Domestic use of space in an Iron Age house from Tell Halif, Israel

By

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Although household archaeology has been around for a number of years now, it has been slow to truly catch on as a way to learn something about the people of ancient Israel as a whole. Many archaeologists historically were only interested in the monumental architecture like: “palatial and storage complexes, cultic complexes, cemeteries, and fortification systems” (Hardin 2011:12). Archaeologists have realized that studying the basic housing and activity areas of the people that inhabit cities and the outlying areas lead them to have a greater understanding of what is really happening on a day-to-day basis. Understanding what is happening in a small family’s daily life provides information about how the society as a whole might be working. While household archaeology can be studied anywhere by essentially the same methods that will be used in this thesis, my focus will be on the Iron Age II of the southern Levant.
DEDICATION

For my wife, Chelsey, who has stood by me, who has never let me quit, and who has fought for me every step of the way.
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CHAPTER I
INTRODUCTION

The research below will focus on households in the southern Levant during the Iron Age, specifically the four-room house in the 8th Century BCE. The organization and architectural layout of the plan of the four-room house is so typical that it is also possible that there exists a consistent use of space in these buildings. In this thesis I will address this possibility by first identifying the activity areas within the K8 house from Tel Halif in southern Israel. Then I will make a comparison of the identified activity areas and their locations in the K8 house to those of another house (F7) from Tell Halif to see if a pattern of the location of common activity areas begins to emerge between these two houses. It is also possible that the opposite is true: those activity areas in the two dwellings are not similar enough to make any correlation beyond recognizing the basic architectural layout of the four-room house.

In this research, I will use the term “four-room house” as a generic name to specify a typical architectural plan by which Iron Age peoples in the Southern Levant built their houses, and will include all subtypes (Faust 2013:47). It might be better termed “four-spaced house” as the spaces follow a typical pattern of three parallel spaces and one perpendicular space with the spaces further subdivided into “rooms” or areas of use. As Faust (2013:48) says: “Although these four spaces, all of them or some of them, were subdivided into rooms in various ways, according to the residents’ changing needs, the
basic plan of the long building was maintained.” He goes on to say: “These differences are typologically negligible and should not be seen as more than subtypes of the main type” (Faust 2013:48). So, while there might be minor differences among forms they still fall under the category of “four-room house”. There is no other period of history in this area where the architecture of the residential houses shows such uniformity. “Apart from a small variation in the way in which the building was carried out, this normal [four-room house form] exhibits an astonishing rigidity in concept, as well as wide distribution” (Fritz 1995:142). The four-room house was ubiquitous in the Iron Age southern Levant; and it followed a typical architectural pattern that only requires a brief glance at the plan to identify it and to date it to the Iron Age (Faust 2013).

The four-room house has great potential in the burgeoning field of household archaeology. The term "household archaeology” was first used by Wilk and Rathje in 1982 (Parker 2012, Wilk and Rathje 1982). Household archaeology has developed as a way to determine activity areas inside and around dwellings in hopes of understanding the daily lives and routines of the people that once lived there. Household archaeology is limited in that we do not have direct witness to ancient households. Unlike ethnographic studies, we can only discuss the "household" by examining the material culture left behind from the people who regularly used its space. For example, Singer-Avitz (2011:275) states: "Archaeological ‘households’ can never be exposed in their entirety; the material culture remains of a dwelling are unearthed, but not the social unit that inhabited the building" (see already Hardin 2001:30; 2010:10, 18-10; 2011:13-14); whatever can be said about the social unit that once inhabited the dwelling has to be inferred after the archaeological work is done and the data are analyzed.
Household archaeology originated in the study of the new world. During the 1970's and 80's there was a surge in the study of the household (Hardin 2011). Most of its beginnings "can be traced through activity-area research to cultural ecology via settlement archaeology" (Hardin 2011:10). In the new world the study of cultural ecology primarily focused on settlement archaeology as it was seen to relate to spatial, economic, and social aspects of the peoples environment. Culture ecology, was however, quickly replaced with the idea of a more functional approach to prehistoric peoples. "To understand prehistoric social organization, settlement archaeology studied the distribution of traceable human activities across the landscape, viewing sites not in a vacuum, but as single elements in a much larger functional network" (Hardin 2011:11). It was through this process that sites began to be looked at on different scales. It was under these different "hierarchical sets of patterns" (Harding 2011:11) that household archaeology started to truly take form as a way to examine and address the everyday life of the people in an area. (Hardin 2011)

