nature of the activities carried out in various rooms of the houses (Daviau, 1993). Her model for determining how the spaces were used was based on the ethnoarchaeological work of both Kramer and Watson. Kramer's careful social analysis correlated with the physical elements of life in a village, combined with Watson's detailed inventories of household contents provided a comparative basis for evaluating the remains discovered archaeologically. 'Umayri's spaces were analyzed in the previous chapter, based roughly on Daviau's model for determining the function of domestic spaces, but also taking into consideration other studies. The results indicate that most of the spaces were multi-functional, with activities taking place across the house. The inhabitants made the most of available space, whether on the ground or upper floors, though food preparation areas were the easiest single activity to identify based on grinding installations and hearths or ovens. In this way, it is possible to recognize the flexibility of households in carrying out activities in their own way in their

own spaces. This has been argued for a different concept of multifunctionality in Egyptian houses, where "social factors," "individual choices" by owners, and even house size determined how a room would be used, and not a pre-defined society-wide notion that dictated house layout (Moeller, 2015, pp. 448–449). Even in this flexibility, however, there can be patterns that emerge as inhabitants make "compromises" in their use of available space, such as where they decide to cook or keep animals, that are similarly made by their neighbors (Spence, 2015, p. 95).

Another way to study artifact assemblages is to determine differentiation between the houses based on their possessions, again trying to better understand the range of economic statuses possible. According to Kramer, studying economic differences in the village begins with studying the activities in each household compound, and then working to "establish the nature and extent of variation among compounds" since "such variation is related to both the differences in households' economic statuses and to differences in the number and relationship of residents" (Kramer, 1982, p. 116). For her study, she concluded that activities and portable goods were "generally comparable" between houses, perhaps due to a desire for "minimizing status differences and the potential for community conflict and underscoring, if not actually enhancing, neighborliness and *esprit de corps*" (Kramer, 1982, p. 57). While larger, more visible aspects of neighborly differences such as house size, which reflects land and animal wealth, would have belied any such appeal of sameness, the fact that the inhabitants of these larger compounds did not actually have increased personal space and used similar assortments and type of household goods to carry out the same daily activities might have minimized differences, as Kramer suggests.

As highlighted by the tables and charts presented in the previous chapter, the same type and range of artifacts were found in each of the houses, with only a few exceptions. The absence of textile-related materials in Building E is probably due to accident of discovery, as only part of the building has been excavated. More meaningful perhaps is the discov-

ery of specifically cultic and administrative goods found uniquely in two of the buildings (B and A), suggesting an addition to the daily routines in these two households possibly not part of the daily repertoire for everyone in the settlement. What did the restriction of specific artifacts to only two of the buildings mean for social interactions at the community level? Is the restriction of administrative and ritual artifacts to Buildings B and A an indication that others from the community relied on these households for the fulfillment of related activities, and so were invited in and involved? Or were other household members excluded from the practice of administrative and cultic activities, or made do with non-specific artifacts? Potentially ritual-related artifacts were found in Building D, a set of natural odd-shaped stones (discussed below), but no figurines. A much larger sample size would be necessary for any firm conclusions here about the settlement at ʻUmayri, but some initial suggestions for ritual scenarios are pursued below.

The administrative artifacts are represented by weights, including a hematite weight from the surface of the courtyard of Building B (B1; B966051), and another hematite weight found in the collapse near the plastered table in the back room of Building A (A3; B891941) (Table 5.1). The two weights are different in appearance, the one from Building A shaped like a disk and the one from Building B a bumpy nodule. Weights at ʻUmayri vary considerably by period, and the only other known hematite weight comes from the house in the following stratum, Building M in Field H (included in Table 5.1 for reference). Other weights made of metal or stone have also been found on site.[1]

The use of hematite for weights is not uncommon in the Southern Levant and in the wider ancient Near East. Hematite weights were found in the Late Bronze Age Egyptian garrison at Beth Shean, in a "sphendanoid" ("truncated barrel with one flat side")

1. Small, shaped metal or precious stones that have been registered or noted as weights are found later in the Iron Age to the Hellenistic period at ʻUmayri, as well as undated artifacts from topsoil. These include the following: bronze/metal weights B840705, B870931, B871050, B020031, A100125; precious stone weights B871200, B871202, A06043. These registration numbers are as found in the online database at umayri.opendig.org, and will occur without the letter and year prefix in the final publication volumes for the given season for those from the 1984 and 1987 seasons. Those from 2000 and on await publication.

or dome shape, weighing 4.8 to 47g (James and McGovern, 1993, p. 194). These weights were found in temple or residential contexts. A similar set of hematite weights were found in a Late Bronze Age shipwreck, argued to be in the possession of a Canaanite merchant (Golani and Galili, 2015). Golani provides a chart outlining the weights in grams of these hematite weights (ranging from 1.47 to 45.6g), and also compares them to several known weight systems from the time (Golani and Galili, 2015, p. 26). Finer hematite weights in barrel, lentoid, and duck shapes are known from ancient Mesopotamia (for excavated examples, weights, and parallels see (Stone and Zimansky, 2004, pp. 121–122)). Closer chronologically is a set of weights found in an Iron I tomb at Megiddo (Guy, 1938, Plate 168, Tomb 39). Three hematite weights, from a larger group of stone and lead weights, are similar to the examples from ʻUmayri; they are amorphous or slightly shaped, polished, and weigh around 10 or 16g. Finer shaped hematite examples also came from Iron I strata at Megiddo, though none were published with the small finds from the Iron I Level K–4 courtyard building (Loud, 1948, Plate 168).

The presence of these specifically hematite weights in the two houses adds to the number of ways they set themselves apart from the rest. What transactions in such a small settlement would have required the use of balance weights is unclear. The weights would only be useful for measuring out small items or amounts. Neither match closely with any of the known weight systems, though at 31.36 and 41.49 g each, the Stratum 12 weights fall into the range of weights known for the Late Bronze Age weights from Beth Shean and the shipwreck (Golani and Galili, 2015, p. 26). That ʻUmayri was on the trade routes of this time period is clear from other items present in this stratum, namely the Nile perch bones. Perhaps these weights were used in transactions with outsiders that came along as part of this trade, transactions perhaps conducted through the owners of Buildings B and A for all of the settlement.

The difference in amount of materials per house is significant, as discussed in the previ-

ous chapter (Fig. 4.2). The categories with the greatest differences include those related to food storage and food production. Categories such as textile artifacts, tools/weapons, and personal adornment do not differ greatly between houses. The most significant artifacts that differ are: 1) basalt groundstone tools, which occur nearly twice in number in Building A than the other structures (Building A contained over a third (37%) of all groundstone artifacts in the houses); and 2) storage pithoi, which occur over twice in number in Building B than the other structures. Building A contained slightly higher numbers of cooking pots, jugs, and lamps.[2] As discussed further in the feasting section at the end of this chapter, these increased numbers of food-related artifacts in Buildings B and A may have had much to do with a responsible role these two households somehow shared in special events.

That there were material differences in the settlement are clear from this discussion. Not only was there a difference in the types of artifacts distributed across the settlement, with ritual and administrative artifacts only occurring in Buildings A and B, but Buildings B and A had a larger number of artifacts in the categories shared with the other buildings. Taken together with the architectural differences, it is possible to argue that these two buildings were in a higher socio-economic position than the others.

5.2.4 Creating Boundaries: Spatial differentiation

Establishing the spatial nature of the houses at 'Umayri, their architectural boundaries with each other, and the ways in which they would have accessed each other's domestic spaces is one way of investigating the degree of interaction. Yaeger noted at his study

2. Restating the pottery situation: restorable vessels at this point are only known from from Buildings B and A, otherwise registered diagnostics are used for the rest (from the online database at umayri.opendig.org). This results in a fair amount of inequality for comparative purposes. A real study of the pottery for this stratum will have to await future publications when the assemblage can be studied as a whole and results between the database, publications, and restorations can be aggregated. For now, restored pithoi counts from Building B are clear, as are a few individual pieces, and a general idea from rim counts for other buildings and categories.

site that when compared to other sites in the region, his settlement had houses that were spaced much closer together, suggesting a "higher level of interaction, both cooperative and contentious" (Yaeger, 2000, p. 130). This section will define the types of boundaries that separated each household and the characteristics of streets and access between households. In the following chapter these parameters will be used to compare the Stratum 12 settlement with other Early Iron Age settlements in Transjordan and Cisjordan and so explore the architectural expressions of closeness or distance in the Southern Levant during this transitional period.

The houses of 'Umayri's Stratum 12 were constructed, as noted above, with shared side walls. Each house is otherwise distinct from the other with only exterior entrances opening onto a presumed public street. No other doorways or points of access existed at the ground level, belying a closeness perhaps indicated by the shared walls. The increased cooperation between households required to jointly build shared walls during the construction of their houses would then be lost once the project was complete, as further interaction would only take place either in the streets in front of the houses, the suggested interactions by women on the roofs (see Chapter 4), or the visiting of outsiders entering through the main doorways. It is possible that the shared organization necessary for constructing the houses would have been organized and made possible by a pre-existing kinship or clan grouping, who initiated and organized the settlement of Stratum 12. While the sharing of walls in house construction has the additional functional advantage of reducing the workload, such a construction style would be unlikely between completely unrelated households. However, once their organization was complete, the boundaries identifying individual households became solid barriers symbolically and functionally dividing the domestic groups in their architecture, as has been seen in their domestic activities. Only the movement of individuals through the controlled access points would break these barriers, or the possible visiting/moving across open rooftops.

While only one of the four main structures (Building B) is complete enough to study the entryway to the building, it is clear enough from the remains of the others that access between buildings would only have taken place from an outside-facing entryway, and not between structures. Building B had a large walled courtyard in front of the house, restricting access and possibly visibility (depending on the total height of the courtyard wall in antiquity) except through two specific entrances. The entrance in the northern wall of the courtyard had a protective "L" shaped screen wall around the doorway, perhaps necessary to shield the courtyard from this corner of the settlement. The area to the north of Building B was open not only to public view but also to to the weather if the settlement wall was not very high there. A second entrance in the southern part of the east-facing wall would have opened onto a street shared by the other four buildings, and was a point of direct access without screening walls. The excavator argues that this street-facing entrance was only used for the first part of the building's lifetime and was later closed up (see Chapter 3). This would have further restricted easy access to this building and the visibility of outsiders into the courtyard.

The contrast of 'Umayri's separated houses from the ideal family compound described by Stager provides a good reason for making the comparison of architectural boundaries in the Early Iron Age. Stager argued that an archaeological correlate to the description of the "multiple family" or "*bt b*" compound of Micah (Judges 17–18) can be found already in the Iron I period (Stager, 1985, p. 22).[3] Taking just one example of a later Iron Age settlement with shared walls, at Iron II Tell en-Nasbeh, there is a superficial similarity to the settlement at 'Umayri. Nasbeh's settlement too had five buildings that shared walls and were bounded by streets into their own area (Brody, 2009, p. 46). The similarity ends there, however. Brody argues that limited placement of storerooms, kitchens, workshops, and courtyards across the five houses indicates they were shared by the inhab-

3. However, Stager's concept is not completely accepted even for the later Iron Age; see Albertz and Schmitt's reference to a study by Geva (Albertz, 2012, pp. 36–37).

itants of all five buildings. These five buildings, in his argument, housed nuclear families who together made up an extended family compound, using the limited features communally (Brody, 2011, p. 254; Brody, 2009, p. 54). Their shared space for mundane activities would have led to a very different daily experience than that of the householders at ʻUmayri.

5.2.5 Conclusions

Several factors would have worked against a sense of community unity on an everyday basis at ʻUmayri. First of all, some people had clearly larger houses. These same people also had more material goods, though this would have been less visible. With only partial remains and missing the entrance-ways to the settlement, it is hard to be too certain about the visibility and accessibility between the houses. From the one complete structure in Building B, both visibility and access to the houses were controlled via limited entrances. As access to resources was restricted in some ways, there are no grounds for saying this was a completely egalitarian settlement. Instead, there were inequalities present from the very foundation of the settlement, visible in unequal architecture, to the practices of everyday life, visible in the unequal distribution of material goods. Even if initially settled by a related group of people, at least in this area of the settlement, as suggested by shared walls, these inequalities would have worked to divide the inhabitants on a daily basis, separating them physically, economically, and visibly from each other. These might have presented significant barriers to community life, or it may have been accepted that the households in the two larger houses had a preeminence based on factors acknowledged by all, such as clan leadership.

5.3 Community Practices that Unite

5.3.1 Introduction

On the opposite hand from the experience of everyday divisions, there are numerous ways in which everyday practices would have served to unite the inhabitants of the village. The common fight for survival, from the construction of their homes, as different as they may have been, to the care of crops and herds that fed each family, as diverse in quantity as they may have been, the everyday practices of production would have provided opportunities for the villagers to work together. While building community projects such as the defense walls or the refuse pit, villagers would have left their divided homes and worked side by side to ensure their way of life. Their agricultural and pastoral endeavors would have only benefitted from cooperation in caring for their fruits and animals. Hints of rituals and feasting suggest that villagers shared in the events and practices that they felt would assure the success of their labors.

5.3.2 Building the Wall

There are three important questions that arise when presented with the archaeological evidence of a fortification system at the Early Iron Age site of ʻUmayri. First, why (re)build a wall? From a completely functional standpoint, what purpose would a wall serve that would outweigh the massive amount of labor and materials necessary for its (re)construction/maintenance? When compared with other Early Iron Age settlements in the Southern Levant, ʻUmayri stands out as having an unusually large defense system, including not only a large wall but also a rampart. The scale of this system is not unfamiliar from the Bronze Age, but most other Iron Age sites in this earlier period have relatively simple perimeter walls formed mostly from the ringed nature of house construction, or have no wall at all. So, why build a wall, what benefits would it have to make the con-

struction or maintenance of this wall so important? Second, how did they (re)build the wall? As the nature of the fortification system in this period is under debate, it is in unclear whether the wall was built completely from scratch during this period, or whether the system was rebuilt and maintained from the earlier Bronze Age system (as discussed in Chapter 3). Either way, it would have required significant labor and materials to build or rebuild the 2.5 m, or greater, wall and re/finish the ramparts. How was this labor organized, and through what mechanisms was cooperation encouraged or enforced among the villagers? Finally, the third questions asks, what are the social implications of the wall? This question draws from the previous two, as there could have been social benefits as much as, or more than, functional ones that motivated the (re)construction of the wall. The methods of organizing wall labor can provide some insight into the nature of the social organization of the villagers, and one of the activities that would have united them as a community in a practice of affiliation, carefully bounding them from outsiders.

Why would a small, rural village need a wall? During the transitional period from the Late Bronze Age to the Early Iron Age, a brief review of settlement fortification systems reveals that many settlements were either unwalled or took advantage of previous fortification systems and rebuilt them, similar to the situation at ʻUmayri. Sites that involved some sort of fortification include Tall Irbid, which had an "architectural complex" that included a perimeter wall and a tower associated with a sanctuary (Lenzen, 1992, p. 456) and Tall Madaba, where the remains of a pillared house were built against an earlier Bronze Age wall (Foran and Klassen, 2013, p. 214). Other settlements during this time period appear to have been unconcerned with fortifications, including Tall Zira'a, described by the excavators as a simple, unfortified agricultural village (Vieweger and Häser, 2010a, p. 13) and Tall Fukhar, where "squatters" built houses into the ruins of a Bronze Age palace (Strange, 2009, p. 614) (regional defense systems are discussed further in Chapter 6).

Moving later into the Iron I period, intentional fortification systems become more common[4]. Excavators have noted the presence of fortifications, usually a casemate-style wall system built in association with domestic structures, at Tall Abu al-Kharaz (Fischer and Bürge, 2013, p. 309); Lahun (Swinnen, 2009, p. 30); Khirbat al-Mudayna al-'Aliya, which, in addition to the casemate-style wall also included an extra defense wall, a tower with a moat, and a gate (Routledge, 2000, pp. 48–49); Khirbat Mudayna Mu'arraja with additional towers and gate (Olavarri, 1978); and Khirbat al-Mamariyah with a noted gate (Ninow, 2004). Sites like Pella (Bourke, 1997) and Tall Irbid (Lenzen, 1988b) build or rebuild fortifications as well. Two other sites have either not enough information to deduce the presence of fortifications, or seem most likely to not have had them: Tall al-Mazar had only a sanctuary and possibly some domestic buildings (Yassine, 1988), while Sahab's Bronze Age wall was noted to have been "reused in the Iron I for domestic housing", as the Iron I town exceeded the limits of the Late Bronze Age walled town (Ibrahim, 1987, pp. 77–78). West of the Jordan River, Iron I sites often created a "perimeter wall" effect by the circling of houses with their rear exterior walls facing outward, as at many of the above-mentioned Karak Plateau sites (Mazar, 1990, pp. 338-339; Swinnen, 2009, p. 30).

The extent of 'Umayri's fortification system is unusual in this transitional phase into the Iron I period. While walls and even moats are attested at other sites as intentional creations later in the Iron I, they are rare in the rural sites just following the Late Bronze Age. Some of this sense of rarity may be due to lack of exposed remains from contemporary sites. However, by comparison with the existing evidence, the large wall system and rampart do stand out in their protection of the domestic structures at 'Umayri. Why would these massive undertakings have seemed so important to the ancient 'Umayrites? Were they concerned with defending their village from attack, or could there have been other reasons for the large construction (Herr too was concerned with this question for

4. For a fairly up-to-date list of all excavated Transjordan sites from these two periods and their main features, see (Herr and Najjar, 2008, p. 313–315).

the rebuilding of the fortifications Herr, 1999)? Another suggestion for the purpose behind the creation of perimeter walls is that they had social value, creating a form of identity in itself or in bounding properties, setting the inhabitants inside the wall apart from those outside. Theoretically, in an analysis of communities, an enclosing wall can be seen as an important way of maintaining community boundaries. Kolb and Snead's analysis of New World communities emphasize an evaluation of how communities create their boundaries, noting for their case study that an "increasing investment in symbolic boundary maintenancemay reflect increased competition between groups, possibly over access to agricultural land" (Kolb and Snead, 1997, p. 614). Likewise, Moeller's study of walled settlements in Old Kingdom Egypt suggests that walls as a visible marker "would have given a clear signal to its neighborhood and wider district. a status symbol standing for power, influence and control over a region" (Moeller, 2004, p. 265). A several meter high wall and renewed rampart would clearly and visibly indicate control over the land around 'Umayri and should be considered as a possibility.

In Levantine contexts, the construction of walls also has been associated with symbolic rather than purely functional purposes. For the walled cities of the Early Bronze Age, Chesson has argued that "the fortification systems may have embodied both functional and symbolic aspects, signifying the political, economic and social structures shaping people's daily lives and providing the actual space in which people interacted with each other and negotiated their relationships and identities" (Chesson, 2003, p. 93). Philip, also discussing the Early Bronze Age fortified settlements, noted that repeated rebuilding of the walls and "even the very existence of walls, owed as much to matters of ideology as to physical security. [The walls] would also have functioned as expressive monuments, created by the labour of the community, and as a physical means of distinguishing between people, things and activities closely connected with the community, and those external to it" (Philip, 2003, p. 112). Based on his study of the natural landscape of the

Early Bronze Age, Philip concludes that indeed, these walls were "an expression of social or ideological concerns" more than of practical need (Philip, 2003, p. 113). For the Iron II period, where the simple walls of the Iron I period had grown and taken on more substance, the same question has been asked by Faust as to why the inhabitants felt the need for walls. His answers include functional aspects, noting that though the defense systems were not "formidable" enough to protect against serious military threat, they would have done fine against "encroachers or other 'irregular' threats" (Faust, 2000, p. 27). In addition, as has been often noted for the Iron I settlement walls particularly in the Central Highlands (Bloch-Smith and Nakhai, 1999, p. 74), a village wall is useful for keeping in the livestock which are a significant part of the rural economy (see below about herding practices at 'Umayri); while Faust adds storing water and privacy to this list (Faust, 2000, p. 28). But Faust also considers the symbolic aspects of village fortification, such as "barring spirits and demons from entering" as well as separating the villagers from others: "enclosed settlements often symbolize a division in the society as well as a division between 'insiders' and 'outsiders' The existence of boundary walls, therefore, could also indicate self-identification and social recognition of the local group, both in the physical and symbolic aspects" (Faust, 2000, p. 28). Brody has taken up this consideration of walls and social identity as well in his study of Iron II Nasbeh, where he considers a similarity in "fortification design" to be a possible element of ethnic identity (Brody, 2015, p. 299). The wall, for him, becomes symbolic as part of a "national boundary" because of the location of the site on a national border: "while also closing its inhabitants into a settlement that, in effect, creates an ethnic or social border.one may interpret the massive wall as reinforcing a psychological and ethnic boundary among Nasbeh's households" (Brody, 2015, pp. 299–301).

By studying the fortification system at 'Umayri and comparing it with its contemporary or near-contemporary neighbors in Transjordan and the Southern Levant, it is pos-

sible to argue that the expenditure of so much energy may have had more than simply a functional purpose to keep animals in place and the random "encroachers" at bay, but may have had a stronger symbolic purpose in the unseen realm of social identity. A simple bounding of exterior house walls, as exists in several other of the Early Iron Age settlements, would have served functional purposes. However, the added stress and significant expenditure involved in renewing the earlier Bronze Age wall and ramparts at 'Umayri may have been an attempt to associate themselves with a Bronze Age city identity, or to fashion a new and bounded identity for the small settlement against the unknowns beyond their wall. The temple and palace may have vanished, but the walls were there and rebuilt. Among the contemporary Central Plateau examples, Tall Madaba also made continued use of its Bronze Age wall. Are these examples of an intentional association with earlier glory, or simply an opportunistic reuse of handy fortifications? The large, thick wall could easily fill a roll of creating a physical boundary of who is "in", and when considering the cooperative nature of its construction, further strengthens a claim that this wall served to join the members of the community together and serve as a visible reminder of the physical extent of the community.

How did this rural community organize their forces to build/rebuild their defenses? In Kolb and Snead's analysis, they discuss the levels of community cooperation required for various architectural projects, ranging from personal houses that might require little cooperation, to what they call "custodial projects" that require "suprafamily" organization (Kolb and Snead, 1997, p. 613). Unlike the example they give of a highly centralized society that would put together a conscripted "corvée" to see to such a large project, 'Umayri would have had to use a different method of gathering cooperative labor. While simple family organization would have worked for rebuilding the parts of the wall that formed the backside to the houses, the careful re-finishing of the rampart and moat would have required a different kind of organization. Perhaps appropriate on their scale of "custodial"

project (those requiring pan-community cooperation), would be the "festive projects", where they argue that low-level organization is achieved through the enticement of "a non-labor commodity such as food, prestige, or security" (Kolb and Snead, 1997, p. 613). Joyce and Hendon emphasize the idea of heterarchy in such cooperative construction as "a basis for joint action", with no need to interpret a hierarchical system to coordinate efforts (Joyce and Hendon, 2000, p. 157). Archaeologists working in the Near East have also wrangled with the problem of communal organization of projects in a decentralized society. Returning to Chesson's Early Bronze Age examples, she argues that a "governing council" made up of local elders would have been sufficient to organize the labor on the large urban projects that are a hallmark of this period (Chesson, 2003, p. 93). These heads of household, drawing on parallels from ethnographic sources, could have been "responsible for the construction and maintenance of public structures, including the storage complexes, ritual compounds and fortification systems, in addition to the daily civic governance and judgments in the town" (Chesson, 2003, pp. 92–93).

This same kind of household-based organization fits well with the theories already argued for the organization of Early Iron Age villages in the Central Highlands, most specifically the arguments surrounding the Early Israelites. Stager specifically outlined his theory that they would have been organized "along kinship lines from multiple family households", tying his discussion into the genealogies represented in the Hebrew Bible (Stager, 1985, pp. 23–24). Another classic work on these early communities argued for cross-household cooperation in addressing the concern that such small villages with households of varying sizes would not have had enough labor to meet their basic needs, and so would have had to organize to construct agricultural terraces and cooperate during "times of peak labor demand" (Hopkins, 1985, p. 269).

At 'Umayri, therefore, it becomes easier to visualize the elders of the various households meeting together and organizing a labor force to take on the village defenses. Driven by

a desire for security and perhaps a visual reminder of their physical community's claim on the surrounding territory, these elders were able to enforce or entice cooperation on a community-wide level. And this cooperation beyond the level of the elders would have worked to further reinforce a sense of community as the builders worked together to fortify their settlement.

5.3.3 Community Agro-Pastoral Production

The life of a small rural village revolves heavily around the agricultural and pastoral cycles. Evidence for agricultural, horticultural, and pastoral activities are present at Early Iron Age 'Umayri, fitting it in place with the typical highlands tripartite economy much discussed for the Southern Levant, and particularly the Central Highlands of Cisjordan, during this time period (see Hopkins, 1985; Stager, 1985). A reliance on the valleys and terraces for fields and orchards around their settlements, as well as on their animals, is a hallmark of the economically-diversified small settlements that struggled for survival in sub-optimal conditions. At the household level it was determined in the last chapter that each family group would have stored, prepared, and consumed their own basic necessities, such as grains and textiles. However, when looking at the practices needed to produce these raw materials, inspection at the community level is informative. While it is possible that each family kept carefully separate fields and flocks, ethnographic evidence highlights examples of the ways in which small communities combined forces to make the most of a meager subsistence. This section will therefore look at the archaeological evidence for the agro-pastoral activities at 'Umayri and highlight the possible practices that could have worked to unite the community, as assisted by ethnographic and ethnoarchaeological studies on similar small communities.

Agricultural

Botanical sampling from two of the houses in Stratum 12 provided unusual evidence for the agricultural activities at ʻUmayri. Unlike the domesticated barley and wheat found in the Field H House M from slightly later than Stratum 12, the main discoveries from Buildings C and E were of wild (two-row) barley and wild herbs and grasses (Ramsay and Mueller, ress). Grape and fig seeds were also present in Building E, indicating some presence of horticulture in the settlement, but the surprising number of wild cereals and herbs does little to help understand the agricultural foundations of ʻUmayri. However, this confusing state of affairs is not representative of the entirety of the Early Iron Age economy, for two possible reasons, as Ramsay and Mueller make clear in their report. One, the samples were few in number (n=5) and were taken selectively on site by the excavators and not systematically throughout excavation. Two, the dramatic demise of the settlement, if due to destruction post-siege, could have altered the diet significantly. They do suggest that the wild barley could have been stored for malting or fodder, and that a handful of *Echium sp.* seeds found in a storage jar on the floor of Building C's Room C3, could have represented use for a purple dye or for medicinal uses. The selectivity of sampling may have missed the storage of the food kept for human use, or the wild barley may have been considered normal fare, as it was found in a room with a grinding installation.[5] These seeds aside, the high number of grinding stones throughout the settlement do indicate that cereals were likely processed for human consumption, and the presence of both wheat and barley in a period slightly later indicate these crops were supported by the local environment.

The activities of agriculture at ʻUmayri are also attested by two other lines of evidence.

5. Such a case is attested elsewhere in Iron I Transjordan. At Khirbat Mudayna al-Aliya, barley was also the main grain that was stored for both human and animal consumption. What type of barley was not confirmed. Routledge suggested from their unpublished study that barley was a more resilient grain for marginal environments (Personal communication with Bruce Routledge, November 2015).

First, the use of cattle for traction, such as plowing, by the villagers. Second, the production of olive oil in the settlement. Both of these activities would have had the potential to bring the villagers together in sharing valuable resources necessary to their subsistence.

Cattle for Plowing Bone pathologies related to traction show up in five of the cattle bones studied (n=1156), two from a domestic context (0.9% of the sample) and three from the pit context (0.3% of the sample). These pathologies (on the 3rd phalanx, tibia, innominate, and metacrapal) could be due to diet or genetics, especially that found in the hip area, but the deformities on the lower leg bones typically result from the animal's use for traction (Bartosiewicz et al., 1997, pp. 11–12, 32–104). A study of the Early Bronze Age bones at 'Umayri resulted in the discovery of a small number of cattle bones with draft-related pathologies (Peters et al., 2002, p. 324). This small number of pathologies identified in the Stratum 12 assemblage does not necessarily correlate to a low number of cattle in use in traction, as pathologies can in general be rare in even a very large assemblage (Bartosiewicz et al., 1997, pp. 11–12). One study in the Southern Levant has been able to link the increasing presence of pathologies to an intensification in cattle use for plowing from the Late Bronze Age to the Iron II period at Tel Ekron (Lev-Tov, 2000, pp. 191–194). Generally, however, cattle numbers were low in these time periods at a number of sites studied across the Southern Levant, as the animals were kept mostly for traction as part of a "survival subsistence strategy", and not for their meat or milk (Sasson, 2005, p. 210). The use of cattle at 'Umayri for purposes other than plowing will be discussed further below, as there is some evidence for a herding strategy that did utilize them for meat. Here the focus will be on cattle used for plowing, and the possibility that part of the survival strategy at 'Umayri involved communal use of cattle, instead of individual ownership by each family of enough cattle to meet their agricultural needs. This shared ownership would have been another way of increasing the interactions between community members at the crucial times of plowing and harvesting, forging cooperation and further community

bonding.

Traditional and historical examples of the use of cattle for traction plowing are abundant for suggesting agricultural ways of life at ancient 'Umayri. These examples can help estimate the number of cattle typically used in a plow team, the gendered rolls associated with the use of cattle for traction, and evidence for the sharing of plow animals in rural agrarian societies. Though no specific plowing instruments have been identified among the archaeological remains at 'Umayri, the plows known best from literary and pictorial sources from the Ancient Near East were simple wooden plows (*adr*) that were typically pulled by a team of oxen, though if necessary, could be pulled by just one (Borowski, 1987, p. 51). From examples in the Hebrew Bible, the term for a team of oxen used for plowing became synonymous for a measure of land, indicating the pervasiveness of the idea of a team of oxen in the ancient Hebrew world (Borowski, 1987, p. 52). Research outside of the study area and time note that often the number of oxen used for plowing could be better related to the wealth of the landowners, and had less to do with how many cattle were actually necessary to pull the plow medieval peasants got by fine with a single ox, while an ancient Egyptian tomb depicts a team of six (Bartosiewicz et al., 1997, p. 31). Illustrations and Roman sources also support the wider tradition of using one or two cattle in harness (Bartosiewicz et al., 1997, p. 32). It is important to note that traction in historical and ethnographic examples from the Near East is not limited to cattle, either, but can include the use of donkeys, though more rarely (Borowski, 1987, p. 51; Kramer, 1982, p. 32; Watson, 1979, p. 112). Even dairy cows can be used if necessary, making them a multipurpose animal, though culturally this is not practiced in the examples (Bartosiewicz et al., 1997, p. 119). The usual preference, however, as indicated by ethnographic studies in Iran, was for a pair of oxen, or at least steers (Kramer, 1982, pp. 32; Watson, 1979, pp. 75-280). The ideal in ethnographic studies in Palestine indicated that two oxen were used on the plow, and rotated out with another pair for continuous

work throughout the day (Dalman, 1932, p. 162). From these examples it is possible to imagine the Early Iron Age farmers at 'Umayri harnessing up one or two of their cattle and heading out to the fields for the day's work, taking part in a tradition that spans time and space in small agricultural villages across the pre-industrial world.

The role of agriculture in community life becomes particularly interesting when considering how it would have brought together all members of the community, including both men and women. While women would have been hard at work at home during most of the year, the needs of agriculture and securing the harvests for the year would bring both men and women out into the fields together, the women helping with the threshing and winnowing, the cutting or the gathering of bunches, or even driving the cattle on the threshing floor (Kramer, 1982, p. 33; Watson, 1979, pp. 82). In the rural village observed by Lutfiyya, the communal threshing floor was located next to the spring (Lutfiyya, 1966, p. 26). The spring at 'Umayri is located at the base of the tell, and while no threshing floor has been identified, a similar communal space may have existed for the Early Iron Age settlement. We have, then, a glimpse of one of the moments that the entire community would have left behind the enclosing walls of the village and spread out into the fields, working within sight and sound of each other down the valley or near the base of the tell.