In the late 1970s and early 1980s Wilk and Rathje proposed that we as archaeologists should be able to narrow our scope of description and analysis to that of the household. They describe the term household as: “the most common social component of subsistence, the smallest and most abundant activity group” (1982:618). They suggest it is through the household that archaeologists can directly study adaptation. It is the household, and the social groups associated with it, that can provide a direct link with “economic and ecological process” (Wilk and Rathje 1982:618). Wilk and Rathje divide the study of households into 3 areas: social, material, and behavioral. The material category, according to Wilk and Rathje deals with “dwelling, activity areas, and
possessions” (1982:618). The behavioral category addresses “the activities it performs” (1982:618). Finally, the social aspects deal with relationships and numbers of individuals. One cannot see this last category directly through the archaeological record; however it can be seen through inference. One can see the material part directly, though not fully, and the behavioral part can be seen indirectly through inferences based on the material culture used by the household. I discuss both the material and behavioral categories in this research. The behavioral part of this research will not be addressing the actions of an individual artifact in the house but the behaviors reflected in the artifacts left behind.

My research will add to the body of literature addressing the use of space and activity areas in four-room houses in Iron Age, Israel of the Southern Levant. Because of the paucity of such spatial studies, in this research I will analyze and provide another example of a four-room house that may be used in a comparative study of the typical use of space within the four-room house type structure. It is important to consider as many data sets as possible when looking at the bigger picture based on a study of archaeological remains. To this end different artifact types were consulted and their context established to infer activity areas. By studying the household’s use of space we can see what tasks people performed during the occupation of the structure and which repetitive activities appear important.
CHAPTER II
ORGANIZATION OF THE THESIS RESEARCH

The proposed research will proceed as follows: First, a general overview and background of the four-room house in the Iron Age Levant is presented. Second, a description of the K8 four-room house is provided, (including its context, preservation, dimensions, size, shape, walls, and installations, etc). Third, I identify the number and kinds of vessels found in each room and summarize all of the artifacts from each area of the house. (See Appendix B: Tables 3 and 4.) All sherds found on floors and in the destruction debris were point plotted and collected in 25cm increments and recorded individually so that spatial data was preserved. Fourth, I examine the spatial distribution of vessels by individual room and by activity areas within each room in an effort to identify the function of vessels and the function of the room in which the vessels were found. Finally, I compare the functional areas within the K8 dwelling to the functional areas in the F7 dwelling to make a determination if there are any patterns of typical use and organization of space within the two Iron Age four-room houses.

For my research I am using ceramics because they are the most plentiful artifact found. Because the pottery in the Iron II in the southern Levant is mass produced (Mazar and Stern 1990) I assume that the ceramics intended functions will be close to the same from house to house. I put the vessels into four categories: cooking, consumption/serving, storage, and other (Brody 2009). After I have identified and
categorized each of the vessels (see Table 2). I will calculate relative percentages by functional categories (see Tables 3 and 4). According to generally accepted usage of ceramics, the use of domestic space within the house is determined. Additionally two other factors that determine use of domestic space include the size of the room and where micro-artifacts are found. There is a good chance that in such a small house the rooms might have been used for multiple purposes.
CHAPTER III
BACKGROUND OF THE FOUR-ROOM HOUSE

Household archaeology in the Southern Levant has been of particular interest to some archaeologists (e.g., Stager 1985, Bunimovitz and Faust 2003, Hardin 2001, 2004, 2010, Singer-Avitz 2011, Holladay 1990) because of the unique house architecture that is present during the Iron Age. The four-room house architecture is completely gone by the time of Babylonian captivity, after 586 B.C. (Bunimovitz and Faust 2003).