How many cattle were likely housed in the village? Did every household have their own dairy cattle as well as plowing cattle? Ethnographic studies from rural villages in Iran provide helpful insight into these questions and open up a new question, did the villagers share their cattle? Cattle were not "cheap" to keep, and keeping these agricultural machines fed when grazing was not available would have put a strain on grain supplies; Kramer's study includes figures for stall-kept cattle, noting their yearly consumption of 2100 kg of fodder, 1 ton of straw, and 100 kg of barley (Kramer, 1982, p. 37). Sasson's theory of a "survival subsistence strategy" emphasizes that low numbers of primarily adult specimens (under 15% of identified taxa) would have represented keeping just enough cat-

tle for traction purposes, instead of a focus on dairy or meat consumption in the herding strategy (Sasson, 2005, p. 210–218). Cattle at 'Umayri represent 12% NISP for the Refuse Pit and only 4% NISP from the Domestic contexts, for a site-wide NISP of 9%.[6] This would constitute a low percentage fitting with the survival subsistence strategy. A study of cattle mortality at 'Umayri also indicates a fit with this model, as most cattle survived past their third year, based on fusion data. Only in the pit is there some evidence for earlier kill-off ages, though the pattern holds for a larger drop around the fourth year. Cattle at 'Umayri were likely kept primarily for traction purposes then, as valued agricultural partners. This pattern of a small number of cattle, which generally survive to an older age, is identified elsewhere in the southern Levant (Sapir-Hen et al., 2014, p. 88).

Kramer makes an interesting suggestion for identifying land ownership and farming activities in the archaeology record by suggesting that you search not only for the faunal and floral remains of these activities, but also for artifacts, features, and rooms associated with agriculture and cattle; including stables and storage of animal fodder (Kramer, 1982, p. 261). Only one of the houses at 'Umayri, Building B, has the stone-lined pen and stone-cobble paving that are often interpreted as indications of animal stabling in the bottom floor of a pillared house (Stager, 1985, pp. 12–14). However, the other houses may have had stabling as well in their front rooms, which are now either lost or buried by later construction in the area. It would be fairly safe to argue, as the excavators have done, that the inhabitants of Building B kept animals, including possibly the cattle, donkeys, sheep, and goats that show up in the faunal record (Clark, 2014, p. 110).

The rural Iranian villages provide further evidence of the small number of cattle kept, and their preference for agricultural purposes. Watson notes across her village case studies that cattle were still used for plowing, but that few families owned their own oxen or cows

6. These NISP are based on identified taxa percentages only, for Pit and Domestic separately, and combined. Percentages based on weight are considerably higher, at 35% combined, 40% pit, and 23% domestic. However, Sasson's study is based on NISP, not weight.

(Watson, 1979, p. 112). She notes that the cattle were grazed communally by a herder hired by a cooperative cattle owners, a system she discussed in greater detail in relation to sheep and goat herding (Watson, 1979, p. 112)(discussed below). In Hasanabad she took a census and notes that on average, each family owns less than one ox, though two are required for plowing (Watson, 1979, p. 293). While she does not outright state that the villagers shared oxen for the agricultural activities that needed them, this would have been the only solution for the villagers to achieve their labor needs. As a side note to a discussion of threshing, she notes that when a sledge is not used and a trampling method is used instead, that the farmers would borrow oxen from each other (Watson, 1979, p. 82). The cooperative nature of herding the cattle and the willingness to borrow and share for threshing purposes, suggest that oxen became a pivot around which community cooperation and agricultural production depended. Dalman's study from Palestine records a story about an ill-used ox that is borrowed and then worked until it keels over, alongside a proverb that one without an ox is not up at dawn to plow (Dalman, 1921, pp.162, 166–167). Frick's discussion of Early Israelite agriculture also notes the cross-community cooperation that would have been necessary to secure the year's harvest, when he discusses terrace work, specifically (Frick, 1989, pp. 86–87). He notes that a small family group could have handled the agricultural duties on their own, but that it was far riskier, and one risk was "there would be greater difficulty in gaining access to draft animals", suggesting that sharing was common and if the weather failed to cooperate, there would be a crunch to give everyone time to use the shared animals (Frick, 1989, pp. 86–87). He makes these statements in the context for how systems of organization would have arisen in the Early Iron Age villages that later gave rise to Early Israel and its economic institutions. However, the idea of the village societies developing ways of reducing their already high agricultural risks through cooperation in the construction of terraces and the sharing of herd animals is important.

Likewise, at ancient 'Umayri, a system of sharing the expense of cattle and their use must have existed to allow everyone to get their fields plowed and their grain threshed, even in the absence of individual ownership. This system would have been one more way of bringing the community together, household to household, in the yearly fight to survive.

Olive oil production In Room 2 of Building A, the sherds of a nearly complete, spouted krater were discovered amidst the collapse from the second floor and identified as an "oil-separation krater" because of the large spout just below the rim and a small drain hole near the base (Herr, 2006, pp. 68-70; Clark, 2000, Fig. 5.1). The sherds of a reconstructable second, and very similar, krater were found in the collapse layers of Room 4 of Building A (Fig. 5.1) (Lawlor, ress). These kraters are the only two so far found at the site. The excavators at 'Umayri, discussing the first krater discovery, identified the krater as involved in the production of olive oil, used to separate the water from the oil after the olives have been crushed; they also referenced Zevit's work on first oil pressing to suggest that it could have been involved in cultic activities as well (Herr, 2006, p. 68; Zevit, 2001, p. 139). Herr's recent presentation of this vessel reiterates its "rare" occurrence and "specialized function" in Iron I Transjordan (Herr, 2015, p. 98–99). At least three other examples of similar kraters have been found in the Southern Levant, one from the Late Bronze I period at Hazor, one from the Late Iron I period at Megiddo, and a third from Miqne in the Iron II period (Yadin, 1958, Plate CXXXVII; Arie, 2006, p. 197; Herr, 1992). The Iron I krater at Megiddo was one among several open ceramic types found in an interior living/working room of a house (Arie, 2006, p. 233). It was interpreted as a working vessel for separating liquids "of differing weights", such as oil and water, given the disparity in height of the spout and drain hole (Arie, 2006, pp. 197–244). If these interpretations are correct, then these vessels at 'Umayri would have been a valuable asset in the processing of olive oil after the harvest. The kraters' specialized features and cumbersome size perhaps explain why this particular vessel is limited in distribution, with the

Room A4 example weighing at least 2.68 kg, probably over 3 kg when complete, and measuring 31 cm in diameter and 20 cm in height.[7]

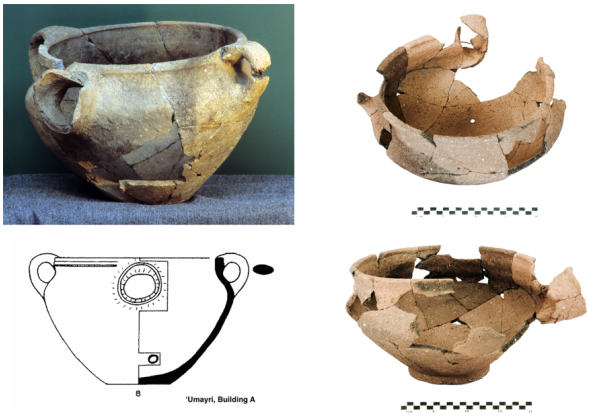

Figure 5.1: Olive oil separation kraters from Building A, Room A2 (upper left) and Room A4 (remaining images). Source: MPP, photographs courtesy of Vera Kopecky

Olive oil production was a significant part of the highland economy, the oil used for light and food, and, like cereal production, also involved the entire community. Ebeling's study of women in the Early Iron Age Southern Levant particularly highlights community involvement, as the olive harvest was a time of "hard work and celebration among the highland villagers, and women participated along with other family members in both the olive harvest and oil pressing for their households" (Ebeling, 2010, p. 120). Men, women, and children were all involved, helping to shake down and collect the olives from the trees, as known from ethnographic accounts (Ebeling, 2010, p. 121), referencing (Amiry and Tamari, 1989, p. 36). Harvesting the olives was only the beginning, as the olives would need to be crushed, then pressed, and finally, the oil separated from the water (Hopkins, 1985, pp. 231–232). As Hopkins points out, this process, while intensive, required "few facilities", and could be completed by any number of methods; at the least, crushing the olives would only need a hard surface and a cylindrical stone, the crushed olives could

7. The spout measures 5.8 cm wide by 8 cm high in an oval shape, while the drain hole measures 1 cm in diameter. These measurements and weight estimates were taken by Kristina Reed at the Center for Near Eastern Archaeology, La Sierra University, where the vessel is currently held.

be pressed in baskets by weights, and the oil separated by ladling out of any open vessel (Hopkins, 1985, pp. 231–232).

Identifiable olive oil installations do not make an appearance in the archaeological record of the Southern Levant until later in the Iron Age, so the simple method noted by Hopkins was likely used at 'Umayri.[8] Ebeling notes that, "[g]iven the dearth of olive presses at early Iron Age sites, it is likely that olive oil was expressed for household use with mortars, pestles and other equipment made of stone and wood during this period" (Ebeling, 2010, pp. 120–121). A study of Bronze Age Crete is the source for Hopkin's mention of a cylindrical stone, as the investigators suggest that a large cylindrical stone would have been rolled over a hard surface, such as a stone bench found at one Late Bronze Age site, to provide a simple yet effective means of crushing olives (Forbes and Foxhall, 1978, pp. 39–41). Such a use for limestone rollers has been suggested for the Southern Levant as well, for a limestone cylinder found at an Iron Age farmstead at er-Ras, based on comparison with a Roman-Byzantine example (Edelstein, 2000, p. 45). The large limestone roller found in the broadroom (B3) of Building B could have served a dual purpose, then, in crushing olives during harvest season, and flattening the roof after rain (see Chapter 4). Once again, it is possible that where only a single roller has been found among the five houses, that it served this dual purpose for more than a single household and would have been shared. Such a suggestion of shared facilities was made for Bronze Age Crete, where the considerable "investment" in oil facilities was large enough to prevent each household owning their own means of production (Forbes and Foxhall, 1978, p. 46). Perhaps only the occupants of Building B used the roller for olive pressing and others had to rely on mortars and pestles, as Ebeling has suggested, or perhaps they did share. There was certainly no dearth of grinding stones for the purpose in any of the houses.

8. Hopkins notes the discovery of a large LB mortar at Bethel as the only example for the LB-Early Iron I period (1985:231), and Eitam notes the locations and types of numerous olive presses that do not date earlier than the 9th century BCE (Eitam, 1979, p. 153).

The final step in the olive oil production was separating the oil from the water. This could be achieved by letting the liquid settle in a large basin, and draining off the heavier water from a spout below, or skimming the oil off the top (Hopkins, 1985, p. 232). For Greece, it was suggested that a large, communal tank provided an initial means of separation, but that then individual families could collect their portion in smaller, spouted vessels for final purification (Forbes and Foxhall, 1978, p. 46). Individual ownership of these smaller vessels was critical, as otherwise the large amount of oil produced (250–300 liters for ancient families) would bottleneck at the point of separation (Forbes and Foxhall, 1978, pp. 46–47). Dalman's Palestinian villagers made use of large bowls instead of tanks or basins, and scooped the oil out by hand or other vessel (Dalman, 1935, pp. 236–237). The spouted kraters at 'Umayri would have been ideal for separating oil from water, and may have been limited to the ownership of the Building A occupants, while others made do with non-specialized kraters and bowls. However, with two vessels on hand, they could also have shared this equipment with others.

Meyers mentions that "the clan was the facilitating mechanism for the communal food-processing activities of the smaller settlements" of Iron Age Israel (Meyers, 2013, p. 116). The clan, in this example, would likely equate with an entire small village, and the example she gives of their organization is in work at the settlement's olive oil press. She further notes ethnographic observation that twentieth-century Palestinian peasant villagers shared large and expensive installations (Meyers, 2013, p. 116). While it is possible that the inhabitants of Building A restricted use of the krater, it seems more likely that such equipment would have been shared. If this house also also oversaw community ritual in the shrine that involved oil offerings (see the discussion of grain offerings in the previous chapter, and discussion of the shrine below), it makes even more sense that such equipment would have been stored in this particular house. Villagers certainly could have gotten by with the abundant basalt groundstone tools and ceramic bowls at their disposal for crush-

ing and separating, but the sharing of the krater may have been another way of cooperating across households and increasing neighborly good will.

Pastoral

The care of animals in the Early Iron Age would have been crucial to the survival of the villagers. The large number of animal bones found across the settlement (including pit and domestic material) were dominated by a high percentage of sheep and goat (80.8% NISP of identified species), indicating that pastoralism was a large part of the local economy (Tables 5.2–4). Other common barnyard species were a much smaller part of the overall sample, including cattle (13.4%), pig (3.4%), equid (1.2%), and dog (0.8%). Wild species, including birds and fish, were a very small percent of the overall identified fauna, at $<$ 1.3%, indicating that hunting was not a significant source of subsistence. Analysis of the faunal record from Stratum 12 at 'Umayri provides insights into the profiles of the pastoral herds, the likely contributions to diet and daily life made by the sheep and goats, and, when further complemented with ethnographic data, the community practices that surrounded the herding and use of caprines.

This section starts with a brief review of the faunal data, combining the large faunal study published by Peters, Pöllath, and von den Driesch on the material from the large refuse pit (Peters et al., 2002), Angela von den Driesch and Nadja Pöllath's unpublished identification of bones during the excavation season of 2008, and the focused identification of the fauna from the Stratum 12 domestic structures by Justin Lev-Tov.[9] Most conclu-

9. The faunal material from the refuse pit, collected from 1994 and 1996, was coded, digitized, and analyzed by Joris Peters, Nadja Pöllath, and Angela von den Driesch and published in their 2002 article, based on 5,989 specimens (Peters et al., 2002). Material excavated in 2000 and 2002 was coded on-site by Nadja Pöllath and Angela von den Driesch in 2008 in handwritten notebooks. I translated (from the original German) and digitized their handwritten records pertaining to Stratum 12, with the assistance of Pöllath. Some of these records included new data from the refuse pit, increasing the numbers from the 2002 report, as well as some domestic material. Pöllath gave me access to the raw data used for their 2002 report, and I have done my own calculations on the data utilizing this new data for the pit, as well as removing data (about 400 specimens) from loci that I decided were unsuitable for inclusion in the Stratum

sions regarding environment, trade, wild game, and other aspects of the faunal assemblage published by Peters *et al.* in their study still hold true, and references to this study are made throughout this section in addition to the presentation of the larger dataset (Peters et al., 2002). The faunal discussions in this current study focus on certain aspects of particular importance to the interpretation of community practices.

The Sheep/Goat Herd The composition of the herd of sheep and goats provides information about the local environment and the goals of the herders. As was emphasized with cattle herding strategies above, the villagers had several options for minimizing risk while keeping animals for various purposes. Keeping a mixed herd of sheep and goats is "an insurance policy against disastrous climatic extremes as well as an effective way of utilizing available forage resources" since each species prefers differing vegetation (Lancaster and Lancaster, 1991, p. 130). Goats handle rougher terrain and less desirable vegetation well, while sheep are more demanding, though sheep are more valuable for their wool and their higher-fat milk (Lancaster and Lancaster, 1991, p. 130). A mixed herd that is fairly equal in proportion of sheep to goat is evidence of a concern with herd security over a specialized economy focusing on wool/energy, and was evident in use at Khirbat al-Mudayna al-'Aliya later in the Iron I period (Redding, 1981, p. 233; Lev-Tov et al., 2011, p. 74). At Iron I Tel Dor, goats only slightly outnumbered sheep (Sapir-Hen et al., 2014, p. 88). Small communities living on the edge of survival would have preferred a safe herding strategy, and as Redding makes clear, the ratio of sheep to goat is one of the clearest indicators of herding strategies (Redding, 1981).

At 'Umayri, the results from the refuse pit were a surprise when set in its rural context. Peters *et al.* noted that sheep outnumbered goats at 2–3 to 1, a larger ratio of difference

12 refuse pit. The combined data for the refuse pit for this study totals 12,411 specimens. While the numbers are slightly changed from those in the published 2002 report, the main conclusions still stand (Peters et al., 2002). The domestic material is a combination of some faunal material from the 2008 identifications by von den Driesch and Pöllath, but mostly from the identifications made by Justin Lev-Tov in 2013, covering faunal material collected up through the 2012 season.

in favor of the riskier, but more valuable, sheep (Peters et al., 2002, p. 324). They suggest this inequality may have been related to the production of woolen textiles on-site, which would have benefitted from higher numbers of sheep. This pattern of at least a 2:1 ratio was true at 'Umayri for all of the Bronze Age assemblages they studied at the time. It was a pattern that held into the Iron Age and beyond regionally, based on the faunal studies at nearby Hesban. It was not until the Islamic period that goats became dominant in the herd composition, perhaps, as they suggest, an indication of wide-scale environmental change for the worse (Peters et al., 2002, p. 324). The higher ratio of sheep to goats at 'Umayri suggests a couple of conclusions: 1) grazing around 'Umayri was sufficiently abundant to encourage greater risk in strategizing herd composition; 2) wool, and perhaps meat or milk, was enough of an integral part of their economy to make the herding risk worthwhile; wool in particular was emphasized by Peters *et al.* (Peters et al., 2002, p. 330).

The much smaller assemblage from the domestic contexts show a slightly lesser predominance of sheep to goats. Here, the NISP ratio is roughly 3:2, sheep to goats, for a dataset of 103 specimens that have been identified to species. A further 593 specimens could only be identified as sheep/goat. This is not that different from the newer numbers for the refuse pit, which stand at sheep 248, goat 163, and sheep/goat 4,657 identified specimens.[10] Sheep still predominate in the assemblage, but not as dramatically as before, and the pattern remains the same in the pit or in the domestic contexts. The implication remains that sheep were an important part of the local economy, possibly for their wool, and that their favor over goats was unusual for the Early Iron Age, when other settlements had a more risk-sensitive ratio of 1:1 (Lev-Tov et al., 2011, pp. 84–85).

Production Models Survivorship curves for sheep and goat are presented in (Fig. 5.2). The kill-off pattern reveals that treatment does vary by context. Comparing the patterns

10. A reader who consults (Peters et al., 2002) will note that the numbers from Fig. 14.6 on p. 312 do not match up with the numbers presented above. See the previous footnote.

overall with those established by archaeologists elsewhere, the herding strategy is clearly not focused on milk production, which would see a sharper kill off pattern in the youngest age category (Payne, 1973, p. 283).[11] The patterns more closely resemble the combined male/female results from Payne's meat production strategy, though perhaps with some influence by a wool strategy in the domestic remains (Payne, 1973, pp. 282, 284). Redding's research argues that such clearly defined goals are unlikely to be identified in herds, and that instead goals focus more widely on either obtaining energy from the herd or in maintaining a herd composition that reduces the risk of major loss, which he terms herd security (Redding, 1981, pp. 30–31). These ideal curves as he presents them do not provide ready comparison with the results from 'Umayri, either domestic or pit (Redding, 1981, p. 203, Fig. X–19). The mortality analysis provided for the caprines from the refuse pit by Peters *et al.* 2002, based on tooth wear analysis, is reprised here in the format of a survivorship curve for ease of comparison with the current charts (Fig. 5.3). Though completed with different data, the curve maintains the basic features of the current curves. Their interpretation of the data led the team to conclude that the large percentage surviving to adulthood best fit a wool production model (Peters et al., 2002, p. 319). In conclusion, it is probable that the herds at 'Umayri were used for more purposes than just one, and that the animals provided a small amount of milk products for daily use, meat when necessary, and that a significant number of the animals survived into older age to produce wool for the community's textile needs. The slight difference between sheep and goats are slightly in favor of sheep survival from the refuse pit, combining with the higher ratio of sheep to goats to strengthen the assertion of a focus on wool.

11. Profiles based on sex would be even more informative for determining herding strategies, as a milk production model eliminates a higher number of males in the youngest age category, while a wool production model allows both males and females to live to the same, older age. However, for this sample, there was not enough new data to establish a sex ratio. Instead, the earlier report on the refuse pit is referenced, where females dominated the older age categories for the small dataset of identifiable crania, goat horn cores, and bone measurements (Peters et al., 2002, pp. 319–320).

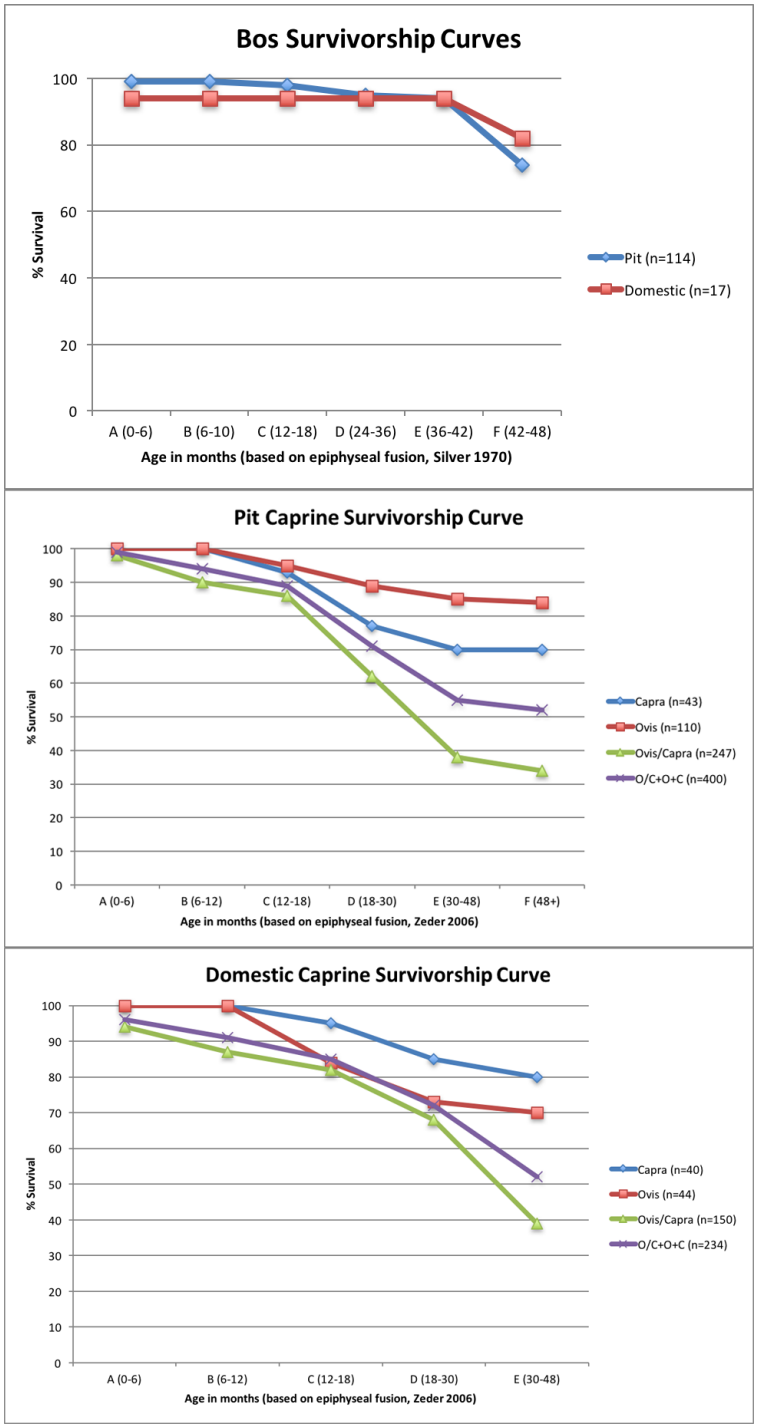

Figure 5.2: Survivorship Curves comparing Domestic and Pit for Cattle, Sheep, and Goat

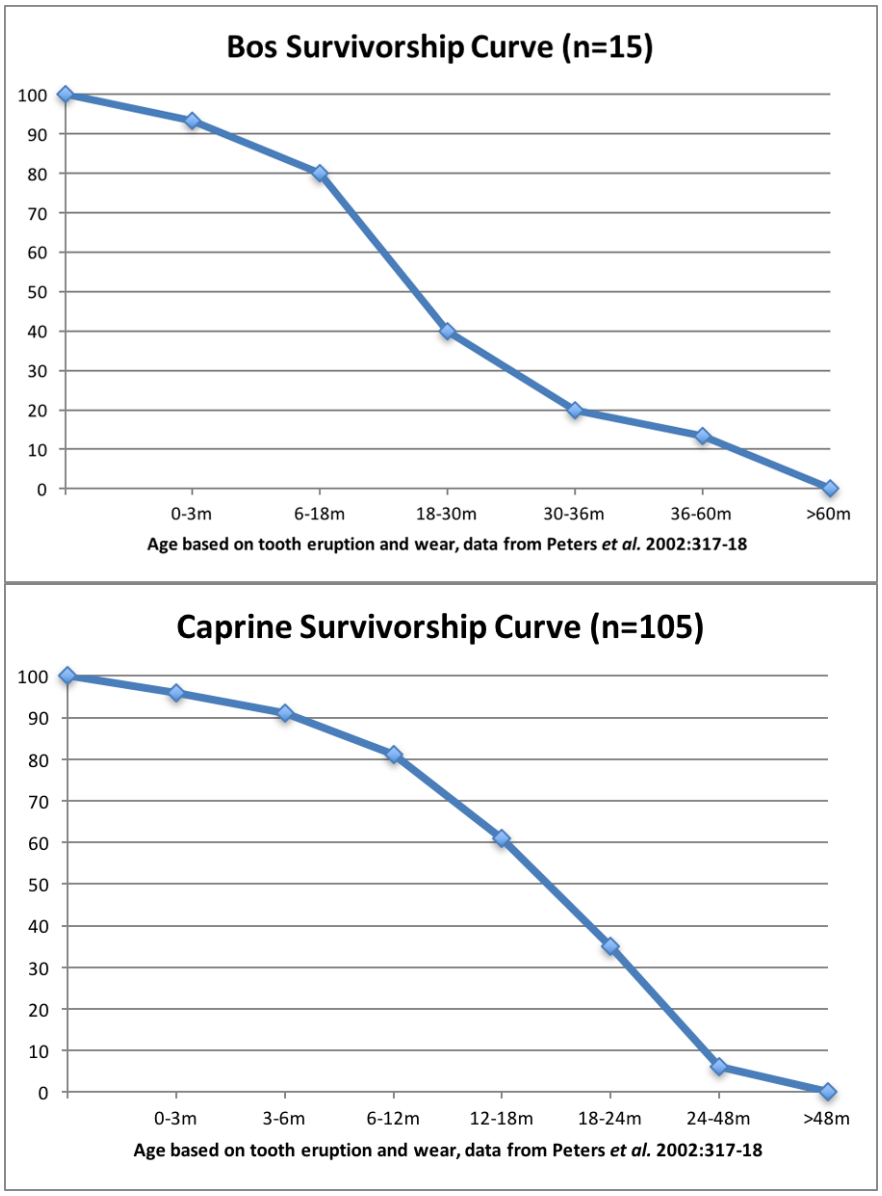

Figure 5.3: Survivorship Curves for Pit contexts based on data from Peters *et al.* 2002

Herding Practices Estimating the size of ‘Umayri’s flocks during the transitional period would be impossible, given the unknown duration of use for the refuse pit and the fact that not every animal that dies in antiquity is represented in the faunal assemblage (Davis, 1987, pp. 23–36). Ethnographic information on flock size is abundant, and though highly variable, is relevant to this study to consider how the sheep and goats so essential to survival at ‘Umayri would have been cared for, and how the community would have needed to work together to ensure herding success.

A study of the semi-arid eastern Badia in Jordan, though representative of a different climate and way of life than that experienced by inhabitants of the Madaba Plains region, gives an idea of herd size from the mid–20th century of 60–80 sheep/goats per family, for families heavily reliant on the animals (Lancaster and Lancaster, 1991, p. 131). While the economic model of this herding situation is different, some of the points that Lancaster and Lancaster raise are pertinent: “Given the multi-resource nature of pastoralism and the fluidity of the domestic group in its productive or consuming capacities, it is difficult to make any calculation of the minimum number of animals needed for the subsistence of a particular number of people.But subsistence is more than the maintenance of physical life, as it incorporates the social relationships necessary for the maintenance and perpetuation of the individual, family and group” (Lancaster and Lancaster, 1991, pp. 131–132). Herd size is not just about what was functionally necessary to support the families, but could be influenced by social factors as well. Watson’s study of agro-pastoral communities provides socioeconomic example relative to the situation at ancient ‘Umayri, but also emphasizes the vast variability of herd sizes. Her calculations of animals owned per family in Hasanabad ranges from some families having no sheep or goats to a family that had as many as 100 sheep and goats, with an estimated average of 7 goats and 13 sheep per family for the village in 1959 (Watson, 1979, pp. 94–96). With some families owning only a handful of animals and others owning good-sized flocks, how were the animals cared for

on a daily basis? With families divided between agricultural duties and everyday production of food, clothing, and other necessities, for each family to sacrifice a member to flock care would have been unrealistic. As Watson notes for her villages, the answer was simple, in the creation of larger jointly-herded flocks with a rotating shepherd duty or hired shepherds (Watson, 1979, p. 94). Thinking about the realities of caring for the herds on a daily basis provides another window into how the villagers could have worked together to help their flocks thrive.

Herding practices change with the local environment but above all, flexibility and communal effort were necessary. Studies of the Bedouin of Palestine and Jordan that include discussions of herding practices corroborate Watson's observations. Flocks were usually herded by family members, even across the divide between the agricultural *fellahin* and the pastoral *bedouin* (Hirsch, 1933, p. 33; Lancaster and Lancaster, 1991, p. 136). The communally-shepherded flocks that Watson recorded were around 200-head strong and could come from as many as 15 different owners, who would take turns watching the animals in a daily rotation (Watson, 1979, p. 94, 231). Hasanabad had four communally run herds, taken out daily for pasturage and returned each night to their home stables, which in Hasanabad were located under the families' compounds (Watson, 1979, p. 97). Another element of herding she notes is the pattern of milking, done in the morning by the women in a communal space before the animals were taken out by the shepherd (Watson, 1979, p. 97–98). Because most families had only a few animals, the women of Hasanabad would also create their own cooperative to distribute the milk in larger quantities and borrow shared equipment for processing the communal milk into various dairy products (Watson, 1979, p. 98). Shearing provided an equally cooperative event for the men of the community, and like the herding and milk cooperatives, could even cross boundaries of kinship or status when "practical considerations" were greater (Watson, 1979, pp. 107, 231). She does note that the cooperatives were usually arranged along economic and kin-

ship lines however, and were fairly stable as flock care was a year-round concern (Watson, 1979, p. 231).

Only one house at ʻUmayri has potential evidence of stabling in the architecture. Building B had a stone paved side room in the main structure, and a stone-walled pen in the courtyard (see Chapter 3). While larger animals could have sheltered in the side rooms, the small pen would have been ideal for a small flock of sheep, goats, or their offspring. Other Early Iron Age sites in the Southern Levant were often fully walled with an open space in the middle of the settlement that many have suggested could have been used for sheltering community flocks (Routledge, 2000, pp. 59–60). If ʻUmayri's settlement plan follows this pattern, then more animals could have been gathered than the few that would have fit into Building B's courtyard. Lutfiyya's study of a Jordanian village noted that animals were kept on the bottom floors of houses, or in the courtyard when weather permitted, and that they were allowed to wander during the day, guarded by a member of the household (Lutfiyya, 1966, p. 20).

From the faunal evidence presented above about sheep and goat herding practices, the various inhabitants must have together owned a large number of animals. Their care and the use of their secondary products would have required a great deal of cooperation, as the example of Hasanabad suggests. Further archaeological exposure at ʻUmayri would assist greatly in studying stabling patterns and judging herd size, but for now it is possible to note that herding was likely a community-wide concern, and not an activity restricted to the household level.