The basic house plan is simple. The typical four-room house has three long spaces with a broadroom across the back, which is perpendicular to the long spaces. The three long spaces are often separated into smaller activity areas (or rooms) by small stone walls or by load bearing pillars that are used to hold up the roof or second floor (Clark 2003). During the summer months especially, domestic activities could take place on the second floor or roof of the house. This would allow for greater space to accomplish domestic activities and provide a cooler place, i.e. on the roof, to sleep. Although the sizes of the houses vary, generally they are between eight to ten meters wide and ten to twelve meters long (Clark 2003). Bunimovitz and Faust (2003) and Shiloh (1970) have suggested that the central space could have been an open area, like an open courtyard of sorts, to allow for cooking areas to vent smoke. The central space is often wider than the side spaces to provide room for a greater number of installations, including cooking pits and tabuns (Bunimovitz and Faust 2003).
Other archaeologists, (Stager 1985, Holladay 1992, Singer-Avitz 2011) maintain that the central area would have been covered. They point out that during the rainy months the central area, with the cooking installations and tabuns, would have been largely useless and would make for a very wet and uncomfortable environment throughout the rest of the house. Stager also says that the size of the rooms and the load bearing pillars would indicate that there was often a second floor and it would be relatively easy to extend the ceiling over the central room. Stager (1985) suggests that there was ample timber available in the region to provide a substantial ceiling. It is my opinion that the four room houses were probably not either/or, but both. There are solid arguments on both sides of the "open courtyard" debate and because of that I believe that there were probably some houses that had an open courtyard and others that did not.

Many times these houses were incorporated into the wall of a casemate wall system, used for fortifying settlements. A casemate wall consisted of two thinner walls that run parallel to each other with an empty space between. During times of war, or if the city was being attacked, the space between the walls could be filled with dirt and stones to create a larger, stronger, single wall. Generally the broadroom is built into wall system as is the case for the houses found at Tell Halif. The houses might also share an outer or intermediate wall with another adjacent house and many times can be two stories high (Stager 1985). Like the condominium apartment complexes of today, the Iron Age structures are built together at one time, likely to cut the time of construction and to keep costs down. The advantages of incorporating houses into a casemate wall and having a shared wall with the next house are obvious. Because labor was difficult and expensive, and preparation, collection, and transportation of building materials required significant
time and effort, building out from already established walls would provide a quick and less expensive way of completing a house.

Many scholars think the typical four-room house would have housed a single nuclear family comprising a father, a mother, and a few unmarried children (Faust 2000, Shiloh 1980; 1978). This assumption is based on single floor dwellings with an average house size of 30-70 m² as judged from more urban archaeological sites like “Tell Beersheba, Tell Beit Mirsim, Tell en-Nasbeh, Tell el-Farah (N.), Tell es- Sa idiyeh, Hazor, and other sites” (Faust 2000:19). However, single nuclear family occupation was not always the case. Other sites in more “rural” areas like: Khirbet Jemin, Wadi Zimra and Khirbet er-Ras (and Iron I houses of the south) (Faust 2009) have four-room houses that are on average 120 m² (Faust 2009). This is almost twice the size of the smaller houses described at the previously mentioned archaeological sites, and could have very easily housed 3-4 generations of a family (Faust 2000, Hardin 2001; 2004, Sloan 2001).

Although the architectural style of the four-room house was found everywhere throughout the southern Levant during the Iron Age, the actual size of the house and how many people lived there would have varied greatly depending on the location of the dwelling, spatial needs or limitations, and the kind of materials and labor available.

Archaeologists study the household for different reasons. Bunimovitz and Faust study the household in the Iron Age as a way to determine ethnic identity. They believe that the four-room house is a product of the “Israelite mind” (Bunimovitz and Faust 2003). They follow earlier archaeologist Y. Shiloh who says: “In the light of the connection between the distribution of this type and the borders of Israelite settlement, and in the light of its period of use and architectural characteristics, it would seem that
the four-room house is an original Israelite concept” (1970:180). However, Bunimovitz and Faust take that idea and stretch it a bit farther. The authors believe the architectural plan of the four-room house is functional because of the “suitability of the building to the peasants’ daily life in ancient Israel” (Bunimovitz and Faust 2003: 412). They go on to say: “It seems to us that it is still far from conveying the full story of the structure’s exceptional dominance as an architectural form during the Iron Age, and beyond this, as a cultural phenomenon” (Bunimovitz and Faust 2003:412, Faust 2015).

Furthermore, the house is setup in such a way as to provide privacy and facilitate the separation of purity and impurity. Bunimovitz and Faust suggest that the house has closed off rooms that are accessible through a central area “hallway” and are not designed where one would have to go through one room to get to another. All rooms are accessible through the central hallway and thus provide necessary privacy. If someone were “unclean” they would have been able to go into a room and be alone. This leads Bunimovitz and Faust to argue that the architectural plan of the four-room house is a direct output of the sub-conscious Israelite mind. They believe that Israelites sub-consciously, and possibly consciously, built these four-room houses as an outward expression of their inner religious and cultural beliefs (Bunimovitz and Faust 2003).