5.3.4 Practicing Ritual Together?

Household and community religious activities would have been an important part of everyday life in the settlement, as well as on special occasions. Archaeologists have combined archaeological evidence with textual studies to more fully understand the small ob-

jects and special installations that suggest ritual practices and contextualize them in the broader religious realm of the ancient Near East. For the earliest Iron Age, few remains of formal or "official" religious sites exist for study, though the Iron I period cult places that are known are listed by Zevit (Zevit, 2001). However, several remains from domestic contexts in the Iron Age Southern Levant have been studied, interpreted, and arranged into typologies (Zevit, 2001; Albertz, 2012; Schmitt, 2008, 2014; Ackerman, 2003, 2008; Nakhai, 2011, 2014; Daviau, 2001). The remains from Stratum 12 at 'Umayri have frequently made an appearance in these articles after the publication of a "cultic corner" in Building A by the excavators (Herr, 2006). Other cultic artifacts add to the remains of ritual activity discussed in the Early Iron Age settlement. With disagreement over the interpretation of these remains, presented below, it is necessary here to outline the extent of the possibly cultic remains from Stratum 12, discuss them in their archaeological context and in the context of the growing body of literature on domestic ritual. Only then will it be possible to consider the possibilities for communal ritual practice at 'Umayri from the domestic remains.

Evidence for Cultic Ritual

Determining whether an object or installation was used in a ritual context can be difficult, with archaeologists gaining a notorious reputation for associating anything new with ritual activities. However, attempts have been made to better identify particular objects of cultic use, most recently by Schmitt, who judges cultic designation against a criteria-rich typology that includes context and association (Albertz, 2012). Though Schmitt's typology is quite strict, it is a good starting place for highlighting some of the artifacts found in the Stratum 12 settlement and noting their possible ritual use. A list of all possible cultic artifacts from Stratum 12 are presented in Table 5.5 (excluding items of personal adornment, which will be discussed shortly), where the tables are organized by Buildings B, A, D, and

E. No possible cultic artifacts were found in Building C. Figurines, human or animal, as well as miniature shrines or stands, are all identified by him as "Category A" cultic objects, used as votives, for apotropaic magic, or for the locus of worship or ritual practices (Albertz, 2012, p. 72). Several of the Stratum 12 artifacts fall into this category, though all are sadly in a worn and fragmentary state, leaving open the likelihood that they were not actually used by the Stratum 12 inhabitants. This includes two anthropomorphic figurine fragments depicting feet and an arm (B945142 and B006715); a possible zoomorphic figurine (B986658); and a fragment of a possible miniature shrine or cult stand (B986678). "Collectibles," chalices, lamps, game pieces, and astragali, all fall into his "Category B" cultic objects, used for either "profane" or ritual purposes, and varying in interpretation by context (Albertz, 2012, pp. 74–75). A number of these "Category B" artifacts also show up in the settlement, including: three natural but oddly shaped stones, which fall into his "collectibles" category for personal or votive use; chalice sherds for drinking or ritual libations; several lamps for lighting the mundane or the holy; and gaming pieces and astragali, useful for personal gaming or casting lots (for the gaming and ritual uses of astragali, see Gilmour, 1997) (see Table 5.5 for the complete list of these artifacts). In addition, three sherds from pyxides were found, which could mark status or serve a specialized ritual use (one in Room B3, two in Room A1). A large (1 m high), rectangular limestone found erect against the western wall of Room A2 in Building A has been interpreted as a standing stone, with a flat stone found almost 1 m east of the stone interpreted as an associated altar stone (Fig. 3.11). Further flat-lying stones found in an alcove (A4) to the south were interpreted as possibly more standing stones out of use (Herr, 2006, pp. 62–63).

Evaluation of Cultic Remains

In Schmitt's evaluation of the cultic assemblage from Stratum 12 at 'Umayri, based on his own typology for cult places and cult objects, the possibilities for ritual do not fare well (Albertz, 2012, pp. 190–192). He contradicts the excavator's interpretation (Herr, 2006), as well as those who have followed Herr's interpretations in constructing their own typologies of Iron Age cultic places (Nakhai, 2014, p. 55; Nakhai, 2011, p. 353). Schmitt's "[i]mpartial consideration" demotes the standing stone to an architectural feature and points out the lack of "Category A" objects that would have set this space apart as a ritual installation. At the time of his publication, Schmitt was aware of the pyxis and chalice fragments, as well as a pair of cymbals which have been misattributed to this stratum and which are in fact from a later stratum. As he rightly notes in his discussion, the full evidence awaited final publication and such judgments were therefore made on partial evidence (Albertz, 2012, p. 190). Now, with all of the excavated evidence from Stratum 12 compiled, the day of judgment has come.

A review of the gathered evidence provides some support for the cultic corner interpretation of the area in Building A, Room A2, according to Schmitt's typology. Of minor assistance are the figurine and cult stand fragments, while the concentration of lamps, all found in Room A1, openly adjacent to the standing stone in Room A2, improves the possibility that this area was a cultic installation. Most of the artifacts were found in the collapse material of Room A1, though one lamp was found on the surface of Room A1 and another on the Surface of Room A3. The other lamps could have fallen from the bench in Room A1 or from other furniture or shelves in the room, or from rooms above. That these two rooms were solely dedicated to cultic activities is unlikely, given the otherwise domestic nature of the cooking and storage installations and the similarity of the remaining artifacts to those found in the other buildings. However, that Room A2 was the center of ritual activity seems likely.

The stone in Room A2 seems a very good candidate for a standing stone based on Herr's observations of its size, shape, its limestone composition unique from surrounding building stones, and its intentional placement in the center of the wall (Herr, 2006, pp. 62-63; Herr, 2000, p. 173). The interpretation of the flat-lying stone to the east of the standing stone as an altar is debatable, as similar large, flat-lying limestones were found between Rooms A2 and A1 and are interpreted as pillar bases (Herr, 2006, p. 63, Fig. 4). However, the excavator does maintain that the stone was not aligned with the others, was in front of the standing stone, and was naturally-formed limestone like the standing stone (Herr, personal communication, March 2016). The pile of carbonized barley found nearby could have been meant as a grain offering, but as easily could have fallen from one of the many pithoi during the destruction or been in the midst of processing on the nearby groundstone in Room A1 (Herr, 2006, p. 63, Fig. 4).

Schmitt's observation that the flat-lying stones in the alcove in Room A4 were more likely paving stones than standing stones, given their irregular shaping, was offered as an equally likely interpretation by Herr, though maintaining that the arrangement of the stones does not entirely fit with this alternative explanation (Albertz, 2012, p. 190; Herr, 2006, p. 63). No cultic-related artifacts were found on the surface in this alcove, only a grinding stone and a spindle whorl.[12]

In Schmitt's typology, then, Room A2 would not have been a dedicated ritual installation, but one that would fit most easily into his concept of a "domestic cult" category, with ritual activity alternating or coinciding with other household activities (Schmitt, 2014, pp. 267–269). The relatively high numbers of grinding stones and the two olive oil kraters found in Building A were mentioned above as possibly due to cultic activity such as grain and olive oil offerings. It might be possible to suggest that the area in Rooms A2 and A1 could even fit into Schmitt's concept of a "domestic shrine", with the perma-

12. Neither were saved as registered artifacts but came from Locus 7J79:05, Pail 205 and are listed as artifacts on the original locus sheets.

nent bench feature against the eastern wall of Room A1, the standing stone in Room A2, the specialized figurine and cult stand fragments in this area, and possible ritual offerings (Schmitt, 2014, p. 269). Whether or not he would accept this interpretation of a space that so clearly shared mundane activities remains to be seen. The chalice, figurine, and miniature shrine fragments in a context with kitchen installations altogether are not dissimilar from the ritual assemblages that he sees continuing Bronze Age practices in Iron I Cisjordan (Albertz, 2012, pp. 172–173).

Studying the same assemblage from the viewpoint of Nakhai introduces the possibilities of community-wide ritual practice related to this cultic area. Her most recent analysis of household religion focused on the aspects of individual and household participation and concerns in domestic rituals (Nakhai, 2014). Following Herr's interpretation of Buildings A and B as a *bt b* and her own previous work identifying household religious installations, she identifies Building A's "cultic corner" as one of her "shrines of the family elders," a place where "an elite family, presumably the community elders, presided over ritual feasts and cultic ceremonies" (Nakhai, 2014, pp. 55, 58). With the convenience of the excess storage next door in Building B, she points out, the two buildings pair well as the center of community ritual and storage for group feasting. With more buildings now excavated and no architectural support for interpreting Buildings A and B exclusively as a family compound, it might be more difficult to continue following this line of argument. However, her theory that community elders could have been involved in this space with the standing stone to carry out rituals perceived as essential for their "sustenance and economic survival" (Nakhai, 2014, p. 54), may fit with the architectural and artifactual evidence presented in this chapter and the previous for a predominance in the settlement of Buildings A and B. One of the ways this pre-eminence could have been expressed was through control of a community shrine.

Perhaps less restricting when surveying the evidence for ritual in the settlement is

Nakhai's idea of the "sacralization" of space, a "temporal" application of ritual sacredness to an otherwise mundane space (Nakhai, 2014, pp. 349–350). For the figurine fragments, as well as the strange collection of stones found in Building D[13] and the lamps found in Buildings A, B, D, and E, both of which can be either mundane or ritual objects according to Schmitt, these objects could have marked moments in everyday life when the villagers sanctified the space around them with ritual. That this everyday ritual was particularly carried out by women in the domestic domain is another point that Nakhai makes, bringing into the discussion other "small sacred objects" such as beads and jewelry that were also present in the Stratum 12 settlement (Table 5.6) (Nakhai, 2011, p. 356; Nakhai, 2014, pp. 53-54). Ackerman's work on studying household religion with the input of textual material also emphasizes the dominance of women in the domestic cult (Ackerman, 2008, 2003). Daviau, discussing nearby Tall Jawa in the Iron II period reconstructs domestic ritual involving food and drinking rituals accompanied by lamps on the roof or upper story of the house, recognizing the "complex pattern of religious observance" that took place in ancient homes (Daviau, 2001, p. 202).

As Van der Toorn imagines in his fictional reconstruction of living nine months in an Early Iron Age village, rituals could have taken place in a number of ways with a number of levels of individual, household, community, and regional involvement everyday (van der Toorn, 2003). A final interpretation of the potential cultic materials in Building A would be impossible without a "dream" such as van der Toorn's becoming a reality. The standing stone and cultic artifacts in close proximity to a bench and cooking installations seem indicative of ritual activity. Whether or not this activity was limited to the household of Building A, or whether the standing stone was the center or larger, community-wide ritual events, is difficult to confirm. As more buildings are excavated and patterns of ritual

13. Albertz and Schmitt note that oddly shaped stones can be seen as "collectibles" (Albertz, 2012, p. 72). The stones are certainly distinctive in shape (resembling to the modern eye a soap dish and a door handle!) but are natural chert formations. Such "unusual stones" were found at the LB/Iron I sanctuary at Timnah, possibly as votives (they ref. Rothenberg 1873:184–185, 100, 105–108).

activities are better studied at ‘Umayri, perhaps we will be able to say more in the future. When taken with the evidence in the next section on feasting at ‘Umayri, it seems likely that ritual activity was an important part of everyday life at ‘Umayri, at both household and community levels.

5.3.5 Feasting Together?

The refuse pit, located northeast of Building B as discussed in Chapters 3 and 4, has been the source for many theories about the nature and use of the Stratum 12 buildings. In the context of the wider community, the trash dump contains a unique dataset from which to better understand the practices of the settlement, including not only seals, but also a large and varied collection of animal bones. While fine resolution of animal bones in the settlement is impossible for individual houses, with most animal bones originating from secondary or tertiary contexts in and around the houses, the refuse pit provides an opportunity to contrast a single large context with the combined domestic faunal remains. This section discusses the nature of the refuse pit, the profile of animal remains in contrast with the wider settlement, the inclusion of “exotic” fauna, and non-faunal remains of note. The results of analysis of these various aspects are then used to evaluate the various arguments that have been made about special activities represented by the refuse pit.

The Refuse Pit

As discussed in Chapter 3, the refuse pit is physically a space cut between earlier Bronze Age walls to a maximum depth of 2 m, and excavated so far to 8.5 m long by 3.7 m wide. As discussed with the construction of the settlement perimeter wall above, the pit likely required a cooperative effort by community members to construct. As one scenario, it is possible that the pit’s great depth and width was created during removal of earlier earth deposits for use in the construction of Stratum 12 buildings, as seen in ethnoarchaeological

examples[14] (Watson, 1979, p. 119). Alternatively, the pit could have been intentionally enlarged from a space already partially open after the destruction of the previous stratum (Clark, 2014, pp. 100–102). The refuse pit's enormous size, filled with at least 60 m^3 of garbage, shows some community organization to intentionally use a particular space for disposal.

The nearly homogenous deposit shows fine layering in both ash deposits and in "tip lines", indicating that the pit was used over at least a small span of time, but nearly continuously (Fig. 3.6). Some disagreement over the stratigraphy of the pit resulted in two different interpretations: one, that thin layers with ashy pockets, sloping from west to east, created a homogenous fill that "represented periodic fill debris from above" (Clark, 2014, p. 102), and two, that there were clear layers, signified by cobble leveling and ash layers, to indicate spaced but significant deposit "episodes" (London, 2009, p. 22). When a new section of the pit was excavated some years later, no new evidence was presented to contradict Clark's original interpretation (Bramlett, ress). Instead, the entire fill of the pit was excavated as a single locus, without the clear internal phasing suggested by London. It seems more likely, then, that the homogenous fill was created by frequent, regular deposits by the community of their everyday trash from meals and from broken or useless tools, as well as their ash.

Some of the studies that have discussed the material from the refuse pit include the following: the original excavator's interpretation that the pit was used for disposal from everyday "cooking and eating" by the nearby houses (Clark, 2014, p. 102); the zooarchaeologists' conclusion that the pit was a "garbage dump" made up of "butchery and kitchen refuse" (Peters et al., 2002, p. 306); a comparison with other Iron I faunal assemblages to emphasize the variety of ways in which the decentralized societies of this period could

14. This is likely the case, as the excavator notes that there were no Late Bronze Age remains at the bottom of the pit, only Middle Bronze II remains. There are Late Bronze remains in this area around the pit, so they had to have been completely removed from the pit by the inhabitants of Stratum 12 (Personal communication with Larry Herr, March 2016).

flexibly organize their animal economies (Lev-Tov et al., 2011, p. 86); London's interpretation of the pit's "assemblage as residue of feasting provisioned by a local authority" and taking place on a seasonal basis (London, 2009, pp. 28–30, 35); and Routledge's review of London's assertions and the archaeological evidence to agree that the pit was a "structured deposit" and that the Nile perch was related to a "socially or ritually marked event", but withholds reservations that the entire pit was the product of feasting events (Routledge, 2015, pp. 222–223). As points from these arguments become pertinent in the following discussion of the refuse pit, they are referenced again.

The Faunal Discards

It is possible to ask a number of questions to identify the practices that created the faunal discards in the pit. Comparing the faunal remains of the pit with those from the domestic structures, it is possible to start by looking for differences that would set the pit assemblage apart (Tables 5.2–4). The pit contained 12,411 excavated faunal specimens, with 61.7% identification. The domestic context, on the other hand, contained 5,603 specimens, with 88.9% identification.[15] Looking at the body part frequency, mortality profiles, and representation of wild and exotic fauna between these two contexts, taking into consideration the disparate size of the two datasets, provides new insights in the study of this pit and the practices of the Stratum 12 inhabitants.[16]

A significant difference between the representation of skeletal elements in the two locations could represent specialized consumption practices, as has been shown for Late Bronze Age feasting events at Hazor (Lev-Tov and McGeough, 2007, p. 105), for differences in socioeconomic status among inhabitants (Marom et al., 2009, p. 56), or for Israelite or Canaanite cultic contexts (Marom and Bar-Oz, 2013, pp. 236–237). Compar-

15. See footnote above on the studies of the faunal assemblage for its origins and use here.

16. See footnote above on sex ratio.

ing age profiles of the species from both locations, already studied site wide for insight into herding and agricultural practices in above sections, brought to attention the higher percentage of young cattle bones found in the refuse pit, perhaps resulting from feasting events. The presence of exotic fauna is also a basis for interpretations of feasting or ritual events at 'Umayri (London, 2011b, p. 29).

Body Part Frequency Comparison of skeletal element distribution, or body part frequency, between the pit and the domestic contexts reveals some variation in the percentage of elements represented by each species. However, the overall pattern is one in which all skeletal elements are found in both contexts, without a clear preference for particular body parts (such as the meatier upper limbs), and with non-meaty skeletal elements present in both (such as phalanges). These comparisons were made using both the fragment count for each species (NISP)(Fig. 5.4) and a count that takes into consideration the frequency with which various skeletal elements occur (NNISP, or normalized NISP) (Grayson and Frey, 2004) (Fig. 5.5)(Fig. 5.6). The resulting numbers accord with the conclusion of Peters *et al.* that all body parts are represented and that this indicates that butchery likely took place nearby (Peters et al., 2002, p. 316).

One interesting divergence, however, is related to caprine phalanges, a non-meat bearing bone that Peters et. al. noted were represented by a low percentage (2%) in the pit (Peters et al., 2002, p. 316). In domestic contexts, there was a higher percentage of caprine phalanges than in the pit (domestic: 6.7%, pit: 2.8%, NISP). For NNISP the pattern is the same, with phalanges better represented in the domestic contexts than in the pit. Because bones in general would have been better preserved in the pit where they would have been out of the reach of scavengers, this reversed pattern of frequency provides some insight into butchery practices. Each family might have carried out the slaughtering process during which phalanges were detached in their courtyards or houses, putting an increased emphasis on household-level processing of carcasses. That some phalanges do show up in

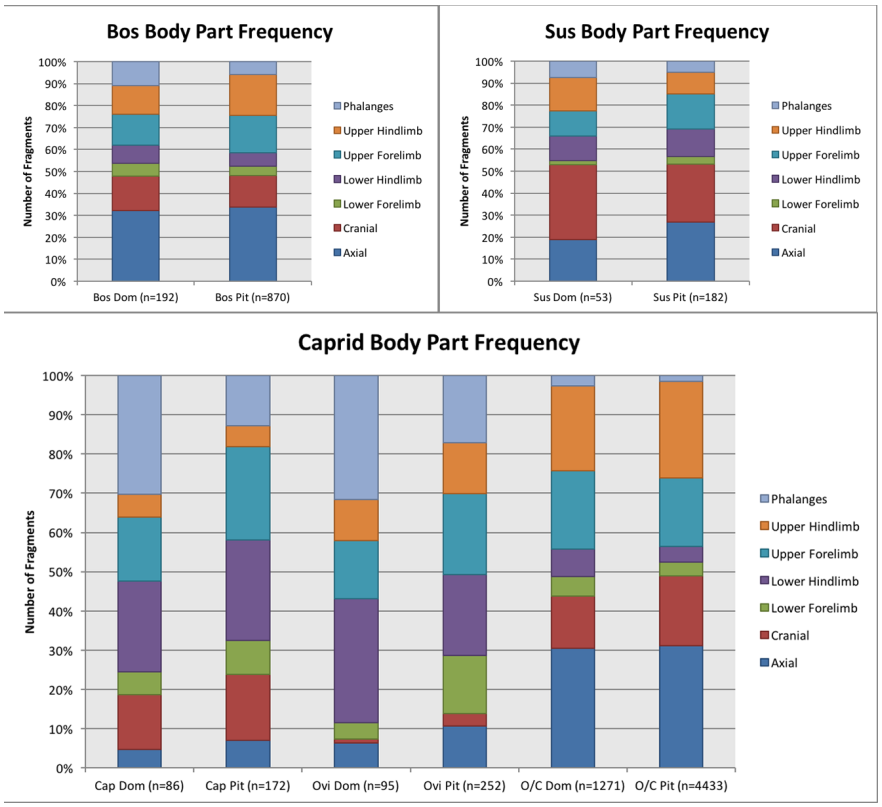

Figure 5.4: Body Part Frequency, based on NISP

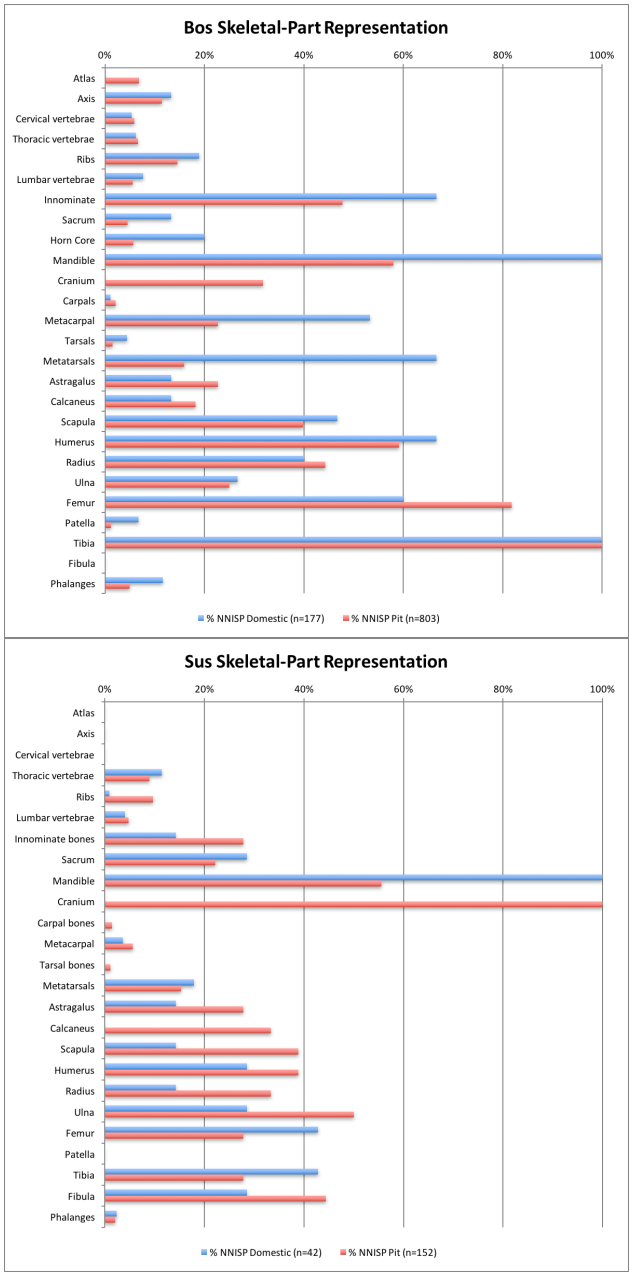

Figure 5.5: Relative Skeletal Abundance as measured by scaled NNISP (Grayson and Frey 2004)

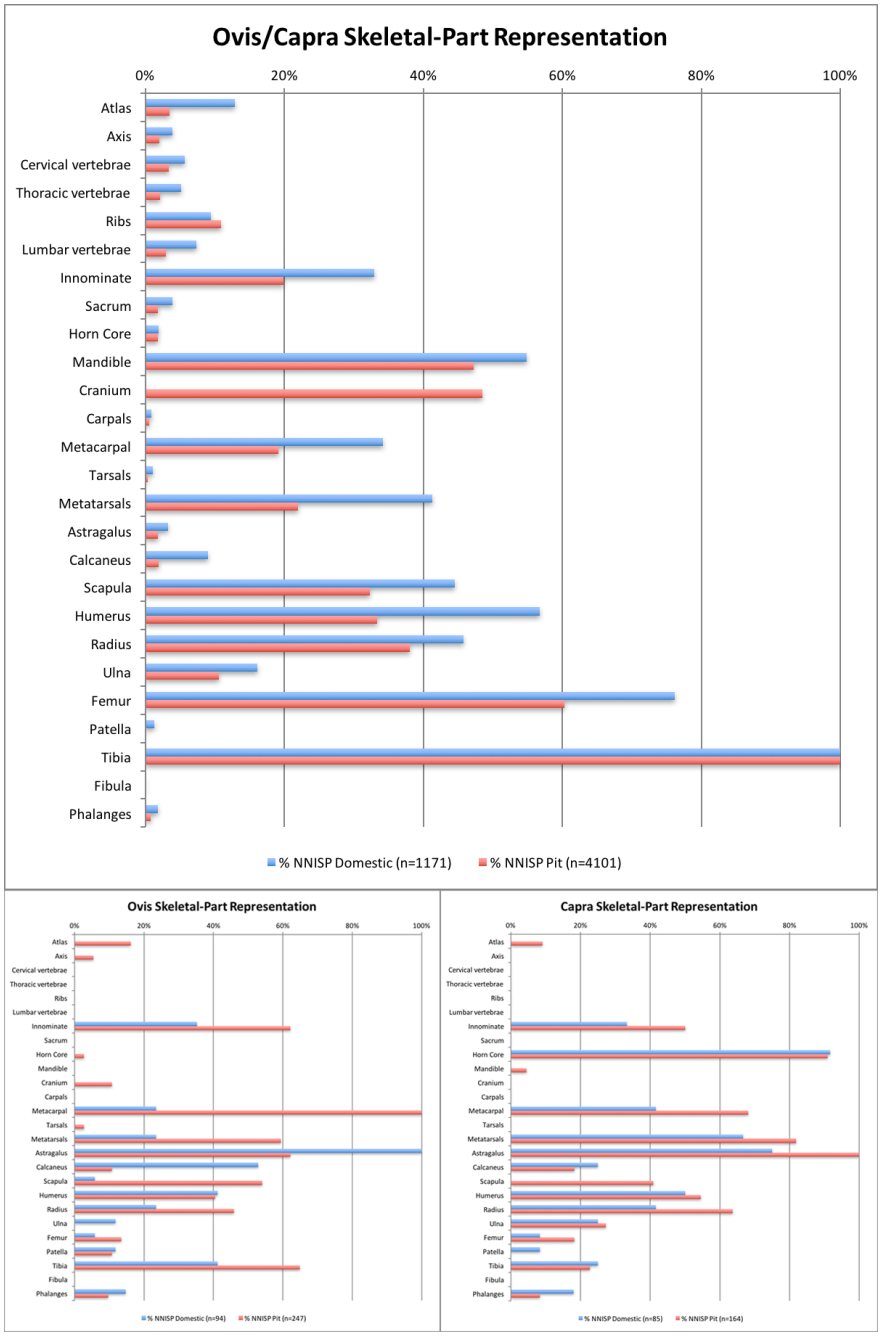

Figure 5.6: Relative Skeletal Abundance as measured by scaled NNISP (Grayson and Frey 2004)

the pit either indicates 1) some cleaning out of butchery waste into the shared refuse pit, or 2) butchery for some events taking place by the pit.

There was a noted predominance of head and feet elements, associated with primary butchery activities, in a sanctuary context at Late Bronze Age Hazor, which, from ritual texts from Emar, were tied into on-site slaughter of sacrificial animals and the distribution of these elements to key participants (Lev-Tov and McGeough, 2007, p. 98). At 'Umayri neither the head nor the feet elements were remarkable in the pit context and instead were more evident in domestic contexts.

Mortality Profiles Mortality profiles are another way of comparing assemblages. The sample size is quite disparate comparing the refuse pit to the domestic contexts from the fusion data, and is especially poor for comparing cattle (domestic n=17, pit n=114), though caprines fare a bit better (domestic n=234, pit n=400) (Fig. 5.2). Unfortunately, it is not possible to compare tooth wear analysis at this time, as the only data come from the earlier study of the pit (Fig. 5.3). From their study of age profiles, Peters *et al.* concluded that the high proportion of cattle juveniles (65%, n=15) in the pit might represent a focus on beef production at the site (Peters et al., 2002, p. 317). While this may be a result of high preservation in the pit, it is also possible that younger cattle were consumed in communal events related to the pit, as the slaughter of such a large animal would feed more than one family.

For sheep and goats, the mortality profiles do differ slightly when comparing the domestic and pit contexts (Fig. 5.2). There is a sharper culling of the combined sheep/goat fauna after 18 months evident in the pit. Another difference is that sheep and goat swap profiles from pit to domestic, representing a higher mortality rate for goats in the pit and sheep in the domestic contexts. With such small numbers and differences, it is not clear what can be made of these numbers for now.

Wild and Exotic Fauna A recent study by Lev-Tov *et al.* emphasizes the flexibility and opportunism of the Early Iron Age villagers, who took advantage of their environments to find creative food sources (Lev-Tov et al., 2011, p. 86). Included in their discussion was the wide range of wild fauna found in the refuse pit at 'Umayri published by Peters *et al.* (Lev-Tov et al., 2011). Most of the wild fauna from the pit certainly make sense in this scenario, and a similar, though less broad, range of wild animals were also found in the domestic contexts (Table 5.2–3).

One example goes beyond an inclusion of local wild animals and into the realm of exotic or luxury status, in the presence of two Nile perch bones (Peters et al., 2002, p. 329). These fish bones, from the refuse pit, are non-meaty bones suggesting entire Nile perch were brought to site and not just the more easily-transported fillets (Peters et al., 2002, p. 329). While not the only Nile perch bones found on site, the others come from outside of the current study area and time period.[17] A study on the Egyptian and Egyptian-influenced finds at 'Umayri discusses the Nile perch in Levantine and Egyptian contexts and questions the motives of the inhabitants in importing such a fish, supporting the interpretations by Peters *et al.* and London that the fish were more than mere food and had symbolic value as an internationally traded item, possibly involved in ritual feasting events (Vincent, 2014, p. 451; London, 2011b; Peters et al., 2002).

More recently Nile perch in Levantine contexts were raised for discussion by Routledge (Routledge, 2015). Here he too brings up the example of the bone from the 'Umayri refuse pit and highlights its use in a "socially or ritually marked event", even in the case that the pit itself was not formed entirely from feasting events (Routledge, 2015, pp. 222–223).[18]

17. Seven other Nile perch bones have been identified so far, originating from later Iron II and Persian deposits. Only one comes from a locus dated to the Iron I in Field F, so may be close in time but at this point cannot be connected stratigraphically to Stratum 12. (Personal communication (January 2016) with Justin Lev-Tov and Gabriele Fassbeck, who are completing the translation and digitization of the 2008 identifications made by von den Driesch and Pöllath).

18. Routledge does reference a study arguing that the fish were not luxury items but that the bones resulted instead from "fish-frames" that were shipped as "low-value" cargo. However, he questions the

Considering the context and likely feasting use of Nile perch at ‘Umayri and in a burial at Dothan, Routledge argues that Nile perch were “socially marked” luxury items (Routledge, 2015, p. 224). The Nile perch, in this scenario, is a strong piece of evidence for ritual events related to the refuse pit in Stratum 12.

Non-faunal discards

Besides the seals discussed in the previous chapter (Table 4.4), the other discards in the refuse pit represent a range of everyday artifacts, with a couple of exceptions (Table 5.7). An inventory of the refuse pit assemblage includes three bronze artifacts, including a pin and a spearhead as well as an “ingot” (A020175, A020234, B966105). The only other metal includes an unidentified “lead” fragment (B966181). These material determinations were made visually in the field, and would need confirmation before further study. A strange ribbed ceramic tube has so far presented a mystery as to its function (B966096). A few stone vessel fragments, an incised ceramic sherd, two bone spindle whorls, a loom weight, a bone awl, a large quantity of reworked ceramic sherds as spindle whorls and stoppers, as well as numerous whole and fragmentary groundstone tools round out the assemblage (see Table 5.7). The only artifacts with possible ritual connotations (excluding the seals) include a perforated astragalus (B006738), a partially-fired clay figurine fragment (A020194), and an incised sherd (A020150). Perforated astragali could have served for gaming purposes or ritual purposes as amulets, offerings, or for divination (Gilmour, 1997). The figurine has direct parallels with a series of similar figurines found in a cache in the Late Bronze Age temple that stood nearby in a previous stratum (Bramlett, 2004, p. 51). How this figurine would have ended up in the refuse pit of this later phase is unknown. With no other similar figurines identified in Stratum 12, it seems likely that this fragment is a remainder from the previous stratum, or was accidentally dug up from an

similar challenges in preserving a whole fish as a “fish frame” for transport up the Mediterranean and inland to sites such as ‘Umayri, especially the fragility of the “frames” (Routledge, 2015, p. 221).

earlier cache and discarded in the pit, perhaps unknowingly. The incised sherd is marked with a possible early *kaf*, though this is currently under study (Herr, personal communication, January 2016).

This assemblage of material fits well with the range represented in the domestic structures. Artifacts related to textile production, food preparation, and even a small weapon match those from all of the houses. The possibly cultic artifacts fit into the discussions of ritual events at the site, and being so few in number, are unlikely to represent a great deal of cultic-related activities in the pit. The range of domestic artifacts suggests the pit was a convenient disposal for broken groundstone tools, and sometimes also claimed other everyday tools. Looking at the distribution of artifacts within the pit, they are found fairly evenly spread through all identified loci. The pit functioned as a convenient garbage dump for the houses, then, at some point during its use, along with other potential ritual or feasting activities.

The ceramic discards have been discussed by London, who examines the ratios of pottery types based on diagnostic sherd counts, comparing the ceramic remains from the pit with those from Buildings B and A (London, 2009, pp. 21–22). She notes an especially high (35%) percentage of cooking pot sherds from the pit (compared to 11.9% from Building A and 7.5% from Building B). The large number of cooking pots are woven into her theory of large-scale feasting, the meat (represented by the faunal remains) cooked up in pots and served before all the remnants, cooking pots included, ended up in the pit (London, 2009, pp. 28–29).

Archaeological and Ethnographic Discussion

Archaeological parallels to the refuse pit at ‘Umayri help in the interpretation of this pit, especially where different excavation methods revealed features that are not possible to explore at ‘Umayri in retrospect. One example includes a large pit complex excavated at

Tell ed-Daba in Hyksos period Egypt (Aston et al., 2009). Close study of the pottery indicated that not only was the entire pit likely filled over about 30 years, a relatively short time, but that the mending of sherds from layers through a single pit and across pits, indicates some vessels were thrown in whole over this short time (Aston et al., 2009, pp. 19, 73). Aston *et al.* argued that the pits were "composed primarily of the remains of several meals, ritual or otherwise, deposited over a short period of time, with some other rubbish thrown in" (Aston et al., 2009, p. 19). The faunal remains were composed of typical domesticated animals, predominantly cattle and sheep/goat, as well as wild game, fish, and even a hippo bone. Rat gnawing on the bones indicated that the pit had been open over a space longer than a single event, as the rodents were able to access the refuse (Aston et al., 2009, pp. 68, 73). Small, personal items of adornment were also found in the pit, suggested to have been accidentally lost in the pit during the deposit of other garbage (Aston et al., 2009, pp. 70–73).

Only diagnostic pottery sherds were saved from the refuse pit at ʻUmayri, though most pieces were quite small and, according to the excavator, did not seem to mend (personal communication with Larry Herr and Kent Bramlett, April 2016). Only 15 of the bones from the refuse pit were noted to have significant gnawing on them (0.1% of the total assemblage), most attributed to canine gnawing. These two aspects of the ʻUmayri refuse pit do contrast the pit at ed-Daba, though the contents are similarly described as homogenous at both sites. The lack of mending pottery at ʻUmayri may be the result of throwing in only broken vessels or archaeological taphonomic processes (such as not saving sherds for mending). The lack of rat gnawing in the ʻUmayri pit is a significant difference, and one that suggests the pit at ʻUmayri was either not in use for very long, or that the regular deposits of ash, likely from hearths/oven, would have helped seal in the food refuse. The clear inclusion of ash in the deposit, in thin layers throughout the pit, make it likely that it too was used over a short period of time, but not just for a single event (Fig. 3.6).

Such a large communal refuse pit has some parallels in the ethnoarchaeological literature. As mentioned above, Watson observed that the pits resulting from the removal of earth for house-building were then turned into "dump-areas and latrines" as they were usually dug right around the village (Watson, 1979, p. 11). This made the daily cleaning out of hearth ashes convenient (Watson, 1979, p. 37). In other examples, this daily ash disposal was not tipped into a communal pit but instead built up in piles until taken out for use in the fields (Kramer, 1982, p. 89). The Stratum 12 inhabitants at 'Umayri appear to have discarded their hearth ash in the convenient method of her first example, the pit just a step away from their homes.

In Kramer's observations, the refuse from normal meals was thrown into the streets, and it was only on special occasions, such as "weddings and mortuary feasts" or an annual "religious occasion" that the resulting piles of refuse were "buried in pits to prevent concentrations of flies" (Kramer, 1982, p. 44). For these special events, the "animal bone is also reportedly buried in a pit in or near the hosts' compound", perhaps in "household courtyards" (Kramer, 1982, p. 44). The proximity of the pit to Building B in particular could signal their host status in special events. Dietler discusses the social and economic uses of feasting in Africa, particularly the ways in which feasting is used in village politics (Dietler, 2001). The regular deposits of daily refuse in the pit were likely supplemented at times by the remains from larger feasting events, when special dietary items, such as young cattle meat and a Nile perch, played a central role. The extensive surplus of Building B combined with its close proximity to the refuse pit again draws our attention to the inhabitants of this structure. They had the necessary resources on hand with which to sponsor feasts and may have helped bring the community together in occasional feasting events.

5.3.6 Conclusions

Several aspects of everyday community life have been explored in this section and presented as points at which the community would have needed to work together to secure and continue their life on the tell. Some aspects provide more certain footing for discussing models for how the inhabitants would have needed to work together, such as their joint need to construct or maintain defense structures, as well as maintain a large refuse pit. Other aspects present a greater challenge to pinpoint with the archaeological evidence, such as the possibilities for communal practice of ritual or feasting, hinted at in the Building A cultic features and the presence of seals and a Nile perch in the refuse pit. Other aspects take us into the realm of creative speculation based on faunal and botanical remains as well as limited ethnographic comparison. However, it is in these ephemeral realms that the necessity of this approach becomes clearest, that considering those types of activities which would have been most fundamental to the food supply of the settlement are so hard to determine, but so worthwhile to think about. That a small community with limited resources could have supported a specialized wool industry as well as run sheep and goat herds for other diverse uses, and kept cattle for traction and special-occasion meat, allow speculation about the relationships that would have been forged behind the scenes to share those cattle and share the responsibilities of herding the flocks. With everyone working together, the risks and time-consuming needs of fields and flocks could have been reduced and shared among the inhabitants, even if the products of this agro-pastoral economy were then taken into individual houses for processing and consumption.

5.4 Conclusions: Building and Maintaining the Community's Social Identity

The inhabitants of 'Umayri's Stratum 12 faced a daily struggle to survive, a struggle to keep their flocks and their harvests safe and so be able to continue to feed and clothe themselves. At the community level, a focus on this struggle looks for interactions above those that took place inside the houses, where the daily meal was constructed from the raw ingredients eked out of the soil and from their animals. Looking for the origins of these raw ingredients raises the question of how the inhabitants could have worked together. From the first section of this chapter, it is clear that physical and economic boundaries separated some of the villagers from the others. The size and contents of the two largest houses, Buildings B and A, lay the basis for a claim that these two households were in visible and invisible ways set above their neighbors. The nature of the excess storage in Building B indicates that this household had access to more food than their own needs would have warranted. The proximity of the large refuse pit in front of the house, and the shrine next door in Building A, make it likely that these two houses were the seat of village elders, who possibly had kinship claims to leadership. That they could have directed community projects and then called upon large grain, and possibly meat, reserves for special occasions, would have helped to justify and maintain their leadership roles.

Small clues from these community activities provide insight into the social identity of this village. Their hematite weights clearly tie into a broader Ancient Near Eastern system of thought in trade, though the weights themselves are rough reminders of the smoothly polished and shaped weights from the Late Bronze Age, and perhaps represent a local system of measurement that was no longer related to a major scale system. Aspects of ritual fit within a broader context of Southern Levantine cult, including the use of a standing stone and astragali. How their own rites would have stood out from those of their neighbors is unclear, as there is little comparative domestic data presented in the following

chapter. The focus on sheep herding and a wool economy was supported by an environment that allowed them to keep riskier herd ratios than their neighbors in more peripheral zones were able. The range of textile artifacts found in the houses and in the refuse pit attest to the use of this wool.

In small ways the community members carried out their everyday lives in a way that became very localized to their settlement. In large ways they needed to cooperate together to make the most of their grain harvests, their olive oil production, and the raising of sheep and goats. Both of these contribute to a better understanding of the ways in which they were able to build a sense of local identity and community.

CHAPTER 6

TALL AL-'UMAYRI'S HOUSEHOLD AND COMMUNITY PRACTICES IN PAN-REGIONAL PERSPECTIVE

6.1 Introduction

The traditional approach to studying the identity of regional groups of peoples in the Southern Levant has been to focus on the issue of ethnicity and the identification of textually known peoples with material culture assemblages. For example, many studies have focused on the phenomenon of Israelite ethnicity and its emergence in the Early Iron Age. Attempts to understand the ethnicity and origins of the Israelites through the lenses of archaeology and textual material has created numerous theories and debates, which have often drawn in Israelite neighbors such as the Philistines (to name only a few, Stager, 1998; Dever, 2003; Killebrew, 2005). Many of the older studies deal with arguments developed first from a study of the later textual material and its interaction with the archaeological record, particularly in regard to uncritical mapping of biblical entities onto the geography of the Levant. As the focus has shifted more to the archaeological evidence, a criterion of ethnic identifiers has become prominent. One example is the Israelite "set" of identifiers that includes the four-room house plan and the large collared pithoi [a recent example and two recent reviews can be found in (Faust, 2006; Killebrew, 2005, pp. 173-175; Gilboa, 2014).

Ethnicity, however, is not so simple as identifying a standard set of material artifacts and equating them with an ancient people. Instead, ethnicity is an active expression of cultural differences, derived from cultural practices, but ultimately created in opposition to other groups in a particular historical context (Jones, 1997). The boundaries between ethnic entities are not solid, but fluid, and can change over time (Barth, 1969; Jones, 1997). As summarized by Jones, "sensations of ethnic affinity are based on the recognition, at

both a conscious and subconscious level, of similar habitual dispositions which are embodied in the cultural practices and social relations in which people are engaged" (Jones, 1997, p. 120). This approach to understanding ethnicity as a conscious act on the part of self-identifying groups provides a better platform for understanding another aspect of social identity in the Early Iron Age (Lucy, 2005b, p. 101). It moves the focus from a fixed set of artifacts to patterns in everyday practices that emerge from the underlying "disposition" of a group (Lucy, 2005b, p. 101; Jones, 1997, p. 128).

In regions without textual material to help and hinder the discussion of identity, these approaches have been used to explore a range of identities. For Yaeger's Mayan communities, he focused on both local identities as constructed through everyday practices, but also investigated the ways in which one community identified with outside, "extra-local" identities (Yaeger, 2000, p. 133). Yaeger identified the "symbols used to express affiliation" in both the use of rare and exotic materials and in the use of particular architectural features that identified the inhabitants with an elite political center in the region (Yaeger, 2000, pp. 133–134). Certain ritual activities helped to create "an identity that transcended local communities" (Yaeger, 2000, p. 135). Archaeologists working in the Southern Levant have also worked to creatively understand social identity in ways that are not dependent on textual material, but instead focus on the everyday practices of household and community (see Ilan, 2011; Porter, 2013). This investigation of social identity as tied to everyday shared social practices is one that can be investigated at the regional level and provides a more flexible way of approaching identity in the Southern Levant in the Early Iron Age, when there is a general paucity of contemporary textual material.

The phenomenon of searching for the origins of the later Israelites in the archaeological record of the Iron I period gave rise to the ethnic entity of the "Proto-Israelites" in the Central Highlands, their traditionally ascribed zone of settlement. Biblical and archaeological evidence have been used and debated for identifying a new "ethnic" group in the

Iron I period and its antecedents, one good example of which was the debate between Dever and Finkelstein (Dever, 1995; Finkelstein, 1996a). One example of the problems faced by these models is the restriction of "Israelite" ethnicity to a historical geographical zone. The four-room plan and collared pithoi of Building B have kept 'Umayri on the periphery of discussions of Israelite identity in the Early Iron Age, despite its location outside of the Central Highlands of Cisjordan. Ever since the initial publication of this pillared house with collared pithoi (Clark, 1996), these apparent ethnic markers of Israel have had to be explained here on the Central Plateau of Transjordan. Faust, who argues that the four-room house is an identity marker of the Israelites, advocates for an Israelite presence at 'Umayri to explain the house plan use there (Faust, 2006, p. 77). The excavators have had their own explanations, including Herr's exposition that 'Umayri represents a settlement of a tribe that was, or later became, associated with Israel (Herr, 1999). Herr has decried the ethnic models of explanation for Iron I relationships, and instead describes a tribal model that predates the national identities of the Iron II groups, a model that emphasizes the flexibility of tribal identity and loyalties during this period (Herr, 1998, pp. 258–259). Others have maintained that the design of the pillared or four-room house is functionally adapted for the agrarian/pastoral life style, and is better seen as a continuation from the Late Bronze Age traditions, following similar arguments about the four-room or pillared houses and "collared-rim" pithoi developed to explain those in the west (Mazar, 1985, p. 66), (Stager, 1985, pp. 12–17), (Holladay, 1992, p. 310), at 'Umayri (London, 2003), and at Sahab (Ibrahim, 1978, 1987). Departing from discussions of historically Iron II-based ethnic identities in the Early Iron Age and turning instead to how patterns of practice may shift or vary across a larger regional zone such as Transjordan is one way of refocusing the discussions of social identity in the Early Iron Age. Though exploration of such practices is best carried out in a comparison over time, the parameters of this study restrict focus to the Iron IA, the period of greatest contention in arguments of

ethnicity in the Southern Levant.

The methods used here to investigate the dimensions of social identity at Tall al-'Umayri within a regional context build upon the work of the previous two chapters. Taking the evidence for the patterns of house and settlement construction, for domestic and economic activities, and for social ritual and comparing them with other archaeological sites in Transjordan and the wider Southern Levant will provide insight into the distinctive and shared practices that define the social identities of the Early Iron Age. This turns the focus from arguments that project later Iron II nationalities back onto the Iron I period, and seeks to understand the nature of social identity in the Iron I period on its own terms, as a matter of shared practices instead of ethnicity.

Beginning with a brief summary of the preceding Late Bronze Age in Transjordan and the Southern Levant, it will then be possible to discuss some of the models already in place for studying social identity and its transitions and emergence from the Late Bronze Age into the Early Iron Age. A list of all known sites with Late Bronze/Early Iron I settlements in Transjordan, and a selection of those from Cisjordan, is then presented, with summaries of the evidence. 'Umayri's Stratum 12 is then placed in its regional context, comparing a set of criteria with the other known sites. This lays the foundation for a concluding discussion of the available evidence for discussing social identity in the Early Iron Age based on household and community practices.

6.2 Early Iron Age Identities A Regional Perspective

6.2.1 Late Bronze Age Identities

The Late Bronze Age is characterized as a palace/urban-centric and international period with lively trade between the major powers located across the Ancient Near East. Much of this trade passed through the Southern Levant, occupied at this time by peoples known

as the Canaanites from later biblical material (Killebrew, 2005, pp. 94–96). The Canaanites, as apparent from the Amarna letters, were organized socially into a series of small city-states that were constantly at odds with each other and subject to Egyptian overlords (Redford, 1992; Moran, 1992). In Transjordan, scholars have identified the city-state of "Pahil" from the Amarna letters with the site of Pella (Ahituv, 1984; Routledge, 2004, p. 62). Likewise, an Egyptian garrison is placed in the Jordan Valley at Tall as-Sa'idiyeh, though this evidence has been called into question by Mazar (Morris, 2005, p. 762; Weinstein, 1992, p. 145; Mazar, 2008, p. 88 n. 1). While Transjordan was not a primary focus of the Egyptian empire, some campaigns apparently did cross the river and Egyptian influence is found in the material culture of the excavated settlements and tombs from this period in Transjordan (Redford, 1982b; Warburton, 2001, pp. 90; Routledge, 2004, p. 61-85).

In her discussion of Canaanites in the Late Bronze Age, Killebrew concludes that "Canaan was not made up of a single ethnic group but consisted of a diverse population, as implied by the great variety of burial customs and cultic structures both considered to be culturally sensitive indicators of ethnicity" (Killebrew, 2005, p. 138). The aspects she notes that they do share across Canaan are instead a "common socioeconomic system based on a city-state/hinterland" model that harmonizes with the textual evidence, and a "homogenous material culture" (Killebrew, 2005, p. 138). Much of this she attributes to a stable social and economic environment created by the Egyptian imperial presence.

In Transjordan, the picture of the Late Bronze Age has been more difficult to bring into focus due to the "disappointingly meagre" amount of excavated evidence (Strange, 2008, p. 281). However, some evidence for Egyptian interest in the region has been found both textually and archaeologically (Strange, 2008, pp. 284–285). Late Bronze Age Transjordan has been divided into an Egyptian-influenced Northern Transjordan, with excavated centers that included palatial or temple structures as well as well-equipped tombs, and

an unknown Southern Transjordan roamed by *shasu* nomads and with no in-situ remains yet excavated, only suggested survey sherds (Strange, 2008; Routledge, 2004, pp. 58-86). The northern half, which includes the Northern and Central Plateaus as well as the Jordan Valley, according to Routledge, "was deeply embedded in the economic, political, and social relations that spun outward from the historical conjunctures of Egyptian imperialism" (Routledge, 2004, p. 62). Routledge has argued that the elites of Northern Transjordan collected luxury imported goods from Egypt and the Aegean for use in funerary and ritual contexts, using access to the international trade network for the accumulation of "tribute" for the gods and/or ancestors (Routledge, 2004, pp. 63–77). That Transjordanian entities were connected to the larger international trade networks of this time has been argued based on the distribution of varying imported goods and vessels in northern and central Transjordanian sites (Strange, 2008, pp. 297–298). That Transjordan had strong trade connections with the Northern Levant is also attested by artifacts from that region (Fischer et al., 2015).

Tall al-'Umayri during the Late Bronze Age is represented by a large structure excavated just to the north of the Stratum 12 structures. Building C, as the structure is known, may have had both palatial and temple functions, as a shrine centered on several standing stones took up the largest room yet excavated (Bramlett, 2008, 2004). The excavator interprets an "impoverished" phase at the end of the use of this building and eventual demise sometime in the 13th century, which he relates to an Egyptian dominance in this region during that same time period (Bramlett, 2008, p. 177). The withdrawal of the Egyptians at the end of the 13th century is seen as possibly related to the return of 'Umayri's fortunes and the establishment of Stratum 12, when the settlement's inhabitants could once again control the nearby trade routes without interference (Bramlett, 2008, p. 241). This shift at 'Umayri, especially in regard to the nature of the Late Bronze Age settlement outside of the large public structure, awaits further excavation.

6.2.2 The Early Iron Age and the Creation of Local Identities

The Early Iron Age in Transjordan has been discussed in its own right since excavations in the late twentieth century revealed Iron Age remains, and pottery sequences have been further refined for defining the Iron I period (Herr and Najjar, 2008, p. 311; Herr, 2015). While this area has biblical reflections of Ammonites and Moabites in central Transjordan and Egyptian sources discuss the shasu in the south during the Iron I period, contemporary textual material on the nature of the inhabitants of the settlements is otherwise lacking (Herr and Najjar, 2008, p. 311). Archaeologically, the transition of several Late Bronze Age settlements into the Early Iron Age, as mentioned for ʻUmayri, "suggests a peaceful continuity" (Herr and Najjar, 2008, p. 311). The "simple economic system" at sites like ʻUmayri are interpreted as "brought about by tribal groups beginning a lengthy sedentarization process in the highland areas of Jordan that was more-or-less free of prior occupation. A major catalyst of this initial settlement may have been the north-south trade routes" (Herr and Najjar, 2008, p. 313). This narrative of sedentarizing nomads is one that has been also used to explain the many new settlements that start appearing in this time period in the Central Highlands of Cisjordan (Finkelstein and Silberman, 2001; Finkelstein, 1986, 1988, 1996b; Gilboa, 2014).

McGovern's study of the Iron I period in central Transjordan concludes that the area is characterized by a "relative self-sufficiency and independence from foreign domination" (McGovern, 1986, p. 336). Central Transjordan was still connected to the greater eastern Mediterranean world through trade networks, but was experiencing a considerably greater degree of isolation than that argued for the Late Bronze Age by Routledge (see above). This isolation, McGovern argues, led to innovation in ceramic and iron technologies (McGovern, 1986, pp. 336-341; McGovern, 1987). While McGovern draws interesting conclusions about the formation of Iron Age Transjordan in this Iron IA period, most of his evidence is based on a single, large tomb and an iron-working site in the Baq'ah Valley. Iron

I settlements like the ones at ‘Umayri, Tall Fukhar, Tall Irbid, and Tall Zira‘a were only beginning excavations when McGovern wrote in the 1980s.

Recent research on the Iron I period in the Jordan Valley (van der Steen, 2004), see also (Bourke, 2009) and the Karak Plateau (Routledge, 2004), (Porter, 2013) touches briefly on the Central Plateau. Using ethnographic analogy of tribal movements and trade, van der Steen argues that the Jordan Valley was settled in the Iron I period by groups from the collapsed infrastructure of the Amman Plateau (van der Steen, 2004, pp. 306–308). Routledge discusses the dissimilarities of the highlands in Transjordan from those of Cisjordan in this transitional period, notably arguing that the Transjordanian settlements lacked the “urban to rural” shift (as the Late Bronze Age centers in Transjordan were “hardly urban”) and that settlement did not shift geographically as in the west (Routledge, 2004, p. 91–92). Likewise, Porter’s discussion of community in Central Jordan (including ‘Umayri as a comparative site) touches on the Central Plateau’s development during the Early Iron Age as the result of the resettlement of Routledge’s “disenfranchised segments” (Porter, 2013, p. 66).

Adding the comparative data from ‘Umayri, a settlement in the center of the geographical zones that have fueled the theories regarding the Northern Plateau, the Karak Plateau, and the Western Highlands of Cisjordan, brings an important, stratified, and well-preserved assemblage to the discussion. The Stratum 12 assemblage provides one of the best examples of everyday life in Iron I Transjordan. Unlike the Karak Plateau sites, ‘Umayri was destroyed before the inhabitants could depart with the small artifacts and belongings that provide so much information on daily practices. Similarly, many of the earliest Iron I remains from the Northern Plateau and the Jordan Valley are ephemeral in nature, in contrast to ‘Umayri’s substantial and easily-defined architectural features. While few Iron I sites in Transjordan provide a similar range of published comparative data, a review of the evidence that is currently understood to be contemporary to ‘Umayri’s

Stratum 12 will provide a starting point for discussing the nature of social identity in the Early Iron Age, based on the material remains of the everyday.

6.3 Iron I Sites for Comparison

6.3.1 Transjordan

Building on the momentum of recently or soon-to-be published final reports, it is now possible to look at the ways in which communities were creating their own local identities by comparing similarities and differences across settled sites in Iron I Transjordan. For this comparison, this study will include only sites with confirmed or possible domestic remains. Other evidence of Iron I remains, including tombs, sanctuaries, foreign garrisons, and ceramic sherds, are reviewed by Herr and Najjar and Herr and will not be repeated here (Herr and Najjar, 2008; Herr, 2009b). This study is reliant to an extent on the sites' excavators for dating their remains, though review articles and assistance from 'Umayri's ceramicists Larry Herr and Kent Bramlett have been of considerable assistance in verifying the similarity of the presented sites' ceramic assemblages to that at 'Umayri. Herr's recent publication of the Iron I pottery from Transjordan demarcates three main Iron I ceramic "horizons": 1) Iron IA (late 13th first half of 12th century BCE or Late Bronze/ Early Iron I period; Iron IA will be used in the rest of this discussion for all references to this time period), 2) Iron IB1, and Iron IB2 (Herr, 2015, p. 98). 'Umayri's Stratum 12 falls into the first group, and only sites with a strong possibility of falling into this earliest category will be included below.

For this discussion, a number of categories were chosen of possible import to the household and community practices that are the heart of this study. After a brief review of the Iron IA strata at the excavated sites, a summary of the specified categories will be presented in the following format. Where no evidence is discussed in the published reports for

a specific category, NEI for "not enough information" will be used; it is possible that such information will be available in future publications.

Public Structures: Perimeter walls or other large, public constructions

Houses: Architectural plan, construction style and material

Storage: Type, amount per structure, context

Cooking: Installation types, especially ovens/hearths and their contexts

Domestic Ritual: Material evidence, location

Seals: Style, context

Fauna/Flora: Diversity

Madaba Plains and Central/Amman Plateau

As the greater geographical region in which Tall al-'Umayri is located, the Central, or Amman, Plateau would be expected to yield practices in architecture, domestic life, and ritual the closest to those at 'Umayri. With only fragmentary remains from the Iron IA levels excavated at other sites in this region, the basis for comparison is limited. However, what is available is presented here. Material from Sahab, though one of the closest Early Iron Age sites with domestic remains, dates to Herr's Iron IB1 period and so is not included here[1] (Herr, 2015, p. 98).

Madaba (Field Phase 10) Tall Madaba's Iron IA stratum, Field Phase 10, has been only minimally excavated to this point (Foran and Klassen, 2013, pp. 214–216). From the initial publication of this material, however, some points for comparison can be made. First, the inhabitants created fill layers of mixed Bronze Age material on top of Early Bronze Age remains to provide a level surface for their own constructions, which included

1. Larry Herr's personal study of this pottery indicates that it is closer to 'Umayri's Stratum 11 or 10 and not Stratum 12. Some of the material from the Sahab tombs could be contemporary to Stratum 12, though this is currently under study elsewhere (Personal communication, Larry Herr, March 2016).

the rebuilding of the Early Bronze Age fortification wall for their own use (Foran and Klassen, 2013, p. 214). A single "large structure" was partially excavated which abutted this fortification wall, and consisted of single-row walls constructed with boulders (Foran and Klassen, 2013, p. 214). Three rooms were identified, including a rectangular room parallel to the fortification wall and two long rooms perpendicular to this broad-room (Foran and Klassen, 2013, p. 214). The building is dated to this period by the imported and local pottery found on the surface of the building. The ceramic repertoire includes jars, jugs, bowls, a cooking pot, and "numerous" collared pithoi, of the same type as at 'Umayri, found mostly in the eastern half of the building, of which five are illustrated (Foran and Klassen, 2013, pp. 215–216). In the conclusion to this preliminary report, it is argued that this new settlement was founded after a period of abandonment throughout the Middle and Late Bronze Ages, and was focused on a fortification wall and domestic structures, which were re-used into the later Iron Age (Foran and Klassen, 2013, p. 216). The style of domestic structure, built against the fortification wall, is compared to those at 'Umayri (Foran and Klassen, 2013, p. 217).

Public Structures: approx. 5.5m thick stone perimeter wall, rebuilt from the Early Bronze Age.

House: One partial four-room house at least 54 m^2 in size, stone walls (no mention of superstructure of mudbricks).

Storage: Collared pithoi, "numerous" (at least 5), possibly stacked against western wall.

Cooking: NEI

Domestic Ritual: NEI

Seals: NEI

Fauna/Flora: NEI

Tall Safut (Area B) A small area of remains dated to the Iron IA were excavated in Area B at Tall Safut (Chestnut, ress, Wimmer:1989aa). The remains include a domestic

area with small walls built against the settlement's perimeter wall, as well as two installations, one possibly a mudbrick silo or kiln, as well as a large clay bin identified as grain storage. A number of collared pithoi, with potter's marks, were found in a corner between the perimeter wall and another low wall, as well as a strainer jug. This phase ended with a possible destruction. The pottery assemblage is dated to the Iron IA period, and parallels that from 'Umaryi Stratum 12.

Public Structures: Reuse of MB perimeter wall. There was no MB rampart at the site, contra earlier publications by Wimmer (Chesnut, 2013).

Houses: Too fragmentary to determine, area with storage jars and mudbrick installations identified as a "building", no discussion of construction style.

Storage: Collared pithoi, "several" next to the perimeter wall and enclosed by a low mudbrick wall; large, clay bin built against perimeter wall and a possible mudbrick and plaster silo. One of the mud/clay structures measures was almost 50 cm tall (as determined from an illustration), and was likely not much more than 10 cm wide.

Cooking: NEI

Domestic Ritual: NEI

Seals: NEI

Fauna/Flora: NEI

Tall ar-Rusayfah While touring Tall ar-Rusayfah with the excavator, Romel Ghrayib, and Douglas Clark, in the summer of 2010, a burned mudbrick layer and collared pithoi were discussed as representing an Iron IA phase of occupation at the site. Ghrayib's earlier publication (Ghrayib, 2009) did not discuss any significant Iron I remains, but he has since revised his dating of the burnt stratum. Larry Herr confirms that a collared pithos from this layer was exactly like the Stratum 12 pithoi in form, though considerably smaller (Personal communication, March 2016). Without any further publications, there is nothing to include here for comparison, but the site is included to make note of a nearby Iron IA

settlement on the Central Plateau.

Northern Plateau

Tall Fukhar (Area B, Stratum VIA: LBIIB/Iron IA) During the Early Iron Age at Tall Fukhar, occupants reused the ruins of an earlier Late Bronze Age palace for domestic habitation, adding their own walls, floors, and ovens (Strange, 1997, p. 402). The city wall and gate were used as a source for building stones, and only the uppermost part of the tell was reoccupied (Strange, 2015a, p. 421). Collared pithoi were found, as well as some pithoi that had been repurposed into ovens (Strange, 2015a, p. 421; McGovern, 1997, p. 422). The Bronze Age wall system was reused, with domestic structures built against it, though Strange later contradicts this claim and says instead that the "city wall was disused" in this phase (Strange, 1997, p. 402; Strange, 2015a, p. 421). Pavements used in the buildings were pulled from the earlier walls to provide level surfaces for this phase (Ottosson, 2015, p. 17). Ovens and ash pits were often found next to the pavements (Ottosson, 2015, p. 17). Paved rooms were built against walls and rooms had reused LB stone drums as pillars (Ottosson, 2015, p. 18–19). Artifacts mentioned include millstones, spindle whorls, and a scarab (Ottosson, 2015, p. 18–19). A "tremendous" pit full of ash was found next to the pillared building, and was large enough to take several days to excavate, being composed mostly of ash and broken pottery, which included a collared pithos (Ottosson, 2015, p. 19). One of the reused pithos ovens is described as having two jars placed upside down, one inside the other, to create a double-sided oven with a diameter of 44–42 cm (Ottosson, 2015, p. 19). Another oven is described as 60 cm diameter, 50 cm deep, made with two lines of sherds (Ottosson, 2015, p. 23).

As noted above, this stratum is dated by the excavators to the Iron IA period.[2] How-

2. Herr stated that even with the recent publication of the Fukhar material, there is not enough information to securely connect the stratum at Fukhar to Umayris Stratum 12 (Personal communication, March 2016). The results are presented then with considerable reservations.

ever, the internal confusion of the final publication (see the note on the scarab below), as well as discussion with Larry Herr, mean that these remains must be treated with great caution.

Public Structures: Bronze Age perimeter wall reused/repurposed for use in building domestic structures only, not as fortification.

Houses: Structures with rooms built against perimeter wall. The structures were very fragmentary but included stone pavements and small stone dividing walls, as well as stone drums used as pillars in one building. Studying the remains from the published phase plan (Ottosson, 2015, Fig. 2.4.1), it is possible to detect three possible separate rectangular structures arranged with their short edges against the perimeter wall, though these are never interpreted or discussed as whole units by Ottosson.

Storage: Collared pithoi.

Cooking: Ovens made of reused pithoi or pithoi sherds (range in diameter from 42 to 60 cm) located next to pavements, a large pit full of ash, and groundstones.

Domestic Ritual: NEI

Seals: a single scarab was found on the pavements of one of the domestic areas (Ottosson, 2015, p. 18); though note that (Jensen, 2015, p. 337) states that the same scarab came from an LB II context).

Fauna/Flora: Faunal remains were studied at a site-wide level for the Bronze, Iron, and Hellenistic periods, and so it is not possible to discuss finer resolution for the Early Iron Age settlement (Bangsgaard, 2015). However, in general, domesticates predominated, including sheep, goats, cattle, and equids, as well as small numbers of pig and wild game. The sheep:goats ratio was 1:1.5 in the Bronze Age and 2:1 in the Iron Age, but significance is questioned based on the small amount of material (Bangsgaard, 2015, pp. 380, 383). The range of domesticates for the entire Iron Age (small assemblage, at n=138), including pig (1.5%), cattle (17.4%), equid (19.6%), sheep (14.5%), goats (6.5%) (31.9%

sheep/goat), with small percentages of deer, red fox, and bird (Bangsgaard, 2015, p. 396).