Other archaeologists are not as quick to make such leaps, but instead use the four-room house and its defined context as a means to understand the day-to-day activity areas within the home as interpreted through archaeological finds. Hardin (2011) says:

“We do not directly excavate households. As culturally defined, task-oriented units, households are not directly observable in the archaeological record. Such intangibles as kinship and affinity (the social element) do not exist as entities to
be exposed through excavation. For this reason, the basis for the archaeological understanding of the household is identification of the tasks or activities it performed” (Hardin 2011:14).

Hardin does not presume to make any interpretation of ethnic identity here. He simply states that the purpose of the excavation and analysis of the house in his study is to identify what happened there. Once excavation and analysis have taken place, the material record could be correlated to the household and the people living there. After this takes place, there is potential for research into kinship and affinity, but not before there is a link made between material and household.

Figure 1  K8 Stratum VI Destruction Level (Jacobs 1992)

**Introduction and Excavation of Field IV**

During the “Summers of 1992, 1993, and 1999 the Lahav Research Project, Phase III, excavated Field IV on the western edge of [Tell Halif]" (Jacobs 1993, 1999). Efforts were co-field directed by Paul F. Jacobs and Oded Borowski in 1992/1993 and by Jacobs
alone in 1999 (Jacobs 1993, 1999). The K8 four-room house was discovered during the 1989 field season at Tell Halif in the Southern Levant, Israel. It was first identified in a probe in Field IV above the Tell’s west slope. After positive results of GPR data from 1987, and the fact that one could see the tops of the house’s pillars above the modern ground surface, Jacobs and Borowski decided to excavate at this location on the tell. The Lahav project’s Phase III research design called for “extensive exposure of Iron II buildings” (Jacobs 1992). Jacobs and Borowski excavated a broad series of areas in Field IV and uncovered traces of four Iron II four-room houses. As determined in Phase III of the LRP excavations, during the time of the Stratum VIB1 occupation, Tell Halif was a fortified town with a casemate fortification wall that circled the tell (Jacobs 1993). During the late phases of Stratum VI evidence indicates much of the Iron II town was destroyed by fire. At this time the K8 dwelling was also destroyed in fire, evidenced by the ash layer that was found all across the house’s floors, especially in Locus K8002 (Appendix A: Figure 12). Locus K8002 contained burnt brick fragments, pebble to cobble-sized stones, and charred beams.

The west end of the house and wall which included the broadroom has eroded down the western slope of the tell. The other three perpendicular spaces are mostly intact. In Area L8, room 2 (Appendix A: Figure 11) on the SE side is the threshold to the entryway of the house. When entering the house there is a large cobblestone floor with a wall immediately to the north. Inside of the house, I number/identify the rooms/activity areas in a clockwise fashion starting with the North East corner (Appendix A: Figure 11). I am labeling some of the rooms with an 'A' or 'B' designation along with the number of the room (e.g. 1A or 1B). Rooms with no letter designation are separated by stone walls.
and are easily identified as their own separated space. Rooms also contain a letter when they are partitioned, but not separated by walls. Rooms 1A and 1B are situated in the NE corner of the dwelling. An entrance to the house is in room 2 in the SE corner of the dwelling. It is surrounded by a small stone wall on the north and west and has an installation in the NW corner of the room. Rooms 3A and 3B are in the SW portion of the dwelling. They are divided by a single pillar near the center of the house. The rooms are bordered by the stone walls of rooms 2 and 4. Rooms 4 and 5 are in the NW portion of the house. Both rooms are small and are separated by stone walls. Room 4 has stone walls on the south, east, and north ends of the room. Room 5 has stone walls on the east, north, and west sides of the room.

Cobblestone floors extend east to west in the northern and southern sections of the house, comprising rooms 1A, 2, 3A, and 5. In the southern section of the house the cobblestone floors extend from east to west covering rooms 2 and 3A. On the Northern section of the house the floors extend from east to west covering only rooms 1A and 5 and do not extend as far west as the southern portion of the house.