Tall Irbid (Area C, Phase 2, or Late Bronze III/Iron Age I) A large and deep (up to 4 m) destruction layer at Tall Irbid sealed in a phase of occupation dated to the Iron IA period, which in the southwest of the tell included a several-roomed building, a tower, and a rebuilt and reused large Middle Bronze Age basalt perimeter wall with very large boulders (Lenzen, 1988b, p. 32; Lenzen, 1992, p. 456; Lenzen and McQuitty, 1989; Kafafi and Dalu, 2008, p. 460). The buildings were constructed in at least two stories, with stone foundations, mudbrick superstructures, and wooden support beams (Kafafi and Dalu, 2008, p. 460; Lenzen, 1997, p. 181). After the destruction by fire of this complex at the end of the Iron IA phase, its stones were reused for "minor industrial and domestic structures" in the same area (Lenzen, 1997, p. 181). Cultic objects found in one of the buildings led to its possible identification as a sanctuary or other major public building, associated with the tower as a complex, though one room held "large storage vessels" containing "lentils, olives, grains, and probably oil" (Lenzen, 1988b, p. 32; Lenzen, 1992, p. 456; Lenzen, 1997, p. 181). Mention is made of domestic buildings on the western side of the tell and of a limestone and chert extension to the city wall contemporary with the large complex (Lenzen, 1997, p. 181). Cooking pots dating to this period were found elsewhere on the tell in later excavations (Kafafi and Dalu, 2008, pp. 467, 469). A tomb dating to the Iron IA was also excavated in Irbid with a small collection of carved ivories as high status items. However, the locally produced pottery assemblage and other items found in the tomb are interpreted as evidence that connections to trade networks were in decline at the time of burial (Fischer et al., 2015).

Public Structures: Major building complex with tower and rebuilt MB basalt perimeter wall.

Houses: Domestic buildings, undescribed.

Storage: Collared pithoi in the public building complex.

Cooking: NEI

Domestic Ritual: "cultic" pottery and objects, including "an incense burner, goblets, cups and saucers, lamps, and a basalt libation stand were found on storage shelves at the rear of the complex" (Lenzen, 1997, p. 181).

Seals: NEI

Fauna/Flora: Lentils, olives, grains, and oil are mentioned as stored in the pithoi.

Jarash Jarash included only fragmentary remains dated to the Iron IA period, including plastered floors and a wall, an oven, and two small, pebble-lined pits (Braemer, 1987, 1985, 1989). Collared pithoi, cooking pots, and bowls were also found from this period. The installations and pottery perhaps indicate these remains were part of domestic structures. No destruction or abandonment seems to intervene from the Late Bronze Age into the Early Iron Age on the tell, and Jarash was unfortified (Braemer, 1992).

Public Structures: No fortifications

Houses: Fragmentary remains with plastered floors and wall, probably domestic

Storage: Collared pithoi and pebble-lined pits

Cooking: An oven

Domestic Ritual: NEI

Seals: NEI

Fauna/Flora: NEI

Jordan Valley

The Iron IA period in the Jordan Valley is fraught with a lack of clarity when it comes to securely dating the sites. The continuity of Late Bronze Age traditions and settlements, as well as disagreements on dating of the various strata between excavators and between seasons, and dissimilarities with pottery in the rest of Transjordan, lead to considerable

confusion (Herr and Najjar, 2008, pp. 313-314; Bourke, 2009; Herr, 2015, p. 97). This continuity of Late Bronze traditions, the difficulties of dates, and the waning Egyptian influence are much discussed for the Jordan Valley in general (see Mazar, 2008). With these points in mind, it is not possible to securely date the following sites as contemporaries of ʻUmayri's Stratum 12, though possible contemporary settlements are outlined.

Tall Zira'a (Stratum 5, Iron I, 12th to 11th centuries BCE) The end of the Late Bronze Age at Tall Zira'a was sudden, but without a completely burned destruction layer, according to the excavators. The new settlement at the beginning of the Iron Age was likely rebuilt by the inhabitants of the previous stratum, who maintained Bronze Age traditions in both their houses and their material culture, but without a perimeter wall. A possible glass and faience workshop in a possible four-room house is seen as a continuation of that trade as well. The excavator interprets this transitional period at Zira'a as a time when both the old Late Bronze Age traditions and the emerging Iron Age traditions coexisted (Vieweger et al., 2014, pp. 337-339; Vieweger, 2011, pp. 311-312; Vieweger and Häser, 2010a, pp. 11-13; Vieweger and Häser, 2008, pp. 384-385; Häser and Vieweger, 2007b, pp. 24-26). Both simple domestic re-use of the Late Bronze Age buildings and large, well-built houses were in use in this phase. The Bronze-Age style courtyard houses featured stone foundations, stone-paved floors, courtyards with groundstones, ovens, and stone-lined storage pits (Vieweger, 2011, pp. 311–312). The pottery has not yet been published for dating this stratum, but the excavators have argued that this is an Iron IA site.

Public Structures: No fortifications

Houses: Three fragmentary domestic structures in the center of the settlement, with three larger Late Bronze Age-style courtyard structures in the south, and a possible four-room house in the north. Stone foundations, mudbrick superstructures, stone paved floors.

Storage: Stone-lined pits are found throughout and around all of the houses for grain

storage, including two large mudbrick silos (Vieweger and Häser, 2010a, pp. 11; Häser and Vieweger, 2007b, p. 24)(No collared pithoi have yet been published for this stratum).

Cooking: At least one oven or hearth is found associated with each of the houses but one, with varied locations throughout the structures. In two houses, the oven is found in the innermost room, including one of the LB style houses and one of the Iron Age style houses (information on pit and oven locations from unpublished plan of Area I Stratum 13 EZ 1, provided by Katja Soennecken in October 2012).

Domestic Ritual: a kernos and metal vessels were found in the northern four-room house, and a "Götterhaus" in one of the large mudbrick silos (Vieweger and Häser, 2010a, pp. 11–13).

Seals: NEI

Fauna/Flora: NEI

Pella (Phase IB [possibly Iron IA] earliest Iron Age levels) The earliest Iron Age material at Pella, following a destruction level dated to the 12th century, is designated Phase IB. Phase IB was an ephemeral phase that then transitions into Phase IA, which had clear domestic architecture and use patterns (Smith and Potts, 1992). Phase IA was also destroyed, and possibly dated to the earliest Iron I period, though recent review raises the possibility that this phase is later (Bourke, 2009, p. 288). There was no Iron Age town wall, and only local pottery.

One excavated area exposed a long-lived alley founded at the beginning of the Iron Age, which acquired a lot of hard-to-phase trash. This area included a courtyard with a cooking pot, oven fragments, and post holes (Smith and Potts, 1992, pp. 84–85). Elsewhere Phase IB is represented only by surfaces and pits (Smith and Potts, 1992, p. 86).

Phase IA was completely destroyed by a fire that preserved two houses, with a stone-paved room, a pillared room with stone bases, a brick oven, and pits, groundstone installations, spherical clay loom weights. The houses were constructed with mudbrick superstruc-

tures on ceiling-height stone walls, earth floors, and wooden roofing beams. The excavator notes that the stone was easily accessible at the base of the tell (Smith and Potts, 1992, pp. 86–87, 101). A large Bronze Age temple possibly was still in use during this period of occupation at Pella, or was destroyed shortly before it, after which the ruins were used by squatters for basic habitation (Bourke, 2012, p. 184; Bourke, 1997, p. 113). As there is some confusion over which remains are contemporary, a general comparative description is provided here, but is used with caution.

Public Structures: No fortifications, possibly a temple

Houses: Stone pavement and pillar bases, stone walls and mudbrick superstructures.

Storage: Possibly pits?

Cooking: A brick oven in a pillared room associated with groundstone installations and loom weights, also an oven in a courtyard.

Domestic Ritual: NEI

Seals: NEI

Fauna/Flora: Barley and flax seeds were found in domestic contexts. Barley is suggested as a fodder crop, and a range of other seeds are discussed for the Iron Age in general (Wilcox, 1992, pp. 255–256). A discussion of the animal bones from the Iron Age alleyway highlights the high percentage of cattle bones (32.7%), indicating a surprising reliance on cattle for meat provision, while sheep and goat (34.9%) seem to be more of a focus for secondary products, with only minor inclusion of pig (2.7%), equid (0.6%), and wild game (2.5% gazelle) (Köhler-Rollefson, 1992; Smith and Potts, 1992, pp. 84-85).

Tall as-Sa'idiyya (Area AA, Strata XIV and XV) Very limited habitation remains dated to the Iron IA period have been exposed on the top of Tall as-Sa'idiyya. The architecture of Stratum XIV is noted as "far less well constructed" than the architecture of the following Iron I stratum (XIII), though continuity in alignment is expressed (Tubb et al., 1996, p. 30). The earlier of the two transitional strata, Stratum XV, suffered a destruction

event. A stone paved surface retained complete pottery vessels and a collared pithos from this phase (Tubb et al., 1996, pp. 30, 29 Fig. 20). Further evidence of domestic habitation awaits final publication and future excavation. An extensive cemetery dated from the end of the Late Bronze Age and into the Early Iron Age ("Period 1") reveals the changing nature of "cultural affiliation,", status marking, and local identity, especially in relation to Egyptian, 'Sea Peoples', and other influences on the burials (Green, 2013, 2009; Tubb, 1997).

Public Structures: NEI

Houses: Fragmentary stone-paving may be from a domestic surface

Storage: Collared pithos found on stone-paved surface

Cooking: NEI

Domestic Ritual: NEI

Seals: NEI from potential domestic remains

Fauna/Flora: NEI

Tall Dayr 'Alla (Late Bronze Phases G/H; Iron Age Phases A-D; workshop/ pits; Late Bronze III/Iron I) The Iron IA period at Tall Dayr 'Alla is represented by a village that suffered a couple of earthquakes and fires in its otherwise continuous transition from the Late Bronze Age into the Early Iron Age. A large sanctuary with clay tablets and cultic objects occupied part of the tell and was the focus of earlier excavations, as well as an industrial furnace workshop (Franken, 1992, 1969). New excavations have revealed parts of a village with domestic habitation on other parts of the tell that are dated to either side of the transitional period, both before and after a main destruction event placed early in the 12th century. This provides new evidence of permanent occupation at Dayr 'Alla. Earlier excavators thought the site was only occupied seasonally based on a series of pits dug into the Late Bronze Age remains and post holes from tents (Kafafi and van der Kooij, 2013, p. 123; Ibrahim and van der Kooij, 1997, pp. 103-104; van der Kooij,

2006b; Kafafi, 2009, p. 594; Franken, 1969, pp. 33-34; van der Steen, 2008a, pp. 17-24). The religious complex and trade goods excavated from the end of the Late Bronze Age led the excavators to argue that Dayr ʻAlla "may have functioned as a regional market place", and as a "tribal religious center" (Kafafi and van der Kooij, 2013, p. 127; van der Steen, 2008a, p. 21). The phases of occupation for the earlier excavations are known as Phases F-H for the end of the Late Bronze Period, when rebuilding and fortification of the sanctuary took place after destruction around 1200 BCE before its final abandonment. The beginning of the Iron Age, Iron IA, is marked by phases A-D, represented by houses, ovens, storage pits, and the proposed seasonal tent use for the Iron IA (van der Kooij, 2001, p. 296; van der Steen, 2008b). Later excavations discovered a pillared building dating to a Late Bronze III/Iron I phase (Kafafi, 2009, p. 593).

A mudbrick-and-stone wall from the Late Bronze Age may have served as a perimeter wall for the settlement (Kafafi and van der Kooij, 2013, p. 128). A large, mudbrick building on the opposite side of the tell from the sanctuary also contained a notably large room (10 x 6 m) and thick walls (1.3 m). The building contained more clay tablets and may have served a public function (Kafafi and van der Kooij, 2013, p. 128). After the destruction, however, rooms in this complex contained domestic artifacts such as food storage and preparation ceramics, and notably, a groundstone set made of local sandstone (Kafafi and van der Kooij, 2013, p. 128). A pillared building excavated near the industrial workshop area is compared to other pillared houses, including the one at ʻUmayri, with mudbrick construction, wooden pillars, and stone pavement (Kafafi and van der Kooij, 2013, pp. 128-129; Kafafi, 2009, pp. 592-594). Jars filled with a variety of seeds were found in a small-walled courtyard or open kitchen, alongside groundstones, while elsewhere stone pavement and bread ovens were exposed (van der Steen, 2008b, p. 73).

Construction methods in the earliest phase of the Iron Age (Phase A) included insubstantial mudbrick walls built without the use of stone foundations. Instead, the remains of

the Late Bronze Age sanctuary provided a raised and solid foundation for the new structures (van der Steen, 2008b, pp. 72–83). The absence of stone use in construction is attributed to either a different "architectural tradition" or to the difficulty of acquiring stone in the immediate vicinity (van der Steen, 2008b, p. 90). Storage pits, dug into the Late Bronze Age layers, accompany the flimsy walls. The artifacts are of a domestic nature, including bronze weaponry and jewelry, sandstone groundstone artifacts, and food storage and preparation ceramics (van der Steen, 2008b, pp. 72–73). Identified seeds found in the storage jars include barley (*hordeum distichum*), bread wheat (*Triticum aestivum*), flax, field pea, bitter vetch and darnel (van der Steen, 2008b, p. 73). Near another walled area two "bread ovens" were identified on either side of a fragmentary stone paving (van der Steen, 2008b, p. 76). Postholes found next to the mudbrick structures have led van der Steen to conclude that, during this period, the inhabitants "must here have been a mixed group, some members of which may have lived permanently on the tell, while others probably came during the winter, to pasture their flocks, or work in the fields"; perhaps "transhumant pastoralists" and farmers who were also involved in the production of bronze artifacts for a larger market (van der Steen, 2008b, pp. 76, 89–90). Large "furnaces" have often been discussed as related to some kind of metallurgy, perhaps copper/bronze smelting/melting, and while one does show up as early as Phase A, more are found in the later phases (van der Steen, 2008b, pp. 77–79). The metalworking, flimsy mudbrick structures and postholes led van der Steen to argue that the Iron Age inhabitants, building domestic and industrial structures on top of the Late Bronze sanctuary, were likely newcomers to Dayr 'Alla, and possibly from the Amman Plateau (van der Steen, 2008b, pp. 90–91).

Combining the earlier Franken excavations (significantly contributed to by van der Steen's publications) with the later excavations of van der Kooij and Kafafi, a more complete picture can be made of the Early Iron Age at Tall Dayr 'Alla. Both insubstantial mudbrick structures and more permanent stone and mudbrick structures have been found

on the tell and dated to the earliest Iron Age phases. The range of pottery, seeds, and artifacts attest to domestic occupation of the site. Taken together with the bread ovens and the architectural styles, a picture develops of varied occupation that as van der Steen remarked, possibly included permanent and transhumant occupation. A review of van der Steen's study of Dayr 'Alla applauded the move away from an interpretation of a "regional 'nomadic shrine" while questioning her evidence for interpreting the Iron Age as inhabited with newcomers (Bourke, 2009, pp. 286–287).

Public Structures: Bronze Age stone and mudbrick perimeter wall, and a possible public building with a large (10 x 6 m) room, though this may not date to this period as it was destroyed very early in the 12th century.

Houses: Mudbrick structures entirely (no stone) built on top of the earlier LB sanctuary, as well as stone and mudbrick structures mentioned elsewhere on the tell.

Storage: Pits and storage jars (no collared pithoi).

Cooking: "bread ovens" found near a stone paving, sandstone groundstones

Domestic Ritual: NEI

Seals: NEI

Fauna/Flora: barley, bread wheat, flax, field pea, bitter vetch and darnel found in storage jars.

Karak Plateau

The Iron I period on the Karak Plateau has been discussed by Routledge (Routledge, 2004, pp. 87–113). As all of the settlements so far excavated date to the later part of the Iron I period, they will not be discussed here. The earliest Iron I settlement may be at Lahun, where the pottery has been placed in the 12th century, perhaps contemporary with 'Umayri's Stratum 11, the immediate successor to Stratum 12 (Steiner, 2013) (personal communication with Kent Bramlett, February 2016, and Larry Herr, March 2016).

6.3.2 Cisjordan

The timing of the transitional period in Cisjordan is as debated as the Jordan Valley sites on the Transjordanian side. Several factors contribute to this difficulty, including the waning of the Egyptian empire's control in the region, the continuity of Canaanite cities and traditions in the north and in the valleys, and the introduction of new traditions on the southern coastal plains (see Mazar, 2008; Knauf, 2008). For purposes of this study, only the Central Highlands will be discussed due to their much-noted parallel with 'Umayri's Stratum 12. This geographic limit is not meant to perpetuate the division in archaeological studies between Cis- and Transjordan, but to make use of the material that best correlates with 'Umayri's Stratum 12 both chronologically and materially in Cisjordan, where studies on the Iron I material are much more abundant for comparison than they are for Transjordan.

Central Highlands in the Iron I

Bloch-Smith and Nakhai provide a summary introduction to the Iron I period in the Central Highlands of Cisjordan (Bloch-Smith and Nakhai, 1999). Villages from the Iron I period in the Central Highlands have provided a typical comparison point with the Stratum 12 settlement at 'Umayri. These twelfth-century villages were either rebuilds from the Late Bronze Age settlement, or completely new, and often quite poor, habitations. They were primarily built without fortifications of any type (with the exception of Giloh), they featured pillared houses, some of the four-room variety (an early example is found at Tell el-Farah North), sometimes arranged in an encircling plan that would have acted to bound the settlement (Ai and Tell en-Nasbeh). House sizes ranged from 43 to 200 m^2, with larger houses built in the settlements that reused Late Bronze Age remains for their foundations (Bethel, Tell el-Farah North). Pits or silos and collared pithoi were both used for storage. Domestic faunal remains were dominated by sheep and goat, as well as cattle. Floral re-

mains included wheat and barley, olives, grapes, almonds, pomegranates, figs, and wild pear.

Herr has described the ceramic assemblage at 'Umayri as best paralleled to the earliest Central Highlands sites such as Mt. Ebal (where Herr also identified a similar potter's mark and trapezoidal seal) and Giloh (Herr, 1997, pp. 151-152; Herr, 1998, pp. 256-257), as well as the Jezreel Valley site of Taanach (Personal communication, March 2016). Again, as noted in the introduction to this chapter, Herr's aim is not to argue that Stratum 12 is an early Israelite settlement, but instead one of many villages established by closely related tribal entities in the Central Highlands and on the Central Plateau in the Iron I period. The two sites with evidence of domestic habitation that Herr has noted as closest in culture and chronology will be discussed in more detail here.

Giloh A small "'fortified herdsmen's village"' was excavated at Giloh and dated to the Iron IA (Mazar, 1981). Only a single house could be clearly defined and excavated in the heavily eroded site, though the tops of other walls and the size of the site lead Mazar to suggest that perhaps ten houses total could have occupied the settlement. The excavated building is a pillared structure that is likened to a four-room house, with rough stone pillars forming a line in the courtyard. An enclosed open courtyard south of the excavated building might have been used for securing flocks. A large fortification wall was possibly constructed with the establishment of the settlement, and surrounded the site on at least three sides. The site was only occupied for a short amount of time before being abandoned.

Public Structures: A large fortification wall surrounding the settlement on at least three sides, with evidence for a "double wall" in places. Also, a courtyard enclosed by two houses and walls.

Houses: One stone-walled house, Building 8, with a courtyard and rough stone pillars. Earth and stone-paved surfaces in the courtyard and in the rooms. Built with both walls

of large stone and smaller, poorly built walls. Four-room plan, with a broad room and long rooms, 13.6 x 11.2 m.

Storage: Collared pithoi sherds were found in the courtyard and were abundant in general from the site. Sixty rims were registered for Building 8, though no whole vessels. Two restorable storage jars were found in an inner room.

Cooking: Querns and chalk pestles found in the courtyard.

Domestic Ritual: NEI

Seals: NEI

Fauna/Flora: Tamarisk wood found burnt in one room. Otherwise, NEI.

Taanach (Period IA) A partial house, dubbed "The Twelfth-Century House," was excavated in the southern part of a settlement dated to the Iron IA period (Lapp, 1969, pp. 34-37; Rast, 1978, pp. 7-8). The house had two phases of occupation during this period, designated by Rast as both belonging to Period IA, in which later rooms were divided and the courtyard (perhaps attributed based on the location of the oven) shifted locations. The second, and better described phase, included a courtyard with an oven and two "deep" pits, one described as stone-lined, plastered, and with the addition of a step. A pillar base was found in this same courtyard, and a line of pillars separated the courtyard from a stone-paved room. Lapp identified another room as a storage room based on its small size. An ephemeral phase of a domestic structure called "The Drainpipe Structure" is attributed to this same period as well, though Lapp's discussion of this phase is "conjectural" (Lapp, 1969, p. 39). The inclusion of this settlement as early "Israelite," though in the Jezreel Valley, has been debated (Finkelstein, 1988, pp. 88–89, 92).

Public Structures: NEI

Houses: A stone house with five rooms, with low stone pillars separating one stone-paved room from the courtyard. The exposed plan of the building is square, with three rooms built in corners and a fourth corner occupied by a courtyard/partially roofed earth-

floored room. A tiny storage room is squeezed in between the paved room an unexcavated corner room.

Storage: Four collared pithoi are published for Period IA (Rast, 1978).

Cooking: An oven located in the courtyard.

Domestic Ritual: NEI

Seals: NEI

Fauna/Flora: NEI

6.3.3 Conclusions

The available evidence from other Iron IA sites in Transjordan and the Central Highlands of Cisjordan is limited at this point, though more abundant in Transjordan than even a decade ago. Almost no data was found for comparison in regard to the domestic use of seals or ritual artifacts. While seals and ritual artifacts are found in shrines, temples, or burials from this time period, these contexts are not suited for comparing the active use of these artifacts in everyday, domestic practice. Discussions of fauna and flora have been too broad to be of more than anecdotal use.[3] This lack is particularly unfortunate, given the importance of seals, ritual artifacts, and faunal remains to the interpretation of the refuse pit and household ritual at ʻUmayri. However, the elements of daily practices at ʻUmayri that have been the most informative include the large community construction projects, the domestic structures' construction, and the practices of storing and cooking

3. As a result, the categories of domestic ritual, seals, fauna/flora will be left out of the following discussion. The possible cultic materials from Tall Zira'a are the only other domestic ritual artifacts from the comparative sites. Further discussion will have to await final publication of this material. Comparative material elsewhere for the metal figurine feet from Building B (#B945142) are available, but as this figurine is likely from a secondary context, such a discussion will not be useful. Tall Fukhar's scarab seal, the only domestic seal from a comparative site, is not certain in date and so will not be included. Only Tall Fukhar and Pella have published data on faunal remains, and then only in general for the entire Iron Age. Without specific information for this time period, I will not attempt to perform a comparison here. As none of these sites, ʻUmayri included, have systematically studied or published their floral remains, it is only of interest to note that at Pella, like at ʻUmayri, barley was the predominant floral species identified. The excavator suggests it was used as fodder, but it is possible, as discussed in the previous chapter, that this hardier crop was used for human consumption in this time period.

food. These four categories are present at many of the comparative sites, allowing this study to move forward to contextualize ‘Umayri’s community and household practices.

6.4 Contextualizing ‘Umayri’s Households and Community

6.4.1 Introduction

Contextualizing ‘Umayri’s Stratum 12 involves a comparison of the practices at ‘Umayri with those at contemporary sites in Transjordan, as well as the evidence of outside influence at ‘Umayri. The first section compares the archaeological evidence for similar or different everyday practices of the use or construction of large public structures, the construction and layout of domestic structures, the types of storage, and the patterns of cooking. The second section focuses in particular on the rare or exotic goods present at ‘Umayri.

6.4.2 Comparing Patterns in Practice

This section provides a comparison of selected categories of household and community practices between the Stratum 12 settlement at Tall al-‘Umayri and those sites with Iron IA remains from other sites on the Central and Northern Plateaus, as well as the Jordan Valley and the Central Highlands. As the remains from these sites have been presented in the section above with citations, specific bibliographic references will not be repeated here unless new information is presented. Comparisons will mostly be made where evidence is available, without emphasis on the absence of features, unless they would be easily detectable without much excavation, such as perimeter walls and collared pithoi.

Public Structures

'Umayri's public structures include the rebuilt Bronze Age fortification system and the large communal refuse pit. Building these structures would have required considerable community organization and effort, as discussed in the previous chapters. Was the amount of effort for the fortification wall, posited as worthwhile for a number of possible reasons including the creation of physical and social boundaries, something that was also expended at other contemporary sites? The two other archaeological sites from the Central Plateau with enough exposure for comparison also indicate that the inhabitants rebuilt or reused earlier Bronze Age walls for their Iron IA settlements. At Madaba, they went to considerable effort to level off Early Bronze Age remains and then rebuild the upper parts of the old fortification wall. At Safut, the Bronze Age walls were reused as well. The Iron IA strata at these sites have only been partially excavated in limited exposures, and the full extent of the perimeter walls (whether or not they completely enclosed the sites) is unknown. However, the rebuilding and reusing of the major stone defense walls of their settlements indicates that the inhabitants in this time period expended considerable effort and time on large, necessarily-cooperative projects.

In contrast, the fortification of sites on the Northern Plateau is more mixed. Tall Fukhar's inhabitants made use of the earlier Bronze Age walls as well, though the excavator argues that they were only used for building the domestic structures and not as a fortification. At Tall Irbid a basalt perimeter wall was rebuilt and reused from the Bronze Age, at least near a large public building that was itself impressively well built with a several story building and tower. In contrast, Jarash was unfortified in this period. In the Jordan Valley, only Dayr 'Alla has evidence of reuse of a Bronze Age perimeter wall, both Zira'a and Pella were unfortified. Both Tall Irbid and Dayr 'Alla had large public structures in addition to their rebuilt fortification walls, which would have certainly filled any need for a symbolic or community-building project without the need for further work on

fortifications, suggesting fortifications also served a functional purpose.

From the pattern of settlement fortifications in Transjordan, it would seem that settlements in the Central Plateau, and only select sites on the Northern Plateau and in the Jordan Valley felt it was necessary to have a perimeter wall, and that, as Herr has stated since the fortifications' first exposure at 'Umayri, that "the inhabitants could marshal enough social and economic potential" to provide for their security (Herr, 1997, p. 152). The pattern so far indicates a sense, certainly on the Central Plateau, and at Giloh in the Central Highlands, that fortifications were necessary. That this was not the case in the Northern Plateau and the Jordan Valley may suggest more about the historical context and sense of security/restrictions in the presence of the waning Egyptian empire, than on the Central Plateau where settlements were reviving their own local, rural economies. Alternative suggestions could be made based on the unique geography of each site, and the ease of access to earlier Bronze Age walls, or the size of the settlements and the number of inhabitants that could be gathered for such large projects, though such suggestions would need further excavation. From the available evidence it is possible to suggest that the Central Plateau sites were well organized and faced with a strong enough concern, security-based or ideological, to warrant reconstruction of settlement walls.

Houses

'Umayri's four nearly complete houses provide comparative evidence for house size, architectural layout and construction style, as well as information on the way the inhabitants situated the buildings and their entrances in relation to each other. Though domestic structures from the comparative sites are not as well preserved or exposed, they do exhibit certain parallels. The partial domestic structure excavated at Madaba demonstrates the rectilinear plan similar to the four-room house, built with a broadroom against the perimeter wall as at 'Umayri. Similarly, all known structures utilize stone and mudbrick walls at

‘Umayri, Madaba, and Safut.

On the Northern Plateau, only Tall Fukhar had identifiable domestic remains, with possibly three domestic structures in a row against the perimeter wall. The houses share dividing walls, though these appear to be less substantial than those at ‘Umayri, and include stone pavements and pillar bases.

In the Jordan Valley, fragments of domestic structures were found at all four sites. Tall Zira‘a had the most examples, with at least six separate structures, including three that are described as following an Iron Age style with long linear rooms. The plans are incomplete for these structures, but small stone walls define parallel long rooms, with houses sharing dividing walls as at ‘Umayri. Stone foundations, mudbrick superstructures, and stone paved floors are characteristic of the structures. The excavator likens the northernmost house to a four-room house plan. Pella, Sa‘idiyya, and Dayr ‘Alla all had fragments of domestic structures, though only at Pella and Sa‘idiyya were stone paved floors identified. Pella also had stone pillar bases, stone walls, and mudbrick superstructures. Sa‘idiyya was too fragmentary to identify more than the stone pavement. Dayr ‘Alla had stone and mudbrick structures on parts of the tell.

While the domestic structures from these sites are limited at this point, the initial evidence points to a certain amount of similar construction styles, plans, and even size. House size at the various sites falls into a similar range (Table 6.1). There was a similar conception of house construction, using locally-sourced or reused stones for walls or pavements, along with mudbrick and wooden beams. Both Fukhar, Pella, Giloh, and Taanach also had houses with stone pillars/pillar bases. Pillars are associated with greater house size at ‘Umayri, but this is harder to discuss elsewhere given the incomplete nature of the exposures. That the inhabitants of all of these sites made use of locally available raw or reused building material is clear. The architectural plans are fragmentary, but rectilinear, long-room arrangements are similar across the better-preserved structures, and emerging

four-room plans can be identified at Madaba and Giloh as well as ʻUmayri. As at ʻUmayri, however, house layout shifts to fit into available space and pre-existing boundaries, such as settlement walls or earlier structures. Most interesting of all is that where more than one house is exposed, it has been determined that they share dividing walls. This sign of close cooperation, and perhaps initial kin relation between settlement founders, indicates that similarly related groups of people were founding or rebuilding settlements across Transjordan.

Storage

Patterns of storage at ʻUmayri included the use of numerous collared pithoi, as well as mudbrick- and stone-walled bins. Elsewhere these same types of storage were also used, in addition to silos/pits dug into the ground in and around the houses. At both Madaba and Safut, as at ʻUmayri, collared pithoi were found in domestic structures, particularly in rooms built against the perimeter walls of the settlement. Tall Safut also had at least one mudbrick storage bin built in next to the perimeter wall, like that in Building C at ʻUmayri. It is possible that the practice of storing grain in pithoi or bins in an innermost room was something carried out in all of these walled Central Plateau settlements, a storage solution that emphasizes security and concealment of one's food stores.

On the Northern Plateau, collared pithoi were found at Fukhar, Irbid, and Jarash, though it is not possible to discuss their contexts at this point. At Jarash, pebble-lined pits were also used. In the Jordan Valley, a collared pithos was only positively identified at Saʻidiyya, where it was found on a stone paved surface. The use of pits was more common, found at Ziraʻa, Pella, and Dayr ʻAlla, with stone- or mudbrick-lined pits occurring scattered in and around the houses at Ziraʻa.

While the evidence is incomplete, there seem to be important differences in how grain and other goods were stored across these main regions. The fortified Central Plateau sites

secured their grain stores in innermost rooms in collared pithoi, while on the opposite end of the spectrum, the primarily unfortified Jordan Valley sites stored their grain in easily accessible pits. In Cisjordan, preservation was low for identifying storage, though both collared pithos sherds and pits are found. These initial, and very tentative patterns on the storage of vital commodities, could have interesting implications for better understanding the nature of Early Iron Age society. With the current evidence, it is possible to emphasize the secured nature and specially-produced vessels for grain storage used at ʻUmayri and apparently shared at other Central Plateau sites.

Cooking

At ʻUmayri, a hearth/oven and grinding installation were identified in nearly every structure. The oven in Building D was made by reusing a pithos. At Fukhar, similar ovens made of reused pithoi were found next to pavements and a large ash pit. A single oven was identified at Jarash, but its relationship to a domestic structure is unknown at this point. In the Jordan Valley, Zira'a's ovens or hearths were found in almost all of the houses, with varied locations in and around the structures. In two of the structures, it appears that an oven was located in the innermost room, as with Buildings C and D at ʻUmayri. At Pella, a mudbrick oven was associated with groundstone installations and also loom weights, while an oven was found in a courtyard. Ovens were also found near stone paving fragments at Dayr ʻAlla, as well as, notably local, sandstone groundstone implements. Giloh had at least one grinding installation in its courtyard, making use of chalk for handstones, while Taanach had an oven in its interior courtyard. At Iron IA highland sites in Cisjordan in general, groundstone tools were found in inner rooms instead of outside in courtyards, and each house had their own set of tools, much as is the case at ʻUmayri (Ebeling and Rowan, 2004, pp. 114–115).