A possible kitchen installation sits in the balk area between areas K8 and L8, room 1B (Appendix A: Figures 10 and 12). It is proposed that many of the artifacts found in this area were from a second story of the dwelling over areas K8 and L8, room 1B. A saddle quern was found in the southern half of the balk that stretched between the areas of K8 and K9, room 1B. It is possible that the saddle quern fell from the second floor to its position when found, evidenced by the charred wood beams found underneath it (Jacobs 1992). The saddle quern was not alone in its area of the house. Around it were other artifacts like an oil lamp, loom weights, and other grinding implements.
The rooms along the north wall of the house (Rooms 1A, 4, and 5: Figure 11) extend from east to west and are characterized by a larger room on the east wall (1A). By moving farther west we run into the next room, possibly used for storage (5), and then, by continuing west, into another activity area which appears to be a small room (4). However, this last room was mostly eroding down slope off the western edge of the tell. This pillared dwelling “duplicates the typical plan of the ‘four-room’ type house” (Jacobs 1993:4). Even though the western end of the dwelling, where presumably the “broadroom” would have been, has eroded down slope, it is safe to say that the dwelling is still a typical four-room house. This can be demonstrated by following the outer wall
line evidence down slope which allows one to determine the western most extent of the building. The two pillars (K9010, and L9002; Appendix A: Figure 13) and the layout of the walls (K9002, L8006, L8003, L8012, L8007, K9005; Appendix A: Figure 13) along with the cobbled surfaces indicate that the dwelling indeed does fit the pattern of the typical 4 room house.
Figure 3    House Rooms/Activity Areas
CHAPTER IV
FOUR-ROOM HOUSE DESCRIPTION

Figure 4    K8 Four-Room House

Microartifact Analysis

Microartifact analysis was performed in the K8 pillared dwelling of Field IV of Tell Halif during the 1992 and 1993 field seasons. Dr. Arlene Rosen, from UC London (at the time), performed the analysis. She stated that, “The objective of this research was to analyze the microartifacts embedded in room-floors in order to identify evidence of activities performed in the rooms by their ancient inhabitants” (Rosen 1992:1). For the
analysis here, microartifacts will be defined as “archaeological remains from 30-0.25 mm in size” (Rosen 1992:1). Microartifacts are found because they accumulate on, and are pressed into the surface of the floors and are integrated within the soils and immediate sub-soils of earthen surfaces. In this way a “record of activities” (Rosen 1992:1) is formed in that area. Samples were taken from all of the floors that were excavated in Field IV during the 1992 and 1993 field seasons. A complete explanation of Rosen’s methods can be found in Rosen 1989 and Rosen 1991. A very brief explanation of the methods used follows.

Samples were taken in as many places as possible to reduce bias (Rosen 1992). Some samples were taken off of packed mud floors, under large broken sherds where the best results were often to be found. Samples were also taken on cobbled surfaces. For the cobbled surfaces two types of samples were collected. The first type was taken from the ashy deposits laying directly on the cobbles. The second sample was from the “sediment in which the cobbles were embedded” (Rosen 1992:1). “The samples were taken by scraping a ca. [sic] 25 cm square surface area down to a depth of ca. [sic] 1 cm and collecting the resulting sediment in a clean plastic bag” (Rosen 1992:1). After this the samples were washed through graduated screens and then the samples were allowed to dry. After drying, the samples were put through a set of nested sieves ranging in size from 30 mm- >.25 mm. The samples from each of the sieves were “examined under a stereo-binocular microscope and the percentage [sic] of different categories of artifacts were [sic] determined with the help of visual percentage charts” (Rosen 1992:1). The addition of Dr. Rosen’s samples will help determine where the activity areas were focused within each room.
Room Description and Use

![Diagram of storage jars]

Figure 5   Types of Storage Jars found in Rooms Throughout the House

Rooms 1A and 1B

The area in the north east corner of the house I have designated as Room 1. I have divided this room into a subset of 2 different areas that I will call Room 1A, which is the most northeast room, and Room 1B which is the area just south of Room 1A (Appendix A: Figure 11 and 12). There are slight differences in the rooms: Room 1A is characterized by a large grouping of storage jars and a cobblestone floor, while Room 1B has no cobble stone floor, but instead has a packed dirt floor and is characterized by three lamps and an almost equal number of storage vessels, serving vessels such as bowls, Jugs, Pitchers, or Decanters (JDP), and cooking pots. The three lamps in room 1B show
that this area is near an entry way. People would have need of an immediate artificial light source upon entering in to the dwelling in the evening or early morning. Having access to the lamps near the entrance would further support the entry way being near the south west corner of the house near Room 2. Below is a breakdown and walkthrough of Rooms 1A and 1B.

Rooms 1A and 1B were sampled during Rosen’s (1992) microartifact analysis. The preliminary findings from Room 1B show that the “richest sample from this room is Sample 24 which was associated with what may be a collapsed tabun” (Rosen 1992). The sample mostly contained cereal grains, legumes bird eggshell and fish bone. Rosen states that a “likely reconstruction of this sample is that most of the remains came from within the tabun and are the remnants of cooked meals” (1992). This microartifact analysis only serves to further reinforce my previous belief that Room 1B is used for cooking and preparation of food.

Room 1A is an area that is used for storage. This room has the largest number of storage jars in the whole house with a total number of 7 which is 26.92% of the entire house’s storage jars, the highest percentage of any of the rooms analyzed. Of the total number of vessels found in the room (11), 63.64% are storage jars. The storage jars were found close together in the very North East corner of the room and include hole mouth, sausage, and ovoid shaped vessels. Additionally, there were one cooking pot, one JDP, one Juglet, and one bowl also found in the room. Because of the very high percentage of storage jars relative to other vessels found in the room, not only for large vessels but other types as well that were not in immediate use, and in the house as a whole, I must conclude that this room was used as a large storage area. This room would provide
immediate access to the large hole mouth, sausage, and ovoid store jars that were found in this area. It is likely that the area was used for short term storage that would allow for quick access from the food preparation areas in Rooms 1B and 2. This is in contrast to what I believe is the long term storage area of Room 5 which also has large hole mouth storage jars that would have been used for dried goods (Hardin 2010).

Room 1B is close to the area in which the cooking installation is located. I would expect there to be more cooking and serving vessels present here in close proximity to the installation than in room 1A, and indeed there are (Appendix B: Tables 2, 3, and 4). In room 1B 21.74% (5 total) of the room’s vessels are cooking pots, while a total of 39.13% (9 total) of the room’s vessels fall into the serving category. These include a breakdown of 26.09% (six total) of the vessels being classified as JDP, and 13.04% (three total) are classified as bowls. Furthermore, Room 1B contains 38.46% of the house’s cooking pots, 42.86% of the house’s JDP vessels, and 17.65% of the house’s bowls. The room contains the house’s next highest number of storage jars (six). Most of the jars were found together in very close proximity to the cooking installation. Even though room 1B contains a high number of storage jars, the percentage of storage jars overall relative to the rest of the house is lower (23.08%) than those of the cooking pots (38.46%), and JDP (42.86%). This leads me to conclude that even though storage is necessary and present in this room, the main function of the room is food preparation and serving. The only room that comes close to matching these numbers of cooking and serving vessels is, Room 2 which contains the other half of the cooking installation.
Figure 6  Example of Cooking Pots Found in the Installation Area

The installation which falls between Rooms 1B and 2 is most likely a kitchen/food preparation area. This determination is based on the pottery found directly in the enclosed area. Found inside the installation were five cooking pots and two bowls. Just beside the installation in Room 2, are two storage jars and three more bowls. 23.81% of the room's vessels were cooking pots, 23.81% of the vessels were in the JDP category, and 33.33% of the room’s vessels were bowls. The remaining 19.05% of the room’s vessels were storage jars. Relative to the rest of the house we can see that the high percentage of cooking and serving vessels will show the function of the room. Room 2 contained 38.46% of all the houses cooking pots. Between Room 1B and Room 2, this area around the installation accounts for 76.92% of the house’s cooking pots. A test for significance between the vessels used for food preparation and other vessels for Rooms 1B and 2 is done in Table 5 in Appendix B. Room 2 also contained 35.71% of the house’s JDP category and 41.18% of the house’s bowls. It seems plain to see that due to the high percentage of cooking pots and serving vessels that this room was used predominately to prepare, cook, and serve food.
Also found in Room 1B were three lamps. Two of the lamps were found just north of the cooking installation area and the third lamp was found in the area between Rooms 1A and 1B close to the front wall (L8012, Appendix A: Figure 12). It is proposed by some (Brody 2009, Hardin 2010) that the location of lamps in the house could indicate a covered area, which indeed could be the case for the lamp found near the north wall (L8012, Appendix A: Figure 13). This begs the question: if the area over the cooking installation was completely covered, where would the smoke from cooking activities escape the house? Because of this problem, I believe that the central area above the cooking installation was uncovered like a small courtyard or vented in some way to allow for the smoke to escape (See Avitzur et al. 1971; Watson 1979; McQuitty 1984 for ethnoarchaeological studies on how houses might be vented to allow smoke from cooking activities to escape). The presence of the lamps could be to have light to eat or cook by during the evening hours, or near the entrance so as to act like a flashlight for use at evening entry to the house.