The locations of these hearths and ovens, which can only be compared across a number

of examples at ‘Umayri and Tall Zira‘a, appear to have no fixed spatial concept, illustrating a similar flexibility in cooking arrangements. That each house appears to have its own cooking installations at ‘Umayri and at Zira‘a may indicate that shared facilities were not a common practice in this time period, but that households primarily took care of their food preparation needs with their own installations. That these food preparation features occurred both inside the houses and outside in courtyards or open spaces is remarkable, as such activities were not restricted to a courtyard. Further study on Iron IA courtyards will be interesting to pursue with greater comparative evidence, and for comparison with later Iron Age examples.

6.4.3 External Identities at ‘Umayri

A small range of Egyptian or Egyptian-related artifacts have been found in ‘Umayri's Stratum 12. Explaining or exploring the nature of their presence has occupied previous research (Clark, 2007; Vincent, 2014). However, nowhere has the entire up-to-date collection of artifacts been considered as a group. Among the Maya villages that Yaeger studied, the discovery of rare and exotic goods, as well as particular architectural elements, led him to conclude that the inhabitants strove to identify with regional centers of political elites (Yaeger, 2000, pp. 133–136). That these kinds of artifacts can be used for bolstering social status has been argued for the discovery of Roman luxury imports in traditional German burials outside of the area of Roman control (Wells, 1992, p. 185). When foreign objects are found at sites in the Southern Levant, a variety of responses have been typical. Sometimes the artifacts, especially if they can be shown to have been made in an Egyptian or other foreign fashion locally, are used to support an argument that foreigners resided on site. In other instances, the artifacts, often small and easily portable such as scarab seals, are taken as examples of elite emulation, acquired through trade routes. These types of arguments have often been behind discussions of an Egyptian presence in the Southern

Levant (for a Late Bronze Age example, see (Killebrew, 2005, pp. 53–92).

A review of the evidence for Egyptian or Egyptian-style artifacts in Stratum 12 (Table 6.2) leaves the impression that some of the artifacts, like the alabaster vessel and the carnelian lotusseed vessel pendant (B945073, B120049), were likely heirlooms reused from earlier times, as their specific types originate from Late Bronze Age material cultural traditions. The seal impressions on jar handles (B870843, B945133, B120029, B120023, B120046) could have been made by heirlooms or easily traded seals, and seem to be a tradition popular in the Central Highlands and the Central Plateau during the Early Iron Age (Münger, 2009, p. 125) (also, see Redford's original publication of the first Thutmose III seal Redford, 1991). The poor example of a scarab seal (B020003) may represent local or Levantine attempts to copy popular styles. Only the Nile perch remains have more immediate interest for Stratum 12, presumably intentionally imported and consumed during the lifetime of this stratum's inhabitants as part of a ritual meal, as discussed in the previous chapter.

Feldman's study of the reuse and recycling of luxury artifacts in "displaced" contexts emphasizes the varied meanings that are possible when artifacts move out of their original contexts and into the hands of others (Feldman, 2014, pp. 170–173). She uses several case studies of luxury artifacts to illustrate her point that understanding the meaning of such artifacts in a recycled context requires "case-by-case analysis" (Feldman, 2014, p. 140). This analysis includes investigating "stylistic and technical features, archaeological context of disposition, and historical evidence" to note "displacements" across space and society (Feldman, 2014, p. 171). The discovery in a rural Iron Age house of an Egyptian-style alabaster vessel (B945073) that appeared in a New Kingdom tomb in Egypt and in temples and burials in the Late Bronze Age Southern Levant previously led to an argument that the vessel symbolized prestige for the inhabitants of Building B (Vincent, 2014, pp. 453–454). Vessel fragments of the same type were found in the nearby Late Bronze Age Am-

man Airport Structure, hoarded with an unusually high number of imported luxury goods in a tomb or temple context (Routledge, 2004, pp. 68–70). If this vessel was associated with temple offerings or burial gifts in local Late Bronze Age society, it may have symbolized a personal link to the past for the transitional inhabitants of 'Umayri's Stratum 12. Feldman discusses the notion of "collective memory" in the Iron Age remembrance of Late Bronze Age styles, particularly in how these earlier styles are remembered and used in the creation of styles later in the Iron Age (Feldman, 2014, pp. 67–76). The inhabitants of Building B may have intentionally curated this particular object for its luxury associations, or they may have held it as the symbol of the community's memories.

Routledge's view of the use of "exotic foreign goods" in the Late Bronze Age in Transjordan was that they were kept for use in specific contexts after being obtained through trade networks (Routledge, 2004, p. 75). Green's study of the Iron IA at Tall as-Sa'idiyya also discusses the ways in which foreign, and in particular Egyptian, goods were integrated into the burials. His discussion includes considering the Egyptian or Egyptian-inspired goods (such as jewelry and stone vessels) as part of "cultural affiliations with the Egyptian sphere," or as continued use of "long-established local traditions that accepted, embraced and integrated Egyptian-inspired fashions" that arose from long-standing Bronze Age practice (Green, 2013, p. 422). At the same time, a high ranking tomb (T.101) from the Iron I included other markers of status instead of the Egyptian-styled artifacts. The interred individual wore toggle-pins instead of Egyptian jewelry, "perhaps expressing 'local' cultural identity in death" instead of Egyptian (Green, 2013, p. 423). The same tomb contained only a single artifact of Egyptian-style, as well as artifacts with Aegean influence, leading Green to suggest the end of significant Egyptian influence in the region to the point where "[l]ocal elites in this setting may have no longer felt it necessary to identity with or emulate Egyptian fashions, instead re-fashioning local identities and looking towards emergent centres on the Levantine coast" (Green, 2013, p. 423). The transitions

during the Iron I period among Sa'idiyya's burials provide one way of examining the transition from the use of Egyptian-influenced prestige markers to different, local status markers, as well as changes in society overall (Green, 2009). The way these exotic artifacts could have been used at 'Umayri could be the final holdovers from Late Bronze Age traditions, with an heirloom alabaster vessel brought out to serve on special occasions, the lotusseed vessel pendent worn as a status marker, and the consumption of Nile perch a focus of foreign affiliation or high status, before traditions fully transitioned to items with more local connotations.

6.4.4 Conclusions

While the available comparative evidence at this point has proven to be minimal for research on household and community practices across the Iron IA period in Transjordan, the evidence is building. The greatest evidence at this point is for patterns of community-wide building projects such as perimeter walls for the settlements, as well as the construction of the domestic structures and their placement. Storage practices and the placement of cooking installations, though less prominent, also provide tantalizing windows into ancient practices that may help distinguish differences in regional practices.

6.5 Conclusions: 'Umayri's Households and Community in the Early Iron Age

Focus on the shared practices evident from the archaeological remains of everyday life and the comparison of these practices across the presented settlements supports tentative conclusions based on the cooperative construction of public projects, the concept and construction of domestic structures, the locations and types of storage, and the household-based preparation of food. These are summarized here to provide a tentative description of

the dimensions of social identity at Early Iron Age ‘Umayri.

Settlements on the Central Plateau, including ‘Umayri, felt the need to be secure or to define themselves by rebuilding fortifications, and were organized well enough to be able to carry out such a large project. The destruction layers apparent at sites like ‘Umayri, if indeed due to conflicts and not to natural causes (*i.e.* earthquake), would indicate that a protective function ultimately failed. They built substantial homes tucked against these walls, and typically secured their grains and other resources in the innermost rooms of their dwellings in large pithoi. The use of bins may have provided easier everyday access to grains or other foods, found at ‘Umayri near grinding and cooking installations. At ‘Umayri, every household had control of their own storage, though the extra pithoi in Building B may have been the result of communal or restricted control of surplus.

The fully developed four-room house in Building B at ‘Umayri is so far the only example, though linear and pillared rooms, like the other houses at ‘Umayri, are evident at other sites. Full excavation of the building at Madaba may reveal another four-room house, though with wall divisions instead of pillars, and the stone-pillared house at Giloh was close to the concept of a four-room plan. The pattern of pillar use at ‘Umayri, employed only for larger houses, has not been possible to identify elsewhere. This may have been a unique practice at ‘Umayri, where only certain households had access to the appropriate, and likely local, wood resources. A greater exposure of Stratum 12 at ‘Umayri will likely clarify or alter this pattern. The close cooperation evident in shared house walls in all of the settlements with enough exposed evidence may be the result of closeness or kin relation between the inhabitants when constructing their settlements. This may further support the theory of sedentarizing tribes in these regions, with smaller clan subgroups organizing settlement at the site level. However, the transition from the Late Bronze Age settlements to these Early Iron Age settlements needs more information from excavations at stratified sites. At ‘Umayri, the Stratum 12 domestic structures were built on top of an

area associated with a monumental Late Bronze Age structure, and are unlikely to have been the mere continuation of earlier domestic structures. The Stratum 12 inhabitants, as at other sites with continuity between the Late Bronze and Iron IA periods, could have as easily come from sedentarizing tribes as from other areas of the tell after the demise of the previous stratum.

Storage types and locations provide insights into both social and economic practices. The easily definable distribution of collared pithoi in the Central Highlands, Central Plateau, and Northern Plateau indicate that the use of large, on-site storage containers developed across a broad geographic region. The collared pithos' rarity in the Jordan Valley and the opposite pattern of storage in outside pits and silos reveals a key difference in the approach to storing commodities. This may have implications for agricultural practices and division or ownership of the land that produced the grain, but that is beyond the current scope. At 'Umayri, the individual storage of grain by household indicates that each family had control of their own food supplies. The individualization of cooking installations, both ovens and grinding stones, at 'Umayri and elsewhere, indicate that food preparation stayed at the household level, without sharing of communal baking or grinding features.

The few poor Egyptian and Egyptian-style artifacts discovered in Stratum 12's houses and pit indicate that these artifacts may have been heirlooms or traded goods. The large alabaster vessel in particular may have been an item used during special occasions by the inhabitants of Building B to convey prestige based on the exotic forms and materials. Alternatively, if the vessel was an heirloom, it may have had powerful memories associated with the continuity of the household, their community, or even their ancestors. The use of these Egyptian-related items, as well as the Nile perch, may have been a way of associating with the elite Egyptians who had controlled the greater region for so long, a form of luxury status marker based on control of a foreign item, or an heirloom with social signifi-

cance unrelated to either Egyptians or prestige.

This discussion builds a picture of the variety of local expressions of the inhabitants in this time period, defining practices that were shared especially among the closest geographical neighbors, and contrast at times with the more distant regions to the north. ʻUmayri shares its greatest similarities with sites in the Central Plateau and Central Highlands, but also some with the North. The differences in storage with the north may be a confirmation of the suggestions that the north was still under a different social model. With strong Egyptian influence they may have felt secure in living out in the open or were not allowed to fortify their settlements. It is also possible that the inhabitants were simply not well organized enough to build such communal projects. The contrast with these other settlements and regions builds a picture of an independent settlement at ʻUmayri that was well organized, closely related and cooperative, with well-defined architectural boundaries between households. These households formed the self-sustaining and self-contained units of everyday production of food and clothing, as well as other small household industries. The household-based production of seals using a unique local material would have strengthened a sense of closeness and connection to the distinct landscape around ʻUmayri.

CHAPTER 7

CONCLUSIONS

This study has taken a single settlement from the transitional Late Bronze/Early Iron Age and pursued questions of social identity at the household, community, and regional levels. Tall al-'Umayri's Stratum 12 – a small, rural settlement composed of five houses, a large defense system, and a refuse pit – provides insight into everyday life on the Central Plateau of Transjordan. Questions about identity in the Early Iron Age have typically focused on settlements in Cisjordan. However, the inhabitants of 'Umayri left behind a rich collection of material remains that provide important insights into daily practices in this transformative time period from east of the Jordan River. Trapped beneath a thick destruction layers, these remains can be approached by questions of functionality as well as of social import to build a picture of everyday practices from food storage and preparation to ritual and feasting. Contextualizing these household and community practices with contemporary sites in the Southern Levant provides the basis for a discussion of varying aspects of social identity that focus on the active ways in which villagers organized their society and economy in their specific landscapes.

Two main approaches have been used for questioning the data from 'Umayri's Stratum 12. The first, the functional-ecological approach, provides the founding description of the Stratum 12 houses and households. From the stones and debris of the archaeological remains, the activities have been reconstructed and brought to life. Wilk and Rathje famously define a household as the social, material, and behavioral sums of a domestic strategy for survival (Wilk and Rathje, 1982, p. 618). Using this approach, Chapter 4 asked how big these houses were, who lived in them, how the inhabitants were related, and what activities they engaged in everyday. Furthermore, Chapter 5 asked questions about how the inhabitants of Stratum 12, as households and as a community, used their environment to survive, through the seasonal farming and herding that provide the subsistence of their

economy.

The second approach, the identity-practice approach, built on the first to ask questions about society and economy from an insider's perspective in an attempt to understand the motives and interactions of the inhabitants at both the household and community level. This lead to questions about the significance of the different construction patterns of the houses, of the way essential commodities were stored, and of the arrangement of food preparation installations in the houses. In this way, the artifactual evidence was used to interpret social meaning.

With these two approaches, the functional meaning of an artifact can provide fodder for considering the social practices surrounding its use. The roof roller, for example, is a tool for rolling out the roofs after the rain to keep the houses dry and structurally sound. But moving beyond this functional role to ask about the practices behind the use of the roof roller has allowed this research to go a step further. This research can go a step further, however, in searching out further practices regarding the roof roller. Did the community share the single excavated roof roller? And for what additional purposes, such as pressing olives, could it have been used? These queries questions who had access to such tools, their circulation, and who stored them. Raising these questions allows for an exploration of the social world of the Early Iron Age and the problems and possible creative solutions of individuals. To help answer some of these questions, it was necessary to look at interpretations, theories, and methods used at other archaeological sites where archaeologists have wrestled with interpreting similar data. Most importantly, ethnographic material has contributed to the consideration of not only the functional use of an artifact, but its social implications as well.

While the trifold theme of exploring households, communities, and region-wide practices was inspired by the work of Yaeger on the Maya in the New World (Yaeger, 2000), the questions addressed within each level of the theme developed considerably in the process

of researching and writing this Southern Levantine study. The structure of the theme has proved useful in applying the minutia of everyday, household activities to discussions and comparisons of household and community practices at a regional level. The community-level theme, in particular, developed directly in response to the questions of this particular dataset, which found agricultural and pastoral practices of particular interest. Separating community-level practices into those that work to divide or unite the settlement was a useful way of approaching community organization, socio-economic status, and the role of ritual and feasting. Exploring the ways in which the community worked together to survive with limited human, animal, and plant resources opened up a range of questions that were fascinating to explore, even with minimal data. While a synchronic study cannot grasp easily at the formation and implosion of a community over time, asking these questions provides insight into how the community could have built solidarity, sometimes in spite of glaring differences.

Chapter 4 started with the households of Stratum 12, arguing that they were indeed domestic structures. Laid adjacent to each other, these structures shared walls that would have required collective cooperation during construction. This close cooperation may have betrayed an underlying kinship or close relationship between the founders of the Stratum 12 settlement in this area of the tell. While the inhabitants built with the same basic materials, their houses exhibited disparity in the use of wooden pillars, overall size, and complexity of layout. The house sizes of Stratum 12 fit within the range of house sizes known for the Southern Levant during the Early Iron Age, with room for both potentially nuclear and extended families. The physical disparity evident among the buildings is the first of many points that set Buildings B and A apart from the other buildings.

The similarity of domestic activities across the five excavated structures provided insight into the shared common practices. The distribution of storage facilities, hearths, and grinding installations indicates that each household organized its own storage and produc-

tion of food. The various food storage containers found in the settlement, including ceramic pithoi, mudbrick and stone bins, provided evidence of a flexibility in the concept of storage. This flexibility emphasizes the security and privacy of the household's stored produce, as shown in the convenience of open bins near grinding and cooking installations, for example. Building B is further set apart by its considerably greater storage of surplus. The cooking installations, both hearths and oven, as well as the plastered stone features, were necessary elements of the Stratum 12 "kitchen" that each house included, except for Building B, which may have used such installations on an upper floor or in their large courtyard. Despite the clear architectural boundaries between the dwellings, and the lack of shared facilities, the women of the households may have gathered on their joined roofs for some activities, like grinding, interacting informally on a daily basis.

Every household's inhabitants engaged in the same economic activities – producing textile tools, manufacturing their own textiles, and using (and reusing) basalt for grinding implements. At least two households also crafted seals. Household manufacture of lithics was tied to both the recycling of broken ceramic sherds for spindle whorls, and to the creation of the local seal industry. The spindle whorls were related to every household's need to create their own textiles, as well as to a possible wool emphasis in sheep herding. The production and use of seals provides one way of looking at how practices in Stratum 12 fostered social interaction from the household to the community levels, helping to create and maintain a local social identity in the production and use of their own seals made from a unique, local material. The choice of material may have been a matter of convenience, dug out of the caves and limestone shelves around the site. But as the inhabitants used these seals in their rituals or everyday lives, the material choice would have been another element tying them to their specific landscape. How these seals were used in the everyday economy is hard to determine, as all finished seals were found in the refuse pit. They could have been deposited in the refuse pit as part of communal ritual activity, though this is

difficult to establish at this time. All of these elements build a picture of a small agrarian village where each household controlled its own storage and production of their everyday necessities, from food to clothing.

Chapter 5 moves to the community level, examining how elements of everyday life and experience would have divided and unified the inhabitants. From the differentiation between the architectural size and complexity of the houses, to the variation in the number and variety of artifacts in those houses, to the boundaries between houses, it is clear that physical and economic boundaries separated some of the villagers from the others. The size and contents of the two largest houses, Buildings B and A, lay the basis for a claim that these two households were socio-economically differentiated from their neighbors. The nature of the excess storage in Building B indicates that this household had access to more food than their own needs would have warranted. In Building A, the cultic corner, higher number of grinding stones, and the two olive oil separation kraters, indicate that extra activities took place. The presence of a balance weight in both Buildings B and A attests to another activity limited to only these two houses. The hematite weights also tie the settlement into a broader Ancient Near Eastern trade system. As the weights themselves are only rough reminders of the smoothly polished and shaped weights from the Late Bronze Age, they may have represented a local system of measurement that was no longer related to a major scale system. The proximity of the large refuse pit in front of Building B and the shrine next door in Building A make it possible that these two houses were the seat of village, or at least neighborhood, elders. That they could have directed community projects and then called upon large grain, and possibly meat, reserves for special occasions would have helped to justify and maintain their leadership roles.

In small ways, the community members carried out their everyday lives in a way that became very localized to their settlement. In large ways they needed to cooperate to make the most of their grain harvests, their olive oil production, and the raising of sheep and

goats. The focus on sheep herding and a wool economy was supported by an environment that allowed the inhabitants to keep riskier herd ratios than their neighbors in more peripheral zones. The study of these practices contributes to a better understanding of the ways in which the villagers were able to build a sense of local identity and community. While their resources were guarded on a household basis, with evidence for inequality in the distribution of material remains, the labor necessary to acquire their daily bread was likely shared in agricultural and pastoral duties. These shared duties, as well as communal events like feasts, and the perhaps less public care for a shrine, would have also helped to build solidarity among the villagers.

Contextualizing the settlement at ʻUmayri in the Early Iron Age Southern Levant in Chapter 6, it is possible to see the ways in which the inhabitants at ʻUmayri may have created their own local identity. Settlements on the Central Plateau, including ʻUmayri, rebuilt extensive fortification systems and were well enough organized to be able to carry out such a large project. These fortifications could have served purely defensive purposes, but they may also have served to symbolically set the inhabitants apart in their own, bounded community. Close cooperation between the inhabitants is further evident in their construction of houses with shared walls. This practice, seen in all of the settlements with enough evidence, may have been the result of closeness or kinship between the inhabitants. The construction of pillared houses was not universal at ʻUmayri but limited to the largest houses – a pattern that cannot be compared at this point with other contemporary sites. Storage types and locations provide insights into both social and economic practices. The easily definable distribution of collared pithoi in the Southern Levant indicates the use of large, on-site storage containers developed across a broad geographic region. The collared pithos' rarity in the Jordan Valley and the opposite pattern of storage in outside pits and silos reveals a key difference in the approach to storing commodities. At ʻUmayri, the individual storage of grain by household indicates that each family had control of their

own food supplies. The individualization of cooking installations, both ovens and grinding stones, at ‘Umayri and elsewhere, indicate that food preparation remained at the household level.

The contrast with these other settlements and regions builds a picture of an independent settlement at ‘Umayri that was well organized, closely related and cooperative, with well-defined architectural boundaries between households. These households formed the self-sustaining and self-contained units of everyday production of food and clothing, as well as other small household industries. Regionally, differences in the manner of storing food and fortifying the settlements present some of the greatest patterns for variation in the everyday archaeological record. Better definition of region-wide practices and the distinction of sub-regional similarities will become clearer with future excavation and publication of household material.

This study has been limited to a single site and a single period of occupation. As such, questions of diachronic change from the Late Bronze Age and into the later Iron I period were not addressed except in tangential instances. However, the single-stratum approach did allow for a detailed study of a single moment in time – a moment well preserved by the thick destruction level that is one of the greatest strengths of this study. The high number of valuable, portable artifacts left behind in the destruction, along with the unburied human remains caught in the collapse of Building B, attest to the rapidity with which the entire assemblage was buried and the relative security of the context. That pre-destruction factors such as prolonged siege may have influenced the remains cannot be ignored, but over all, both the movable and permanent features were in accord on the use of room spaces. The problems with the dataset from ‘Umayri’s Stratum 12 were laid out in Chapter 3, along with the solutions developed for use in this study. Therefore, there were few real surprises in working with ‘Umayri’s dataset during analysis. Without microarchaeological analysis, it was not possible to fine tune the investigation of activity areas.

However, it was still possible to discuss room activity from the macro artifacts and permanent features, which proved to be quite informative. When questioning the more subjective aspects of the dataset in Chapter 5, such as who herded the sheep and goats, and who used the kraters or roof roller, the limited number of ethnographic studies that had enough data to be useful meant that often the possible answers were also limited, or highly tentative. With this in mind, the questions remain open to further interpretation and suggestion by other ethnographic or excavation data in the future. In Chapter 6, a huge challenge was the quality of comparative data available, as none of the comparative sites from the Iron IA had a household focus or a detailed-enough analysis of artifacts at the household level. However, as excavations undertake final publication or new excavations with a stronger household focus take to the field, this study will provide a basis for comparison.

This study contributes to the discussion of social identity in the Early Iron Age Southern Levant, and in Transjordan in particular. Its importance lies in its focus on the transitional period between the urbanized Late Bronze Age and the nation-states of the Iron II period. The small, rural settlements in the Southern Levant during this period, such as ʻUmayri, provide a window of opportunity in which to analyze households, communities, and the development of social identity across the region. The destroyed Stratum 12 assemblage is a well-preserved example of everyday life in a single moment in time. To be able to fully take advantage of such a dataset, however, a priority of future excavation should be to include more of the techniques developed for household focus. While artifacts in ʻUmayri's Stratum 12 were able to be located by room and by upper or lower floors, the careful mapping of artifacts, both micro and macro, to their precise three-dimensional locations would allow even better reconstruction of various activity spaces. In addition, systematic collection of faunal and botanical material would allow for statistically-significant analysis. Though requiring additional time on limited budgets, such an approach would allow for even more precise detection of the activities that took place in households across

the Southern Levant.

Two significant avenues of research, the ceramic and metal assemblages that are abundant from Stratum 12, were not included in this study. With pottery restoration an ongoing effort from the more recent excavations, it will not be long before the Stratum 12 ceramic assemblage can be studied comprehensively for the whole or reconstructed vessels found *in situ* in the dwellings. This future study can be used to improve the analysis and conclusions of this current research. The metal weaponry found in every one of the buildings of Stratum 12 are also awaiting further study and will provide useful data on the exchange and use of copper-based artifacts from this period.

A comparative project that studies the detailed practices of everyday life naturally relies on a detailed dataset. As more excavations are published from Transjordan in particular, it will be possible to return to the questions and patterns addressed in this initial research, and to continue the study of practice-based social identity in the Early Iron Age. Patterns of storage, in particular, would continue to be informative on community organization. Adding greater comparative research with sites in the rest of Cisjordan outside of the Central Highlands will be an important part of continued research as well. In this same vein, broadening the chronological horizon of the study into the later Iron I period will provide the kind of diachronic context that is crucial to tracking the emergence and change of social practices over time (Jones, 1997, p. 126). It is hoped that this single moment at ʻUmayri, and at contemporary Iron IA villages across the Southern Levant, can then be compared with published material at slightly later Iron I sites like Tall Abu al-Kharaz (Fischer, 2013), those on the Karak Plateau (Routledge, 2004; Porter, 2013), Tel Dor (Gilboa et al., 2014), and Megiddo (Gadot and Yasur-Landau, 2006).

If excavations of the appropriate areas at ʻUmayri become possible again in the future, they will help answer a number of questions regarding the continuity and change of domestic and community practices at the end of the Late Bronze Age and later into the Iron I

period. Especially in Fields A and B at ʻUmayri, future probes could investigate the nature of the previous stratum and the use of this space on the tell in the Late Bronze Age, and what, if any, continuity existed in the transitional period. In Field H, probes below the Stratum 11 House M indicate that the signature destruction level of Stratum 12 lies just below. Excavation of this area, tracking the changes from Stratum 12 to Stratum 11, would be incredibly informative for the development of practices in the Early Iron Age at ʻUmayri. The occupational development of this area during the remainder of the Iron Age is well known, missing only this initial, hidden link.

The Stratum 12 settlement at Tall al-ʻUmayri is one small yet important glimpse into the lives of ordinary people in the Early Iron Age. These people worked to create their lives from the soil of the land around them. In the activities in which they engaged every day, from sending out the sheep and goats in the morning, to the grinding of grain, to the incising of their own seals, they developed their own local practices in ways that made sense to them. They built their houses out of the stone, earth, and wood of the environment around them, but they did so in ways that filled their needs and fit the available space. The ways they used the resulting spaces of their homes contradict any set notion of prescribed activity areas, and instead highlight the flexibility of the villagers. We cannot give a name to these people who have left behind no written record of their names or the name of their village. They cannot tell us who they were or who they associated with on a larger, regional level. But the patterns they have left behind speak of their organization and choices, and begin to replace burned stone and leveled debris with the homes and members of a living community.

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APPENDIX A
TABLES

Table 3.1: Tall al-'Umayri Stratum Chart. Source: Larry Herr, Madaba Plains Project

Stratum	Period	Date	Fields	Finds from Specific Fields of Excavation
	Neolithic		E&W slopes	Flint scatters
	Chalcolithic?		East valley	Sherds on surface
Hiatus	EB IA			No remains so far
21	EB IB	c 3000-2700 BC	K	K: Dolmen and associated surfaces
20	EB II	c 2700-2500 BC	(C?)D	D: Wall fragments above bedrock; C: bedrock carvings?
19	EB III	c 2500-2200 BC	CDG	CDG: Houses & streets on terraces on S & N slopes
18	EB IV	c 2200-2150 BC	D	D: Ephemeral one-room houses widely separated
17	EB IV	c 2150-2100 BC	D	D: Small walls of cobbles, perhaps animal pens
Hiatus	EB IV-MB IIA-B			No remains so far; cemetery east of the airport highway
16	MB IIC	c 1700-1650 BC	BC	B: Sherds in rampart;C: wall frags & floors

Table 3.1 Tall al-'Umayri Stratum Chart (Continued)

Stratum	Period	Date	Fields	Finds from Specific Fields of Excavation
15	MB IIC	c 1650-1550 BC	BCFGK	B: Moat, rampart & wall frags; C: wall frags & floors;FG: sherds; K: cave tomb
Hiatus?	LB I			No clear remains so far
14	LB II	c 1400-1250 BC	ABFN	BN: Palace/temple; F: terrace wall; AH: wall frags
13	LB/Iron I	c 1230-1200 BC	B	B: Sherds in rampart and in the Stratum 12 bricks; destroyed by earthquake
12	LB/Iron I	c 1200-1150 BC	ABEFHN	ABHN: Perimeter wall & houses destroyed militarily, 4-room house; E: sherds; F: wall frags
11	Iron 1A	c 1150-1100 BC	AH(M?)	A: Wall frags above Str 12 destruction; H: wall frags; M: sherds
10	Iron 1B	c 1050-1000 BC	ABH	A: House; B: storeroom; H: lowest courtyard sanctuary with model shrine

Table 3.1 Tall al-'Umayri Stratum Chart (Continued)

Stratum	Period	Date	Fields	Finds from Specific Fields of Excavation
9	Iron IB-IIA	c 1000-850 BC	ABH	AB: Few red-slipped, hand-burnished sherds; H: poss continuation of courtyard sanctuary
8	Iron IIB	c 850-700 BC	AHLM	A:House; H: sanctuary surfaces; L: large stone walls & terrace wall; M: Cobble surface
7	L Iron 2Iron IIC	c 600-550 BC	ABCEFHLMN	ABCFLMN: Administrative complex & houses; E: watersource; H:sanctuary in Field H
6	Iron IIC/Per	c 550-475 BC	AHL(M?)	AM: Changes to administrative complex; B: houses;H: subterranean room; L: walls
5	E Persian	c 475-400 BC	AHM	AM: Prob domestic wall frags; H: poss cont of sanctuary; AH: Persian provincial seals
Hiatus	L Persian			No remains so far; poss also very early Hel

Table 3.1 Tall al-'Umayri Stratum Chart (Continued)

Stratum	Period	Date	Fields	Finds from Specific Fields of Excavation
4	Helenistic	c 300- 50 BC	HLKM	H: Pits; L: farmstead; K: tomb with Greek inscription at SE slope of site; M: wall frags
3	E Roman	c 50 BC-AD 135	ABH	AB: Ritual pool from a prob farmstead/villa; H: one small cooking pot
Hiatus	L Roman			No remains so far
2	Byzantine	c AD 330-650	FL	F: Farmstead wall fragments and pottery; L: field wall & sherds similar to Field F
1	Islamic	c AD 650-Pres	ABCDEFHLMN	All: Few topsoil sherds from all the Islamic periods; FHM: 3 shallow burials

Table 4.1: Reconstruction of Household Size

	Bld B	**Bld A**	**Bld C**	**Bld D**
Total Area (with walls, in m^2)	130	111	70	73
Roofed Dwelling Area (without walls, in m^2)	50.4	52.2	38	40
	Numbers of Occupants:			
10 m^2 / person of roofed dwelling area/2nd story	5.04	5.22	3.8	4
8 m^2 / person of roofed dwelling area/2nd story	6.3	6.5	4.8	5
	Numbers of Occupants:			
Total Volume in liters (137 liters average per jar)	10,138	4,384	2,466	2,466
	Numbers of Occupants:			
Londons 3.3 jars/person/year estimate	22	9.7	5.5	5.5
Grain-storage based estimate LOW[1]	35	15	9.1	8.5
Grain-storage based estimate HIGH[2]	20	8.7	5.3	4.9
Grain-storage based estimate MAX[3]	17.4	7.5	4.5	4.2

[1]Low Estimate: 290 liters (219 kg) per person per year, barley and wheat (from Kemp, 1986)

[2]High Estimate: 500 liters (365 kg) per person per year, barley and wheat (from Kemp, 1986)

[3]Max Estimate: 433 kg per person per year, including 20% necessary for reseeding and 20% lost to spoilage (from Schwartz, 1994, based on Hole, 1991)

Note that Kramer (1982, p. 37) estimates consumption of 100 kg of wheat per person per year at least, but with an average of 150-200 kg; barley is only consumed in emergencies.

Table 4.2: Iron I Transjordan House Size Averages

Site	Stratum	No. of Houses	Range (m^2)	Source
ʻUmayri	12 LB/EIr1	4	70.0-130.0	Personal calculations using GIS
Madaba	10 LB/EIr1	1	54	Foran, 2013[1]
Sahab	Area B LB/EIr1	1	65	Ibrahim, 1974[1]
Fukhar	VIALB/EIr1	3	60-85	Ottoson, 2015[1]
Zira'a	13 EIr1	8	70.0-200.0	Personal communication, Katja Soennecken, October 2014
Khirbat al-Mudayna al-ʻAliya	LIr1	8	71.5-239.0	Routledge, 2009, p. 49
Lahun	LIr1	8	52.0-160.0	Routledge, 2009, p. 49
Abu al-Kharaz	Ir1	1	368	Fischer, 2013, p. 267[2]
Dayr ʻAlla, Saʻidiyya, Pella	-	-	-	Not enough information published to calculate

[1]Rough measurements were taken from figures present in the listed source and should only be taken as approximations until further information is published.