Figure 7   Examples of Lamps found in Rooms 1A, 1B, and 5
(See Figure 12)
**Room 2**

Room 2 contains the probable entryway/threshold to the house. (See Fig. 2) It sits in the Southeast corner of the dwelling and is characterized by a flagstone floor and is one of the only rooms that is mostly isolated from the other areas and does not have an ‘A’ or ‘B’ designation. The room is small at only 2 X 3 meters. The western wall of the room (L8006, see Figure 13) is only partially preserved. It was robbed of its stones in antiquity. However, during the time the house was in use wall L8006 would have run 2.4 meters from the southern house wall to the pillar in the northwest corner of Room 2. The room acts as an entry way into the rest of the house and as an area where food preparation could take place. Room 2 has the other part of the cooking installation that is situated in the North West corner of the room.

There is one problem that does arise for Room 2 of the house. If people entered the house through the doorway in the SE corner, the rest of the room seems to be blocked off by the wall that separates Rooms 2 and 3A, and potentially between 2 and 1B, with the kitchen installation completing the square. If that is the case how then did one enter the rest of the house? One possibility that comes to mind relates to the wall that separates (L8012, Appendix A: Figure 13) Rooms 1B and 2. The most easterly end of the wall is much higher than the small section that meets up with the pillar (L8011, Appendix A: Figure 13). It appears that there might be an opening between the pillar L8001 and the wall L8012 that would allow access to the rest of the house. If this is the case Room 2 would certainly serve as an entry way into the rest of the house. People would enter in the south east corner of the dwelling and in order to get into the rest of the house take an immediate right to enter into the main hallway or courtyard area. I believe that this area
of the house would have been covered and not open due to the flagstone floor and due to the room being on one of the outer wings of the house.

**Rooms 3A and 3B**

Room 3 is in the southern part of the house. Room 3A is the southern half of room 3 that is south of the pillars and is characterized by a cobblestone floor. This area contains the most of the room's vessels. Room 3B is the packed dirt area extending west of room 1B from the west end of the cooking installation. Room 3B also contains what seems to be the remnant of a broken or moved tabun. (See Figure 11)

Room 3 as a whole has very little pottery compared to the rest of the house, compromising only 14.29% of all of the vessels found. In room 3A there were found two storage jars, one cooking pot, one JDP, and three bowls. Of the vessels found in the room the bowls make up 42.86% vessels present. Whereas Rooms 1A, 1B, and 2 were used for storage, cooking and preparation respectively, room 3A could have been used as the actual eating area. People would have needed a place to eat. Room 3A could have easily provided the space necessary to gather a small nuclear family to eat together. Although it is difficult to make a more specific determination because of the small amount of pottery found in the area it is likely due to this being a family gathering area near the rear of the house.

In room 3B only four vessels were found; two storage jars, one juglet, and one lamp. Of the vessels found in this area, the lamp is the most interesting. As stated earlier, some archaeologists (Brody 2009 and Hardin 2010) maintain that it is possible that the presence of a lamp could indicate a roofed area. In this case I agree with Brody (2009) and Hardin (2010). I believe the only area of the house that might have been open is the
small area above the cooking installation. It would make sense that the rest of the house would have been roofed, and since room 3B was towards the back of the house, any light that might have come from any front windows or door would be hard to see, having a lamp there would provide light to an enclosed dark area. As far as any domestic activity use of this area, the only other artifact remains of note found in this area were the remnants of a possible tabun. The tabun looks as though it might have been moved to different places during different seasons (see discussion in Hardin 2010 for similar situation). Since there were no cooking pots or other vessels to aid in food preparation, it would stand to reason that the broken tabun would have been torn down and rebuilt here to be able to use at a later date. Room 3B could also have been used mostly as a hallway to get into the broadroom at the back of Rooms 4 and 5.

Rooms 4 and 5

Rooms 4 and 5 are the smallest of the rooms in the house. Room 4 looks to be larger than what now remains. It is difficult to make any determination on the use of the room because only six vessels (two storage jars, two bowls, and one cooking pot) were found and the rest of the room was eroded off of the tell. This room is in the very northwest area of the house and the entrance to this room looks to have been in the western part of the house facing what would have been the broadroom. Room 4 has a packed dirt floor, unlike Rooms 5 and 1A immediately to the east of it (See Figure 11). At this time I will not be making a determination on the use of this room. Domestic space use of this area requires more information than we currently have. Future excavations could shed more light on this Room and possibly then a determination on activity use of the room could be discovered.
Room 5