[2]The cell-plan structure at Tall abu al-Kharaz from Phase IX (12th/11th century) is a unique structure, interpreted as a single structure and only the basement remains of a two-story building. The 22 rooms are all built as part of a coherent compound, though pairs of rooms do not communicate with each other. How the upper rooms would have communicated or if they would have communicated at all is unknown, as only this basement structure remains. The measurements are given considering it to be one large structure of at least partial domestic nature, as 46 by 8 m. Individual rooms are 2.5/3 by 3 m (Fischer, 2013, pp. 267-268, 504).

Table 4.3: *Ad hoc* Lithic Tools. Source: Jillian Logee and Julie Cormack, Mount Royal University, and the Madaba Plains Project

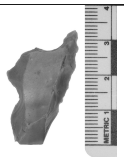
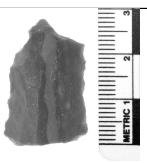
Reg. No.	Lithic Type	Context	Image
3A.19.32.30	Drill	Room A4	
4A.20.43.71	Drill	Room A1	
4A.20.43.118	Drill	Room A1	
3A.19.32.2	Awl	Room A4	
3A.19.32.14	Awl	Room A4	
3A.19.32.32	Awl	Room A4	
3A.20.43.19	Awl	Room A1	
4A.20.43.3	Awl	Room A1	
4A.20.43.11	Awl	Room A1	

Table 4.3 *Ad hoc* Lithic Tools (Continued)

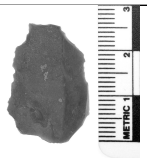
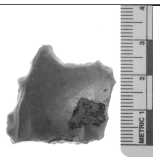
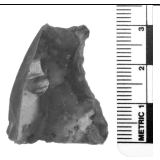
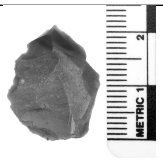
Reg. No.	Lithic Type	Context	Image
4A.20.43.54	Awl	Room A1	
4A.20.43.56	Awl	Room A1	
4A.20.43.72	Awl	Room A1	
4A.20.43.100	Awl	Room A1	
3A.20.43.38	Awl	Room A1	
8A.20.69.3	Awl	Room C3	
8A.20.69.4	Awl	Room C3	
8A.20.69.18	Awl	Room C3	
8A.20.69.39	Awl	Room C3	No image

Table 4.4: Stratum 12 Seals. Source: Madaba Plains Project

Reg. No.	Type	Material	Context	Image
B966200 (Eggler, 2002, p. 284, No. 69)	Seal	Tuff	Pit	
B020009	Seal	Ceramic?	Pit	
B020003	Seal	Frit	Pit	
B966184 (Eggler, 2002, p. 284, No. 68)	Seal	Tuff	Pit	
B020029	Seal	Tuff	Pit	
B020034	Seal	Tuff	Pit	
A020005	Seal	Tuff	Pit	
A020048	Seal	Tuff	Pit	

Table 4.4 Stratum 12 Seals (Continued)

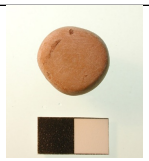
Reg. No.	Type	Material	Context	Image
B966185 (Eggler, 2002, p. 296)	Seal Scarab (unfinished)	Limestone	Pit	
B006887	Seal (blank)	Limestone	North of Building B	
A100036	Seal (blank)	Tuff	Room C3	
U00 A7J79:047 Pail 189	Sample of raw material	Tuff	Room A4	

Table 4.5: Iron IA House M Seals. Source: Madaba Plains Project

Reg. No.	Type	Material	Image
B120006	Seal	Tuff	
A120056	Seal	Tuff	
A100072	Seal	Tuff	
B100013	Seal	Tuff	

Table 4.6: Basalt Bowls. Source: Madaba Plains Project

Reg. No.	Type	Material	Location	Percentage	Comments	Image
B945215	Bowl	Basalt	B3	50	Large, finely carved with ring base	
B923181	Bowl	Basalt	B2C	100	Very finely carved, footed tripod base and B handle	
B006875	Bowl	Basalt	North of B	60	Shaped, shallow, with small pour spout(?)	
B006886	Bowl	Basalt	A4	20	Crude, thick, shallow	

Table 4.6 Basalt Bowls (Continued)

Reg. No.	Type	Material	Location	Percentage	Comments	Image
B891989	Bowl	Basalt	A3	100	Crude, trough-shaped, flat base, deep, elon-gated indenta-tion	
B006823, B923130	Bowl	Basalt	A1	100	Crude, deep bowl, flat base, simple rim	
A100011	Bowl	Basalt	C3	30	Large, finely carved, ring base, deep bowl	

Table 4.6 Basalt Bowls (Continued)

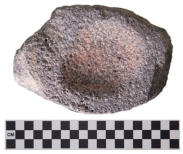
Reg. No.	Type	Material	Location	Percentage	Comments	Image
A120092	Bowl or Mortar	Basalt	D1	100	Crude, shallow, irregular shape. Possible reuse. Compare to A020188.	
A080363	Bowl	Basalt	E1	100	Crude, slight pedestal base, shallow, made of very light basalt.	
A020188	Bowl	Basalt	Pit	100	Crude, flat base, shallow. Compare to A120092.	

Table 5.1: Balance Weights. Source: Madaba Plains Project

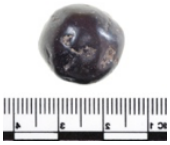
Reg. No., Type, Material	Context	Weight (dimensions)	Image
B891941, Weight, Hematite	A3	41.49 g, (2.1 x 3.2 cm)	
B966051, Weight, Hematite	B1	31.36 g, (2.5 x 3.2 cm)	
B120054, Weight, Hematite	Field H, Building M, Iron I	163 g, (1.48x1.68 cm)	

Table 5.2: Stratum 12 Faunal NISP

Identification	**Domestic + Pit**		**Domestic**		**Pit**	
	Fragment Count	% of Total Fragments	Fragment Count	% of Total Fragments	Fragment Count	% of Total Fragments
Bos taurus	1156	6.3%	215	3.8%	909	7.3%
Ovis aries	363	2%	99	1.8%	248	2%
Capra hircus	258	1.4%	88	1.6%	163	1.3%
Sus scrofa (domestic)	285	1.5%	87	1.6%	193	1.6%
Sus scrofa (wild)	12	0.1%	0	-	12	0.1%
Ovis aries/Capra hircus	6372	34.5%	1475	26.3%	4657	37.5%
Canis familiaris	73	0.4%	8	0.1%	61	0.5%
Equus asinus	85	0.5%	36	0.6%	44	0.4%
Equid	18	0.1%	1	0%	17	0.1%
Gazella sp.	19	0.1%	5	0.1%	14	0.1%
Dama mesopotamica	11	0.1%	9	0.2%	1	0%
Camelus dromedarius	2	0%	1	0%	1	0%
V. Vulpes Arabes	1	0%	1	0%	0	-
Pantera leo	1	0%	0	-	1	0%
Dipodidae	1	0%	0	-	1	0%
Spalax ehrenbergi	1	0%	1	0%	1	0%
Alectoris/Graeca/Chukar	9	0%	5	0.1%	4	0%
Ketupa zeylonensis	1	0%	1	0%	0	-
Milvus migrans	3	0%	3	0.1%	0	-
Pica pica	1	0%	1	0%	0	-
Pterocles sp.	2	0%	2	0%	0	-
Bird	23	0.1%	12	0.2%	11	0.1%
Barbel	1	0%	1	0%	0	-
Cyprinidae	2	0%	0	0%	0	-
Late niloticus	1	0%	0	-	1	0%
Bony Fish	2	0%	2	0%	1	0%
Potamon potamios	1	0%	0	-	1	0%
Cardiidae	1	0%	0	-	1	0%
Gastropode	1	0%	0	-	1	0%
Unio sp.	3	0%	0	-	3	0%
Otala	2	0%	2	0%	0	-
Small Mammal	2	0%	2	0%	0	-
Medium Mammal	4038	21.8%	2632	47%	1290	10.4%
Large Mammal	292	1.6%	286	5.1%	0	-
Lizard	4	0%	4	0.1%	0	-

Table 5.2 Stratum 12 Faunal NISP (Continued)

Identification	**Domestic + Pit**		**Domestic**		**Pit**	
	Fragment Count	% of Total Fragments	Fragment Count	% of Total Fragments	Fragment Count	% of Total Fragments
Tortoise	24	0.1%	3	0.1%	20	0.2%
Indeterminate	5413	29.3%	621	11.1%	4755	38.3%
Total	18484	100%	5603	100%	12411	100%

Table 5.3: Stratum 12 Fauna by Weight

Identification	**Domestic + Pit**		**Domestic**		**Pit**	
	Weight (g)	% of Total Wt	Weight (g)	% of Total Wt	Weight (g)	% of Total Wt
Bos taurus	22123.2	31.6%	3880.8	22%	17637	35.9%
Ovis aries	2542.1	3.6%	345	2%	2170	4.4%
Capra hircus	3834.3	5.5%	280.4	1.6%	3544	7.2%
Sus scrofa (domestic)	1716.7	2.4%	437.1	2.5%	1243.9	2.5%
Sus scrofa (wild)	459.1	0.7%	0	-	459.1	0.9%
Ovis aries/Capra hircus	24631.3	35.1%	6928.4	39.2%	16073	32.7%
Canis familiaris	634.8	0.9%	9.8	0.1%	625	1.3%
Equus asinus	1359	1.9%	317.6	1.8%	969.8	2%
Equid	86	0.1%	22.5	0.1%	63.5	0.1%
Gazella sp.	168.2	0.2%	24.4	0.1%	143.8	0.3%
Dama mesopotamica	162.8	0.2%	156.3	0.9%	0	0%
Camelus dromedarius	150	0.2%	102	0.6%	48	0.1%
V. Vulpes Arabes	0.6	0%	0.6	0%	0	-
Pantera leo	9.1	0%	0	-	9.1	0%
Dipodidae	0.1	0%	0	-	0.1	0%
Spalax ehrenbergi	0.2	0%	0.1	0%	0.1	0%
Alectoris/Graeca/Chukar	3.5	0%	1.3	0%	2.2	0%
Ketupa zeylonensis	2.5	0%	2.5	0%	0	-
Milvus migrans	7.5	0%	7.5	0%	0	-
Pica pica	0.6	0%	0.6	0%	0	-
Pterocles sp.	0.3	0%	0.3	0%	0	-
Bird	3	0%	2	0%	1	0%
Barbel	0.7	0%	0.7	0%	0	-
Cyprinidae	0.2	0%	0	-	0	-
Late niloticus	0.1	0%	0	-	0.1	0%
Bony Fish	0.2	0%	0.2	0%	0.1	0%
Potamon potamios	0.1	0%	0	-	0.1	0%
Cardiidae	1	0%	0	-	1	0%
Gastropode	0.1	0%	0	-	0.1	0%
Unio sp.	0.3	0%	0	-	0.3	0%
Otala	0.2	0%	0.2	0%	0	-
Small Mammal	0.2	0%	0.2	0%	0	-
Medium Mammal	4295.1	6.1%	3068.2	17.4%	1020	2.1%
Large Mammal	1062.3	1.5%	1033.6	5.9%	0	-
Lizard	0.4	0%	0.4	0%	0	-
Tortoise	128.6	0.2%	45.9	0.3%	82.7	0.2%

Table 5.3 Stratum 12 Fauna by Weight (Continued)

Identification	Domestic + Pit		Domestic		Pit	
	Weight (g)	% of Total Wt	Weight (g)	% of Total Wt	Weight (g)	% of Total Wt
Indeterminate	6692.2	9.5%	985.7	5.6%	5076.5	10.3%
Total	70076.6	100%	17654.3	100%	49170.5	100%

Table 5.4: Stratum 12 Fauna NISP, Identified Species Only

Genus	**Domestic + Pit**	
	NISP	%NISP
Bos	1156	13.4%
Ovis	363	4.2%
Capra	258	3%
Ovis/Capra	6372	73.6%
Sus	297	3.4%
Canis	73	0.8%
Equus	103	1.2%
Gazella	19	0.2%
Dama	11	0.1%
Camelus	2	0%
Vulpes	1	0%
Pantera	1	0%
Total	8656	100%

Table 5.5: Possible Ritual Artifacts in Stratum 12. Source: Madaba Plains Project

Reg. No., Type, Material	Context	Image
B945142, Figurine, Bronze	B1 Collapse	
B006719, Astragalus, Bone	B1 Collapse	
No No., Chalice, Ceramic	B1 Collapse	No Image
No No., Pyxis, Ceramic	B3	No Image
B986634, Astragalus, Bone	E of Bldg B	
No No., Astragalus, Bone	E of Bldg B	No Image
B986658, Figurine, Ceramic	E of Bldg B	
B7K80037291001, Lamp, Ceramic	B2C Collapse	No Image
B7K80037165001, Lamp, Ceramic	B2C Collapse	No Image
B006715, Figurine, Ceramic	A1 Collapse	
B986678, Cult Stand, Ceramic	A1 Collapse	
A7K70051201002, Lamp, Ceramic	A1 Surface	No Image
B7K80060027004, Lamp, Ceramic	A1 Collapse	No Image
B7K80060028001, Lamp, Ceramic	A1 Collapse	No Image
B923185, Lamp, Ceramic	A1 Collapse	No Image
No No., Pyxis, Ceramic	A1	No Image
No No., Pyxis, Ceramic	A1	No Image
No No., Chalice, Ceramic	A3 Collapse	No Image
B7J89031127001, Lamp, Ceramic	A3 Surface	No Image

Table 5.5 Possible Ritual Artifacts in Stratum 12 (Continued)

Reg. No., Type, Material	Context	Image
B891942, 4 Gaming Pieces, Stone	A3 Collapse	
No No., 3 natural stones	D1 Collapse	
B120052, Lamp, Ceramic	D1 Collapse	
A7K60068, Lamp, Ceramic	D2 Collapse	No Image
A080248, Chalice, Ceramic	Bldg E, Surface?	No Image
A7J69071, Lamp, Ceramic	Bldg E, Collapse	No Image

Table 5.6: Personal Adornment Artifacts in Stratum 12. Source: Madaba Plains Project

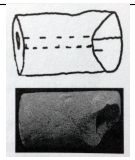
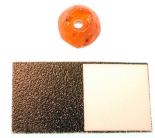
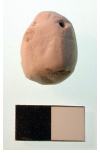
Reg. No., Type, Material	Context	Image
B945160, Bead, Ceramic	B1	
B966034, Perfume Holder, Sandstone	B1	
B006876, Bead, Faience	A5	
B006842, Bead, Carnelian	A4	
B006862, Pendant, Chalk	A4	
B986659, Pendant, Shell	C2	
B100006, Bead, Carnelian	C3	
A100054, Bead, Bone	C3	
B120049, Lotusseed Pendant, Carnelian	D2	

Table 5.6 Personal Adornment Artifacts in Stratum 12 (Continued)

Reg. No., Type, Material	Context	Image
A080404, Bead, Bone	E1	

Table 5.7: Refuse Pit Artifacts. Source: Madaba Plains Project

Reg. No.	Type	Material	Image
A020234	Spearhead/Arrowhead	Bronze	
B006738	Astragalus (Goat)	Bone	
B006739	Awl	Bone	
A020144	Bone, Perforated	Bone	
A020188	Bowl	Basalt	See Table 4.3
A020194	Figurine	Partially-fired clay	
7K92014063	Gaming piece?	Ceramic	No Image
7K92014063	Gaming piece?	Ceramic	No Image
A020053	Hand Grinder, fragment	Basalt	No Image
7K92019080	Hand Grinder	Basalt	No Image
7K92014092A	Hand Grinder?	Basalt	No Image
7K92014092B	Hand Grinder?	Basalt	No Image
B966105	Ingot	Bronze	
7K92014066	Loom Weight	Ceramic?	No Image
A020190	Milling Stone, fragment	Basalt	No Image
A020081	Mortar, fragment	Basalt	No Image

Table 5.7 Refuse Pit Artifacts (Continued)

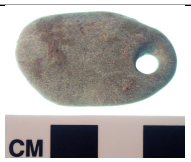
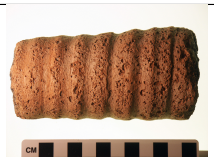
Reg. No.	Type	Material	Image
A020171	Mortar, complete	Limestone	
B020002	Pendant	Stone	
A020175	Pin	Bronze	
B986561	Plate	Stone	
A020191	Pounder, complete	Chert	No Image
7K92014064	Pounder	Chert?	No Image
7K92019089	Pounder	Chert?	No Image
B966096	Roller	Ceramic	
B966200	Seal	Ceramic	See Table 4.4
B020009	Seal	Ceramic	See Table 4.4
B020003	Seal	Frit	See Table 4.4
B966184	Seal	Tuff	See Table 4.4
B020029	Seal	Tuff	See Table 4.4
B020034	Seal	Tuff	See Table 4.4
A020005	Seal	Tuff	See Table 4.4
A020048	Seal	Tuff	See Table 4.4
B966185	Seal, Scarab	Limestone	See Table 4.4
A020150	Sherd, incised	Ceramic	

Table 5.7 Refuse Pit Artifacts (Continued)

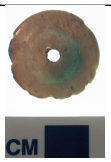
Reg. No.	Type	Material	Image
B966008	Spindle Whorl	Bone	
B020035	Spindle Whorl	Bone	
B966304a	Spindle Whorl	Ceramic	No Image
B966305a	Spindle Whorl	Ceramic	No Image
B966306a	Spindle Whorl	Ceramic	No Image
B966307a	Spindle Whorl	Ceramic	No Image
B966308	Spindle Whorl	Ceramic	No Image
B966309a	Spindle Whorl	Ceramic	No Image
B966310a	Spindle Whorl	Ceramic	No Image
B966311a	Spindle Whorl	Ceramic	No Image
B966312a	Spindle Whorl	Ceramic	No Image
B966313a	Spindle Whorl	Ceramic	No Image
B966314a	Spindle Whorl	Ceramic	No Image
B966315a	Spindle Whorl	Ceramic	No Image
B966316a	Spindle Whorl	Ceramic	No Image
B966317a	Spindle Whorl	Ceramic	No Image
B963619a	Spindle Whorl	Ceramic	No Image
B966320a	Spindle Whorl	Ceramic	No Image
B966321a	Spindle Whorl	Ceramic	No Image
B966322	Spindle Whorl	Ceramic	No Image
B966323b	Spindle Whorl	Ceramic	No Image
B966324b	Spindle Whorl	Ceramic	No Image
A020120	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020135	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020156	Spindle Whorl, complete, reworked sherd	Ceramic	
A020157	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image

Table 5.7 Refuse Pit Artifacts (Continued)

Reg. No.	Type	Material	Image
A020158	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020159	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020184	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020186	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020198	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020199	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
B986716	Spindle Whorl	Ceramic	No Image
A020028	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020030	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020031	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020061	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020065	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020066	Spindle Whorl, fragment, reworked sherd	Ceramic	No Image
A020079	Stopper, reworked sherd	Ceramic	
A020149	Stopper, reworked vessel base	Ceramic	
A020163	Stopper, reworked sherd	Ceramic	No Image
A020165	Stopper, reworked sherd	Ceramic	No Image

Table 5.7 Refuse Pit Artifacts (Continued)

Reg. No.	Type	Material	Image
A020228	Stopper, reworked sherd	Ceramic	No Image
A020016	Stopper, reworked sherd	Ceramic	No Image
A020019	Stopper, reworked sherd	Ceramic	No Image
A020027	Stopper, reworked sherd	Ceramic	No Image
A020039	Stopper, reworked vessel base	Ceramic	No Image
A020041	Stopper, reworked vessel base	Ceramic	No Image
A020076	Stopper, reworked sherd	Ceramic	No Image
A020106	Stopper, reworked sherd	Ceramic	No Image
A020247	Stopper, reworked sherd	Ceramic	No Image
A020248	Stopper, reworked sherd	Ceramic	No Image
B966176	Tool (small cosmetic palette?)	Tuff	
B966093	UD	Basalt	
B966181	UD	Lead	
A020153	Vessel	Marble	

Table 6.1: Iron IA House Sizes

Site	Stratum, Location	No. Houses	Range (m^2)	Source
‘Umayri	12, Fields B, A	4	70.0-130.0	Personal calculations using GIS
Madaba	10	1	54	Foran, 2013, derived from plan
Fukhar	VIA, Area B	3	60-85	Ottoson, 2015, derived from plan
Zira‘a	13, Area I	8	70.0-200.0	Personal com., Katja Soennecken, October 2014
Giloh	Area C, Building 8	1	152.32	Mazar, 1981, derived from building dimensions
Iron I Central Highlands Sites	Ai and Raddana; Tell Beit Mirsim, Beth Shemesh, Bethel, and Tell el-Farah North	Various	43-80; 100-200	Bloch-Smith and Nakhai, 1999, p. 75

Table 6.2: Egyptian or Egyptian-Style Artifacts in Stratum 12. Source: Madaba Plains Project

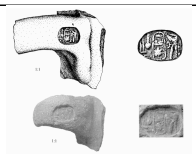
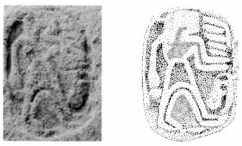
Reg. No.	Type	Context	Image	Comments
No No.	Nile perch bones	Refuse Pit	N/A	2 bones, discussed in Chapter 5
B945073	Alabaster (Calcite) Vessel	Bldg. B, Room B3, crushed and throughout destruction layer		Parallels in LB tombs/temples discussed in Vincent, 2014, pp. 452-453
B120049	Carnelian Pendant, Lotusseed Vessel	Bldg. D, Room D2, Collapse		
B020003	Frit Scaraboid Seal	Refuse Pit		Base possibly depicts a quadruped?
B870843 (Eggler, 2002, p. 248, No. 16)	Seal Impression	Insecure, from a Roman trench dug into Bldg. Bs upper debris. Iron IA jar handle type; poss. Str. 12		Thutmose III seal impression, see Vincent, 2014, pp. 444-447 for discussion

Table 6.2 Egyptian or Egyptian-Style Artifacts in Stratum 12 (Continued)

Reg. No.	Type	Context	Image	Comments
B945133 (Eggler, 2002, p. 274, No. 53)	Seal Impression	Building B, Room B1		See Vincent, 2014, pp. 444-447
B120029	Seal Impression	Insecure, from Iron IIB disturbance of destruction above Bldg. D; poss. Str. 12		Thutmose III seal impression, see B870843
B120023	Seal Impression	Building D, Room D2		Indistinct
B120046	Seal Impression	Building D, Room D2		Indistinct

APPENDIX B
SUMMARY OF BUILDING CONTENTS

Table B.1: Building Summary

House	House Size (m^2)	Potential Second Floor?	General House Content Functions
B	84	Yes	Storage jars, equipment for food preparation and consumption, textile production, tools/weaponry, ritual, personal adornment, administration
A	65	Yes	Equipment for food storage, preparations and consumption, tools/weapons, administration, textile production, ritual
C	38	No	Equipment for food storage, preparations and consumption, textile production, personal adornment, tools/weapons
D	40	No	Equipment for food storage, preparations and consumption, textile production, personal adornment, tools/weapons
F	30 (incomplete)	No	Equipment for food storage, preparations and consumption, personal adornment, tools/weapons

Buildings and their Contents by Room BUILDNG B

Table B.2: Size, contents, and suggested function of rooms in Building B

Room	Room Size m (Area m^2)	Contents on Surfaces	Architectural Features	Suggested Room Function
B3	6 x 2.8 (16.8)	Storage jars and jar stopper, 4 metal weapons, human bones	Partial cobble-stone surface, 2 pillar bases	Food storage
B2A	4.5 x 2 (9.8)	Pounder		
B2B	4.8 x 1.7 (9.5)			
B2C	5.2 x 2.2 (11)		Cobble-stone surface	Animal stabling?
B1	7.3 x 4.2 (32.5)	Pounder	Cobble-stone surfaces, animal pen, outside entrances, hearth	Cooking, Animal stabling

Table B.3: List of objects from Building B, Room B3

Reg. No.	Type	Material	Image	
Funnel	B7J99003093001	Collapse	Food Storage	
Grinder	B945056	Collapse	Food Prep/Cons	
Hand Grinder	B945128	Collapse	Food Prep/Cons	
Hand Grinder	B945057A	Collapse	Food Prep/Cons	
Hand Grinder	B945074	Collapse	Food Prep/Cons	
Jar Stopper	7J99003008	Collapse	Food Storage	
Loom Weight	B945226	Collapse	Textile Production	
Roof Roller	B945225	Collapse	Tools/Weapons	Center East, against Wall 10
Spear	B945234	Collapse	Tools/Weapons	
Stone Bowl	B945215	Collapse	Food Prep/Cons	
Stone Vessel	B945073	Collapse	Food Prep/Cons	
UD Metal	7J990033157	Collapse	Uncertain	

Table B.3: List of objects from Building B, Room B3 (Continued)

Reg. No.	Type	Material	Image	
Jar Stopper	7J99003289	Surface	Food Storage	Unknown
Lance	B945264	Surface	Tools/Weapons	Center NE, near human bones
Spear	B945262	Surface	Tools/Weapons	Center NE, near human bones
Spear	B945263	Surface	Tools/Weapons	Center NE, near human bones
Spear	B945159	Surface/Collapse	Tools/Weapons	SE, on Cobble Surface 8

Table B.4: List of pottery from Building B, Room B3 (see Ch. 4 for reconstructed pithoi counts)

Pottery Type	#Pub	%	#DB	%	Location	Possible Function
Bowl	3	3.75	10	7.69	Collapse	Food Prep/Cons
Jug	4	5	7	5.38	1 – Surface, 3 – Collapse	Food Prep/Cons
Krater	3	3.75	1	.77	Collapse	Food Prep/Cons
Cooking Pot	2	2.5	11	8.46	Collapse	Food Prep/Cons
Pyxis	1	1.25	0	0	Collapse	Food Prep/Cons
Jar	6	7.5	6	4.62	Collapse	Food Storage
Pithos	61	76.25	95	73.08	39 – Surface, 22 – Collapse	Food Storage

Table B.5: List of objects from Building B, Room B2A/B

Artifact	Registration Number	Location	Possible Function	Location in Room
Mortar	7K90005106	Collapse	Food Prep/Cons	SW corner, by wall
Pounder	7K90021000	Surface	Mixed Use	East center, by paved surface
Pounder	7K90019140	Collapse	Mixed Use	Center North, by wall

Table B.5: List of objects from Building B, Room B2A/B (Continued)

Artifact	Registration Number	Location	Possible Function	Location in Room
Hand Grinder	7K90005107	Collapse	Food Prep/Cons	West center, by wall
Hand Grinder	7K90005110	Collapse	Food Prep/Cons	By doorway to B3
Pestle	7K90005107	Collapse	Food Prep/Cons	West center, by wall
Metal Slag	7K90005106	Collapse	Uncertain	Center south

Table B.6: List of pottery from Building B, Room B2A/B

Pottery Type	# of Vessels/%	Location	Possible Function
Bowl	8	Collapse	Food Prep/Cons
Jug	8	Collapse	Food Prep/Cons
Krater	1	Collapse	Food Prep/Cons
Cooking Pot	2	Collapse	Food Prep/Cons
Jar	2	Collapse	Food Storage
Pithos	5	Collapse	Food Storage

Table B.7: List of objects from Building B, Room B2C

Artifact	Registration Number	Location	Possible Function	Location in Room
Pounder	B891868	Collapse	Mixed Use	
Hand Grinder	B923137	Collapse	Food Prep/Cons	
Hand Stone	B923135	Collapse	Food Prep/Cons	
Stone Bowl	B923181	Collapse	Food Prep/Cons	
Lamp	B7K80037291001	Collapse	Mixed Use	
Lamp	B7K80037165001	Collapse	Mixed Use	
UD Bone	B923030	Collapse	Uncertain	
Metal Slag	7K80037237	Collapse	Uncertain	
Metal Slag	7K80037234	Collapse	Uncertain	
Metal Slag	7K80037252	Collapse	Uncertain	
Metal Slag	7K80037307	Collapse	Uncertain	

Table B.8: List of pottery from Building B, Room B2C

Pottery Type	# of Vessels	Location	Possible Function
Bowl	1	Collapse	Food Prep/Cons
Jug	5	Collapse	Food Prep/Cons
Jar/Jug	7	Collapse	Food Prep/Cons/Storage
Cooking Pot	2	Collapse	Food Prep/Cons
Jar	4	Collapse	Food Storage
Pithos	2	Collapse	Food Storage

Table B.9: List of objects from Building B, Room B1

Artifact	Registration Number	Location	Possible Function	Location
Hand Stone	B966149	Courtyard Collapse	Food Prep/Cons	
Jar Stopper	7K81022060	Courtyard Collapse	Food Storage	
Jar Stopper	7K81022132	Courtyard Collapse	Food Storage	
Jar Stopper	7K81022133	Courtyard Collapse	Food Storage	
Jar Stopper	7K81022188	Courtyard Collapse	Food Storage	
Jar Stopper	7K81022189	Courtyard Collapse	Food Storage	
Jar Stopper	7K91012036	Courtyard Collapse	Food Storage	
Jar Stopper	7K91012066	Courtyard Collapse	Food Storage	
Jar Stopper	7K91012069A	Courtyard Collapse	Food Storage	
Spindle Whorl	B943210a	Courtyard Collapse	Textile Production	
Spindle Whorl	B956001	Courtyard Collapse	Textile Production	
Spindle Whorl	7K91012042	Courtyard Collapse	Textile Production	NE corner by door
Spindle Whorl	7K91012069B	Courtyard Collapse	Textile Production	
Spindle Whorl	7K91017045	Pen Surface	Textile Production	
Bead	B945160	Courtyard Collapse	Personal Adornment	
Perfume Holder	B966034	Courtyard Collapse	Personal Adornment	
Weight (Basalt)	B945157	Courtyard Collapse	Admin?	
Weight (Hematite)	B966051	Surface	Admin?	
Tool	B945152	Courtyard Collapse	Tools/Weapons	
Figurine	B945142	Courtyard Collapse	Cultic/Ritual?	

Table B.9: List of objects from Building B, Room B1 (Continued)

Artifact	Registration Number	Location	Possible Function	Location
Astragalus	B006719	Courtyard Collapse	Cultic/Ritual?	
Grinder	7K91012042	Courtyard Collapse	Food Prep/Cons	
Pounder	7K91018046	Courtyard Surface	Mixed Use	

Table B.10: List of pottery from Building B, Room B1

Pottery Type	# of Vessels	Location	Possible Function
Chalice	1	Collapse	Food Prep/Cons
Flask	1	Collapse	Food Prep/Cons
Jug	4	Collapse	Food Prep/Cons
Juglet	1	Collapse	Food Prep/Cons
Krater	2	Collapse	Food Prep/Cons
Cooking Pot	3	Collapse	Food Prep/Cons
Pithos	6	Collapse	Food Storage

Table B.11: List of objects from outside Building B's entrances (East Entry, North Entry)

Artifacts	Registration Number	Location	Possible Function
Spindle Whorl	B7K81051210	East Entry Debris	Textile Production
Spindle Whorl	A080051	North Entry Debris	Textile Production
UD Stone	A080030	North Entry Debris	Uncertain

Table B.12: Spaces outside Building B (North and East)

Artifacts	Registration Number	Location	Possible Function
Astragalus	8K01017058	East of B	Cultic
Astragalus	B986634	East of B	Cultic
Stone Bowl	B006875	East of B	Food Prep/Cons
Figurine	B986658	East of B	Cultic
Grinder	8K01017074A	East of B	Food Prep/Cons
Grinder	B8K02024121A	East of B	Food Prep/Cons
Grinder	B8K02024121B	East of B	Food Prep/Cons
Seal	B006887	East of B	Admin/Adornment
Spindle Whorl	8K01017058	East of B	Textile Production
Spindle Whorl	B986687	East of B	Textile Production

Table B.12: Spaces outside Building B (North and East) (Continued)

Artifacts	Registration Number	Location	Possible Function
Spindle Whorl	7K82024108	North of B	Textile Production
Spindle Whorl	B8K02024120	East of B	Textile Production
Spindle Whorl	B986697	North of B	Textile Production
Spindle Whorl	7K92037114A	North of B	Textile Production
Spindle Whorl	7K92037114B	North of B	Textile Production
Spindle Whorl	7K92037114C	North of B	Textile Production
Spindle Whorl	B986686	North of B	Textile Production
Spindle Whorl	B986708	North of B	Textile Production
Spindle Whorl	B986711	North of B	Textile Production
Stopper	8K00019030	East of B	Food Storage
Stopper	8K01017074B	East of B	Food Storage
Stopper	7K82024105	North of B	Food Storage
Stopper	7K82024108A	North of B	Food Storage
Stopper	7K82024108B	North of B	Food Storage
UD Metal	B966198	East of B	Uncertain

BUILDING A

Table B.13: Size, contents, and suggested function of rooms in Building A

Room	Room Size m (Area $m^{2)}$	Contents on Surfaces	Architectural Features	Suggested Room Function
A3	5 x 2.7 (14)		Stone platform	
A2	4.2 x 2.7 (11.5)		Standing stone, flat-lying stone, cobble-stone surface	
A1	5 x 3 (17)		3 bins, hearth, bench	
A4	2.8 x 2.5 (7)		Cobble-stone surface/flat-lying stones	
A5	4.8 x 3 (17) (Partial)		3 Pillar bases	

Table B.14: List of objects from Building A, Room A3

Artifact	Registration Number	Location	Location in Room	Possible Function
Mortar	B891721	Collapse	NW corner	Food Prep/Cons
Pounder	B891937	Collapse	On E side of Table	Mixed Use
Hand Grinder	B891940	Collapse	On E side of Table	Food Prep/Cons
Hand Grinder	B891966	Collapse	Near S Wall	Food Prep/Cons
Hand Grinder	B892059	Collapse	Unknown	Food Prep/Cons
Hand Grinder	B892090	Collapse	Near center W Wall	Food Prep/Cons
Grinder	B891936	Collapse	Near door on E wall	Food Prep/Cons
Grinder	B891939	Collapse	N side of Table	Food Prep/Cons
Grinder	B891968	Collapse	Near S Wall	Food Prep/Cons

Table B.14: List of objects from Building A, Room A3 (Continued)

Artifact	Registration Number	Location	Location in Room	Possible Function
Grinder	B892039	Collapse	Near center W Wall	Food Prep/Cons
Grinder	B892040	Collapse	Near center W Wall	Food Prep/Cons
Milling Stone	B891938	Collapse	N doorway	Food Prep/Cons
Milling Stone	B891988	Collapse	Unknown	Food Prep/Cons
Stone Bowl	B891989	Collapse	Center, north part	Food Prep/Cons
Jar Stopper	B892041	Collapse	Center, NE	Food Storage
Weight	B891941	Collapse	N side of Table	Admin
Whetstone	B891987	Collapse	Center, north part	Tool
Whetstone	B892015	Collapse	S, near table and wall	Tool
Gaming Pieces (4)	B891942	Collapse	Unknown	Recreation
Lamp	B7J89031127001	Surface	Center, East	Mixed Use
UD Metal	7J89031178	Collapse	Unknown	Uncertain
UD Stone	B891967	Collapse	Center of room	Uncertain
Mortar	7J89031121	Collapse	Center, E wall	Food Prep/Cons
Weight	7J89031127	Collapse	N of table	Admin
Milling Stone	7J89031154	Collapse	Along center W wall	Food Prep/Cons
Pounder	7J89031163	Collapse	S doorway	Mixed Use
Milling Stone	7J89031180	Collapse	Center, N wall	Food Prep/Cons
Grinder	B891867	Collapse	Above table	Food Prep/Cons
Stopper	B891687	Collapse	Unknown	Food Storage

Table B.15: List of pottery from Building A, Room A3

Pottery Type	# of Vessels/%	Location	Possible Function
Strainer Jug	1	Surface	Food Prep/Cons
Flask	1	Surface	Food Prep/Cons

Table B.15: List of pottery from Building A, Room A3 (Continued)

Pottery Type	# of Vessels/%	Location	Possible Function
Pithos	23	13 – Surface, 10 - Debris	Food Storage
Bowl	4	Collapse	Food Prep/Cons
Chalice	4	Collapse	Food Prep/Cons
Flask	1	Collapse	Food Prep/Cons
Jug	13	Collapse	Food Prep/Cons
Krater	3	Collapse	Food Prep/Cons
Cooking Pot	5	Collapse	Food Prep/Cons
Jar	4	Collapse	Food Storage

Table B.16: List of objects from Building A, Room A2

Artifact	Registration Number	Location	Possible Function
Hand Grinder	7J89029225	Collapse	Food Prep/Cons
Grinder	7J89029228	Collapse	Food Prep/Cons
Grinder	7J89029225	Collapse	Food Prep/Cons
Jar Stopper	7J89029215	Collapse	Food Storage
Spatula	B006722	Collapse	Textile Production
Spindle Whorl	B923049	Collapse	Textile Production
Spindle Whorl	B923210b	Collapse	Textile Production
Nail	B923046	Collapse	Tool
Metal Slag	7J89029226	Collapse	Uncertain
Metal Slag	7J89029088	Collapse	Uncertain

Table B.17: List of pottery from Building A, Room A2

Pottery Type	# of Vessels/%	Location	Possible Function
Jar/Jug	1	Collapse	Food Prep/Cons
Jug	3	Collapse	Food Prep/Cons
Juglet	1	Collapse	Food Prep/Cons
Krater	1	Collapse	Food Prep/Cons
Cooking Pot	1	Collapse	Food Prep/Cons
Jar	2	Collapse	Food Storage
Pithos	2	Collapse	Food Storage

Table B.18: List of objects from Building A, Room A1

Artifact	Registration Number	Location	Possible Function
Hand Grinder	B006775	Surface	Food Prep/Cons
Stone Bowl	B006823	Surface	Food Prep/Cons
Hand Grinder	B006827	Surface	Food Prep/Cons
Milling Stone	B006848	Surface	Food Prep/Cons
Milling Stone	B006849	Surface	Food Prep/Cons
Quern	B923182	Surface	Food Prep/Cons
Lamp	A7K70051201002	Surface	Mixed Use
Pounder	B996776	Surface	Mixed Use
Figurine	B006715	Collapse	Cultic/Ritual
Cult Stand	B986678	Collapse	Cultic/Ritual
Stone Bowl	B923130	Collapse	Food Prep/Cons
Hand Stone	B923134	Collapse	Food Prep/Cons
Mortar	B986602	Collapse	Food Prep/Cons
Jar Stopper	7K70043167	Collapse	Food Storage
Jar Stopper	7K70043168	Collapse	Food Storage
Metal Slag	7K80060249	Collapse	Metal Production?
Metal Slag	7K80060250	Collapse	Metal Production?
Lamp	B7K80060027004	Collapse	Mixed Use
Lamp	B7K80060028001	Collapse	Mixed Use
Lamp	B923185	Collapse	Mixed Use
Spindle Whorl	7K70043184	Collapse	Textile Production
Spindle Whorl	7K70048175	Collapse	Textile Production
Spindle Whorl	7K70048175B	Collapse	Textile Production
Spindle Whorl	B923065	Collapse	Textile Production
Spindle Whorl	B923119	Collapse	Textile Production
Spindle Whorl	B986720	Collapse	Textile Production
Pumice	B923140	Collapse	Tool
UD Metal	7K80060272	Collapse	Uncertain
UD Metal	B923142	Collapse	Uncertain

Table B.19: List of pottery from Building A, Room A1

Pottery Type	# of Vessels	Location	Possible Function
Amphoriskos	1	Surface	Food Prep/Cons
Bowl	6	Collapse	Food Prep/Cons
Cup	1	Surface	Food Prep/Cons
Jar/Jug	5	Collapse	Food Prep/Cons
Jug	14	8 – Surface, 6 – Collapse	Food Prep/Cons
Juglet	2	1 – Surface, 1 – Collapse	Food Prep/Cons

Table B.19: List of pottery from Building A, Room A1 (Continued)

Pottery Type	# of Vessels	Location	Possible Function
Krater	5	1 – Surface, 4 – Collapse	Food Prep/Cons
Cooking Pot	5	1 – Surface, 4 – Collapse	Food Prep/Cons
Jar	4	Collapse	Food Storage
Pithos	6	1 – Surface, 5 – Collapse	Food Storage
Pyxis	2	Collapse	Food Prep/Cons

Table B.20: List of objects from Building A, Room A4

Artifact	Registration Number	Location	Possible Function
Grinder	7J79050205	Surface	Food Prep/Cons
Spindle Whorl	7J79050205	Surface	Textile Production
Grinder	7J79047185A	Collapse	Food Prep/Cons
Grinder	B006854	Collapse	Food Prep/Cons
Grinder	B006888	Collapse	Food Prep/Cons
Milling Stone	B006855	Collapse	Food Prep/Cons
Spindle Whorl	7J79047185B	Collapse	Textile Production
Bead	B006842	Collapse	Personal Adornment
Milling Stone	B006846	Collapse	Food Prep/Cons
Milling Stone	B006847	Collapse	Food Prep/Cons
Stone Bowl	B006886	Collapse	Food Prep/Cons
Pendant	B006862	Collapse	Personal Adornment
Tuff, unworked	7J79047	Collapse	Seal production

Table B.21: List of pottery from Building A, Room A4

Pottery Type	# of Vessels	Location	Possible Function
Cooking Pot	3	Collapse	Food Prep/Cons
Jar	2	Surface	Food Storage
Bowl	1	Collapse	Food Prep/Cons
Jar/Jug	1	Collapse	Food Prep/Cons
Jug	1	Collapse	Food Prep/Cons
Krater	2	Collapse	Food Prep/Cons

Table B.22: List of objects from outside Building A, Room A5

Artifacts	Registration Number	Location	Possible Function
Bead	B006876	Surface	Personal Adornment
Jar Stopper	7K70051115	Surface	Food Storage
Whetstone	B945211	Collapse	Tool
Needle	B945109	Collapse	Textile Manufacture

Table B.23: List of pottery from Building A, Room A5

Pottery Type	# of Vessels	Location	Possible Function
Bowl	2	1- Surface, 1 - Collapse	Food Prep/Cons
Jar/Jug	2	1- Surface, 1- Collapse	Food Prep/Cons
Jug	7	6 – Surface, 1 – Collapse	Food Prep/Cons
Krater	2	Surface	Food Prep/Cons
Cooking Pot	3	1- Surface, 2 – Collapse	Food Prep/Cons
Jar	3	Surface	Food Storage
Pithos	1	Surface	Food Storage

BUILDING C

Table B.24: Size, contents, and suggested function of rooms in Building C

Room	Room Size m (Area m^2)	Contents on Surfaces	Architectural Features	Suggested Room Function
C1	5 x 2.5 (11.8)	Groundstone tools, metal fragments	2 benches, 1 hearth + curtain wall, 1 grinding installation, 2 bins (?)	Food prep/cons/storage
C2	5 x 1.8-2.5 (10.8)	None		Uncertain
C3	3.7 x 3 (13.7) (partial)	Groundstone tools, jar stopper, shell, arrowhead	1 bin, cobble stone surface	Storage, outside entry

Table B.25: List of objects from Building C, Room C1

Artifact	Registration Number	Location	Possible Function
Hand Grinder	A100106	Surface	Food Prep/Cons
Milling Stone	A100050	Surface	Food Prep/Cons
Milling Stone	A100114	Surface	Food Prep/Cons
Milling Stone	A100193	Surface	Food Prep/Cons
UD Metal	A100147	Surface	Uncertain
UD Metal	A100146	Surface	Uncertain
Mortar	A080321	Collapse	Food Prep/Cons
Grinder	A080186	Collapse	Food Prep/Cons
Grinder	A080380	Collapse	Food Prep/Cons
Milling Stone	A080215	Collapse	Food Prep/Cons
Milling Stone	A100006	Collapse	Food Prep/Cons
Spindle Whorl	A100176	Collapse	Textile Production

Table B.26: List of pottery from Building C, Room C1

Pottery Type	# DB (pub pre)	Location	Possible Function
Bowl	7 (2 pub)		
Jar	6 (1 pub)		
Jug	7 (5 pub)		

Table B.26: List of pottery from Building C, Room C1 (Continued)

Pottery Type	# DB (pub pre)	Location	Possible Function
Pithos	48 (15 pub)		

Table B.27: List of objects from Building C, Room C2

Artifact	Registration Number	Location	Possible Function
Mortar	A080187	Collapse	Food Prep/Cons
Pendant	B986659	Collapse	Personal Adornment

Table B.28: List of pottery from Building C, Room C2

Pottery Type	# of Vessels/%	Location	Possible Function
Bowl	1	Collapse	
Jug	1	Collapse	
Pithos	2	Collapse	

Table B.29: List of objects from Building C, Room C3

Artifact	Registration Number	Location	Possible Function
Milling Stone	A100105	Surface	Food Prep/Cons
Milling Stone	A100109	Surface	Food Prep/Cons
Mortar	A100011	Surface	Food Prep/Cons
Jar Stopper	A100094	Surface	Food Storage
Shell	A100136	Surface	Personal Adornment?
Arrowhead	A100290	Surface	Mixed Use
Mortar	A080379	Collapse	Food Prep/Cons
Pounder	A080450	Collapse	Mixed Use
Hand Grinder	A080365	Collapse	Food Prep/Cons
Jar Stopper	A100020	Collapse	Food Storage
Jar Stopper	A100032	Collapse	Food Storage
Jar Stopper	A100058	Collapse	Food Storage
Hand Grinder	A080434	Collapse	Food Prep/Cons
Jar Stopper	A080507	Collapse	Food Storage
Jar Stopper	A080509	Collapse	Food Storage
Spindle Whorl	A080417	Collapse	Textile Production
Spindle Whorl	A100008	Collapse	Textile Production
Spindle Whorl	A100037	Collapse	Textile Production

Table B.29: List of objects from Building C, Room C3 (Continued)

Artifact	Registration Number	Location	Possible Function
Spindle Whorl	A100059	Collapse	Textile Production
Bead	B100006	Collapse	Personal Adornment
Gaming Piece/Seal	A100036	Collapse	Recreation/Admin
UD Bone	A100054	Collapse	Uncertain

Table B.30: List of pottery from Building C, Room C3

Pottery Type	# DB	Location	Possible Function
Bowl	1	Collapse	
Jar	3	Collapse	
Jug	3	Collapse	
Pithos	1 (1 Pub)	Collapse	

BUILDING D

Table B.31: Size, contents, and suggested function of rooms in Building D

Room	Room Size m (Area m^2)	Contents on Surfaces	Architectural Features	Suggested Room Function
D1	6.7 x 3 (19.6)	Large grinding stone	Large grinding stone installation and small stone installation	Food prep/cons
D2	4.7 x 4 (18)	None	Smaller room separation walls, for bins?	If walled areas are bins, storage?

Table B.32: List of objects from Building D, Room D1

Artifact	Registration Number	Location	Possible Function
Mortar	A120099	Collapse	Food Prep/Cons
Mortar	A120092	Collapse	Food Prep/Cons
Mortar	A120097	Collapse (Surface)	Food Prep/Cons
Grinder	A100052	Collapse	Food Prep/Cons
Grinder	A100070	Surface	Food Prep/Cons
Milling Stone	A100041	Collapse	Food Prep/Cons
Milling Stone	A100042	Collapse	Food Prep/Cons
Milling Stone	A120022	Collapse	Food Prep/Cons
Milling Stone	A120120	Collapse	Food Prep/Cons
Milling Stone	A120026	Collapse (Surface)	Food Prep/Cons
Spindle Whorl	A100028	Collapse	Textile Production
Spindle Whorl	A100029	Collapse	Textile Production
Spindle Whorl	A100063	Collapse	Textile Production
Spindle Whorl	A120078	Collapse	Textile Production
Spindle Whorl	A120118	Collapse	Textile Production
Spindle Whorl	A120023	Collapse (Surface)	Textile Production
Lamp	B120052	Collapse (Surface?)	Mixed Use
UD Metal	7J69063220	Collapse	Uncertain
3 Natural Stones	7J69066197	Collapse	Uncertain/Cultic?

Table B.33: List of pottery from Building D, Room D1

Pottery Type	#DB	Location	Possible Function
Basin	2	Surface/Collapse	
Bowl	4	Collapse	
Cooking Pot	3	Collapse	
Flask	1	Collapse	
Jar	1	Collapse	
Jug	1	Collapse	
Krater	1	Collapse	
Pithos	4	Surface/Collapse	

Table B.34: List of objects from Building D, Room D2

Artifact	Registration Number	Location	Possible Function
Hand Grinder	A120108	Collapse	Food Prep/Cons
Grinder	A120072	Collapse	Food Prep/Cons
Pestle	A120015	Collapse	Food Prep/Cons
Pestle	A120061	Collapse	Food Prep/Cons
Spindle Whorl	A120081	Collapse	Textile Production
Pendant	B120049	Collapse	Personal Adornment
Spear	B120021	Collapse	Mixed Use
Lamp	A7K60068	Collapse	Mixed Use

Table B.35: List of pottery from Building D, Room D2

Pottery Type	#DB	Location	Possible Function
Basin	1	Collapse	Food Prep?
Bowl	14	Collapse	Food Prep/Cons
Cooking Pot	6	Collapse	Food Prep/Cons
Jar	10	Collapse	Food Storage
Jug	2	Collapse	Food Prep/Cons
Pithos	14	Surface/Collapse	Food Storage

BUILDING E

Table B.36: Size, contents, and suggested function of rooms in Building E

Room	Room Size m (Area m^2)	Contents on Surfaces	Architectural Features	Suggested Room Function
E	23 so far	Groundstone tools, bead	None known	Food prep/cons

Table B.37: List of objects from Building E

Artifact	Registration Number	Location	Possible Function
Hand Grinder	A080366	Surface	Food Prep/Cons
Grinder	A080376	Surface	Food Prep/Cons
Stone Bowl	A080363	Surface	Food Prep/Cons
Bead	A080404	Surface	Personal Adornment
Hand Grinder	A080326	Surface	Food Prep/Cons
Grinder	A080185	Collapse	Food Prep/Cons
Milling Stone	A080312	Surface	Food Prep/Cons
Milling Stone	A120037	Surface	Food Prep/Cons
Spear	B120022	Surface	Mixed Use
Lamp	A7J69072	Collapse	Mixed Use
Chalice	A080248	Surface?	

Table B.38: List of pottery from Building E (2 jars in 2008 found under wall on surface, Bates' 2008 report also mentions 6-8 storage jars found complete on the surface under the wall)

Pottery Type	# DB	Location	Possible Function
Cooking Pot	3	Collapse	Food Prep/Cons
Flask	2	Surface	Food Prep/Cons
Jar	1	Collapse	Food Storage
Jug	1	Collapse	Food Prep/Cons
Krater	4	Surface	Food Prep/Cons
Pithos	2	Collapse (1 surface)	Food Storage

Complete List of Artifacts by Building, Organized by Artifact Type

Table B.39: Complete List of Artifacts, Building B

Artifact	Registration Number	Location	Possible Function
Astragalus	B006719	Courtyard Collapse	Cultic/Ritual?
Bead	B945160	Courtyard Collapse	Personal Adornment
Figurine	B945142	Courtyard Collapse	Cultic/Ritual?
Funnel	B7J99003093001	Collapse	Food Storage
Grinder	B945056	Collapse	Food Prep/Cons
Grinder	7K91012042	Courtyard Collapse	Food Prep/Cons
Hand Grinder	B945128	Collapse	Food Prep/Cons
Hand Grinder	B945057A	Collapse	Food Prep/Cons
Hand Grinder	B945074	Collapse	Food Prep/Cons
Hand Grinder	7K90005107	Collapse	Food Prep/Cons
Hand Grinder	7K90005110	Collapse	Food Prep/Cons
Hand Grinder	B923137	Collapse	Food Prep/Cons
Hand Stone	B923135	Collapse	Food Prep/Cons
Hand Stone	B966149	Courtyard Collapse	Food Prep/Cons
Jar Stopper	7J99003008	Collapse	Food Storage
Jar Stopper	7J99003289	Surface	Food Storage
Jar Stopper	7K81022060	Courtyard Collapse	Food Storage
Jar Stopper	7K81022132	Courtyard Collapse	Food Storage
Jar Stopper	7K81022133	Courtyard Collapse	Food Storage
Jar Stopper	7K81022188	Courtyard Collapse	Food Storage
Jar Stopper	7K81022189	Courtyard Collapse	Food Storage
Jar Stopper	7K91012036	Courtyard Collapse	Food Storage
Jar Stopper	7K91012066	Courtyard Collapse	Food Storage
Jar Stopper	7K91012069A	Courtyard Collapse	Food Storage
Lamp	B7K80037291001	Collapse	Mixed Use
Lamp	B7K80037165001	Collapse	Mixed Use
Lance	B945264	Surface	Tools/Weapons
Loom Weight	B945226	Collapse	Textile Production
Metal Slag	7K90005106	Collapse	Uncertain
Metal Slag	7K80037237	Collapse	Uncertain
Metal Slag	7K80037234	Collapse	Uncertain
Metal Slag	7K80037252	Collapse	Uncertain
Metal Slag	7K80037307	Collapse	Uncertain
Mortar	7K90005106	Collapse	Food Prep/Cons
Perfume Holder	B966034	Courtyard Collapse	Personal Adornment
Pestle	7K90005107	Collapse	Food Prep/Cons
Pounder	7K90021000	Surface	Mixed Use
Pounder	7K90019140	Collapse	Mixed Use

Table B.39: Complete List of Artifacts, Building B (Continued)

Artifact	Registration Number	Location	Possible Function
Pounder	B891868	Collapse	Mixed Use
Pounder	7K91018046	Courtyard Surface	Mixed Use
Roof Roller	B945225	Collapse	Tools/Weapons
Spear	B945234	Collapse	Tools/Weapons
Spear	B945262	Surface	Tools/Weapons
Spear	B945263	Surface	Tools/Weapons
Spear	B945159	Surface/Collapse	Tools/Weapons
Spindle Whorl	B943210a	Courtyard Collapse	Textile Production
Spindle Whorl	B956001	Courtyard Collapse	Textile Production
Spindle Whorl	7K91012042	Courtyard Collapse	Textile Production
Spindle Whorl	7K91012069B	Courtyard Collapse	Textile Production
Spindle Whorl	7K91017045	Pen Surface	Textile Production
Stone Bowl	B945215	Collapse	Food Prep/Cons
Stone Bowl	B923181	Collapse	Food Prep/Cons
Stone Vessel	B945073	Collapse	Food Prep/Cons
Tool	B945152	Courtyard Collapse	Tools/Weapons
UD Bone	B923030	Collapse	Uncertain
UD Metal	7J990033157	Collapse	Uncertain
Weight (Basalt)	B945157	Courtyard Collapse	Admin?
Weight (Hematite)	B966051	Poss Earlier Surface	Admin?

Table B.40: Complete List of Artifacts, Building A

Artifact	Registration Number	Location	Possible Function
Bead	B006842	Collapse	Personal Adornment
Bead	B006876	Surface	Personal Adornment
Cult Stand	B986678	Collapse	Cultic/Ritual
Figurine	B006715	Collapse	Cultic/Ritual
Gaming Pieces (4)	B891942	Collapse	Recreation
Grinder	B891936	Collapse	Food Prep/Cons
Grinder	B891939	Collapse	Food Prep/Cons
Grinder	B891968	Collapse	Food Prep/Cons
Grinder	B892039	Collapse	Food Prep/Cons
Grinder	B892040	Collapse	Food Prep/Cons
Grinder	B891867	Collapse	Food Prep/Cons
Grinder	7J89029228	Collapse	Food Prep/Cons
Grinder	7J89029225	Collapse	Food Prep/Cons
Grinder	7J79050205	Surface	Food Prep/Cons
Grinder	7J79047185A	Collapse	Food Prep/Cons
Grinder	B006854	Collapse	Food Prep/Cons
Grinder	B006888	Collapse	Food Prep/Cons
Hand Grinder	B891940	Collapse	Food Prep/Cons
Hand Grinder	B891966	Collapse	Food Prep/Cons
Hand Grinder	B892059	Collapse	Food Prep/Cons
Hand Grinder	B892090	Collapse	Food Prep/Cons
Hand Grinder	7J89029225	Collapse	Food Prep/Cons
Hand Grinder	B006775	Surface	Food Prep/Cons
Hand Grinder	B006827	Surface	Food Prep/Cons
Hand Stone	B923134	Collapse	Food Prep/Cons
Jar Stopper	B892041	Collapse	Food Storage
Jar Stopper	7J89029215	Collapse	Food Storage
Jar Stopper	7K70043167	Collapse	Food Storage
Jar Stopper	7K70043168	Collapse	Food Storage
Jar Stopper	7K70051115	Surface	Food Storage
Lamp	B7J89031127001	Surface	Mixed Use
Lamp	A7K70051201002	Surface	Mixed Use
Lamp	B7K80060027004	Collapse	Mixed Use
Lamp	B7K80060028001	Collapse	Mixed Use
Lamp	B923185	Collapse	Mixed Use
Metal Slag	7J89029226	Collapse	Uncertain
Metal Slag	7J89029088	Collapse	Uncertain
Metal Slag	7K80060249	Collapse	Metal Production?
Metal Slag	7K80060250	Collapse	Metal Production?
Milling Stone	B891938	Collapse	Food Prep/Cons

Table B.40: Complete List of Artifacts, Building A (Continued)

Artifact	Registration Number	Location	Possible Function
Milling Stone	B891988	Collapse	Food Prep/Cons
Milling Stone	7J89031154	Collapse	Food Prep/Cons
Milling Stone	7J89031180	Collapse	Food Prep/Cons
Milling Stone	B006848	Surface	Food Prep/Cons
Milling Stone	B006849	Surface	Food Prep/Cons
Milling Stone	B006855	Collapse	Food Prep/Cons
Milling Stone	B006846	Collapse	Food Prep/Cons
Milling Stone	B006847	Collapse	Food Prep/Cons
Mortar	B891721	Collapse	Food Prep/Cons
Mortar	7J89031121	Collapse	Food Prep/Cons
Mortar	B986602	Collapse	Food Prep/Cons
Nail	B923046	Collapse	Tool
Needle	B945109	Collapse	Textile Manufacture
Pendant	B006862	Collapse	Personal Adornment
Pounder	B891937	Collapse	Mixed Use
Pounder	7J89031163	Collapse	Mixed Use
Pounder	B996776	Surface	Mixed Use
Pumice	B923140	Collapse	Tool
Quern	B923182	Surface	Food Prep/Cons
Spatula	B006722	Collapse	Textile Production
Spindle Whorl	B923049	Collapse	Textile Production
Spindle Whorl	B923210b	Collapse	Textile Production
Spindle Whorl	7K70043184	Collapse	Textile Production
Spindle Whorl	7K70048175	Collapse	Textile Production
Spindle Whorl	7K70048175B	Collapse	Textile Production
Spindle Whorl	B923065	Collapse	Textile Production
Spindle Whorl	B923119	Collapse	Textile Production
Spindle Whorl	B986720	Collapse	Textile Production
Spindle Whorl	7J79050205	Surface	Textile Production
Spindle Whorl	7J79047185B	Collapse	Textile Production
Stone Bowl	B891989	Collapse	Food Prep/Cons
Stone Bowl	B006823	Surface	Food Prep/Cons
Stone Bowl	B923130	Collapse	Food Prep/Cons
Stone Bowl	B006886	Collapse	Food Prep/Cons
Stopper	B891687	Collapse	Food Storage
Tuff, unworked	7J79047	Collapse	Seal production
UD Metal	7J89031178	Collapse	Uncertain
UD Metal	7K80060272	Collapse	Uncertain
UD Metal	B923142	Collapse	Uncertain
UD Stone	B891967	Collapse	Uncertain

Table B.40: Complete List of Artifacts, Building A (Continued)

Artifact	Registration Number	Location	Possible Function
Weight	B891941	Collapse	Admin
Weight	7J89031127	Collapse	Admin
Whetstone	B891987	Collapse	Tool
Whetstone	B892015	Collapse	Tool
Whetstone	B945211	Collapse	Tool

Table B.41: Complete List of Artifacts, Building C

Artifact	Registration Number	Location	Possible Function
Arrowhead	A100290	Surface	Mixed Use
Bead	B100006	Collapse	Personal Adornment
Gaming Piece/Seal	A100036	Collapse	Recreation/Admin
Grinder	A080186	Collapse	Food Prep/Cons
Grinder	A080380	Collapse	Food Prep/Cons
Hand Grinder	A100106	Surface	Food Prep/Cons
Hand Grinder	A080365	Collapse	Food Prep/Cons
Hand Grinder	A080434	Collapse	Food Prep/Cons
Jar Stopper	A100094	Surface	Food Storage
Jar Stopper	A100020	Collapse	Food Storage
Jar Stopper	A100032	Collapse	Food Storage
Jar Stopper	A100058	Collapse	Food Storage
Jar Stopper	A080507	Collapse	Food Storage
Jar Stopper	A080509	Collapse	Food Storage
Milling Stone	A100050	Surface	Food Prep/Cons
Milling Stone	A100114	Surface	Food Prep/Cons
Milling Stone	A100193	Surface	Food Prep/Cons
Milling Stone	A080215	Collapse	Food Prep/Cons
Milling Stone	A100006	Collapse	Food Prep/Cons
Milling Stone	A100105	Surface	Food Prep/Cons
Milling Stone	A100109	Surface	Food Prep/Cons
Mortar	A080321	Collapse	Food Prep/Cons
Mortar	A080187	Collapse	Food Prep/Cons
Mortar	A100011	Surface	Food Prep/Cons
Mortar	A080379	Collapse	Food Prep/Cons
Pendant	B986659	Collapse	Personal Adornment
Pounder	A080450	Collapse	Mixed Use
Shell	A100136	Surface	Personal Adornment?
Spindle Whorl	A100176	Collapse	Textile Production
Spindle Whorl	A080417	Collapse	Textile Production
Spindle Whorl	A100008	Collapse	Textile Production
Spindle Whorl	A100037	Collapse	Textile Production
Spindle Whorl	A100059	Collapse	Textile Production
UD Bone	A100054	Collapse	Uncertain
UD Metal	A100147	Surface	Uncertain
UD Metal	A100146	Surface	Uncertain

Table B.42: Complete List of Artifacts, Building D

Artifact	Registration Number	Location	Possible Function
3 Natural Stones	7J69066197	Collapse	Uncertain/Cultic?
Grinder	A100052	Collapse	Food Prep/Cons
Grinder	A100070	Surface	Food Prep/Cons
Grinder	A120072	Collapse	Food Prep/Cons
Hand Grinder	A120108	Collapse	Food Prep/Cons
Lamp	B120052	Collapse	Mixed Use
Lamp	A7K60068	Collapse	Mixed Use
Milling Stone	A100041	Collapse	Food Prep/Cons
Milling Stone	A100042	Collapse	Food Prep/Cons
Milling Stone	A120022	Collapse	Food Prep/Cons
Milling Stone	A120120	Collapse	Food Prep/Cons
Milling Stone	A120026	Collapse	Food Prep/Cons
Mortar	A120099	Collapse	Food Prep/Cons
Mortar	A120092	Collapse	Food Prep/Cons
Mortar	A120097	Collapse	Food Prep/Cons
Pendant	B120049	Collapse	Personal Adornment
Pestle	A120015	Collapse	Food Prep/Cons
Pestle	A120061	Collapse	Food Prep/Cons
Spear	B120021	Collapse	Mixed Use
Spindle Whorl	A100028	Collapse	Textile Production
Spindle Whorl	A100029	Collapse	Textile Production
Spindle Whorl	A100063	Collapse	Textile Production
Spindle Whorl	A120078	Collapse	Textile Production
Spindle Whorl	A120118	Collapse	Textile Production
Spindle Whorl	A120023	Collapse	Textile Production
Spindle Whorl	A120081	Collapse	Textile Production
UD Metal	7J69063220	Collapse	Uncertain