Room 5 is located in the area just east of Area K9 and in part of the balk between K8 and K9. It is a small walled off room with a floor of small cobblestones. This room was most certainly used for storage. It is not big enough to accommodate any person or animal. Three large storage jars were found in situ leaning against the north wall (see picture above). Other than the storage jars the only other vessels that were found were one JDP and one lamp. Again, it would make sense to have a lamp in this area as it was probably used for longer term storage than the storage areas in the northeast part of the house. It would be important to have a lamp here because during the winter when it gets dark earlier it would be good to have artificial light by which to get stored goods. The areas in the northeast part of the house would provide easy access to the stored goods there because the area is in an open spot towards the front of the house. It would have
been a better lit area and would have provided the necessary access to accommodate day-to-day storage needs. Because of the archaeological evidence provided here, I believe that this room was used for long term storage.

![Figure 9](archaeological_areas_and_broadroom.jpg)

**Figure 9**  Archaeological Areas and Broadroom

**Broadroom**

This is the most difficult part of the house to make any kind of determination about simply because there is no information on this area. (See Figure 10) There is indirect evidence for the broadroom that can be found in the excavation of Field V. The wall of the city has been traced and so the delimitation of the house can be measured. The area that would have been the broadroom has been completely eroded down the slope of
the tell by time and weather. Because of this I am not able to say anymore than that at one
time there was certainly a broadroom attached to this house. It would be extremely rare
for there not to be a broadroom on an Iron Age Four-Room House (Brody 2009, Stager

The F7 Four-Room House

The F7 dwelling sits in the northern portion of Field IV. The dwelling covers a
large area of the northern portion of Field IV in Tel Halif. The dwelling has many of the
same features that are common in pillared dwellings in the Iron Age in Israel and falls
squarely in the four-room house architecture discussed in this research. There are three
long spaces that are further separated into rooms with a broadroom sitting perpendicular
to the long spaces at the rear of the building. The spaces within the dwelling were
subdivided into five rooms or activity areas.

The analysis of the similarities and differences of the F7 and K8 houses is
important because it gives a comparison of two dwellings that are temporally and
spatially the same. Both dwellings are from the same tell, temporally and stratigraphically
contemporary, and destroyed in the same destruction. They show us that the people who
lived there had the same basic plan for their houses. But the dwellings are also different
enough for comparison to be valid on a larger spatial scale. The F7 dwelling is quite a lot
larger than the K8 dwelling. Its 4 spaces are divided into 5 rooms or activity areas.
F7 Room Use and Description

Room 1

Room 1 is the smaller of two rooms in the broad room. Hardin believes that due to the small area of the room and the many large jars that were found in it that the room was used for storage (Hardin 2010).

Room 2

Room 2 is the larger of the two in the broad room section. It is long and narrow and it is suggested through the analysis of microartifacts that this room is for food preparation and storage (Hardin 2010) and by Jacobs (1992) and Hardin (2010) that it may have been used for cult activity.

Room 3

Room 3 is the southernmost of the three long spaces. It is the only one of the three long spaces that is separated by a solid internal wall. This room is more ambiguous than the other rooms. It is suggested that this room is mostly used for textile production, but with the exception of cooking, it could be used for other activities as well (Hardin 2010).

Room 4

Room 4 is categorized as the central long room of the F7 dwelling. Preservation for this room is poor due to later disturbances. Some of the area of room 4 has been robbed out, however due to the many artifacts and features found in this room Hardin suggests that the best understanding is a "multifunctional interpretation for the various areas of the room" (Hardin 2010:150)
Room 5

Room 5 is described as the third and final long room of the pillared dwelling. This room also has an area where it had been robbed at a later date. This room also had very many artifacts and features and is associated with food preparation. It could also be a processing area and a storage area having 17 storage vessels in the room. It is also of interest to note that this room also showed evidence of metal working near the hearth where green slag samples were recovered during microartifact analysis. However, this room, as most of the artifacts show, was used for multiple activities (Hardin 2010).

Comparison Results

While there are certainly similarities between the F7 and K8 pillared dwellings, there remains quite a bit of difference as well. Both dwellings fit the standard interpretation of a four-room house as described in this research. Both houses are contemporary. Both houses were destroyed in the same destruction event. Both houses have areas in them that are designated for cooking or food preparation, and for short term and long term storage. The types of activities that were performed day-to-day (cooking, food preparation, working with looms) are quite similar; however the locations in the house where they were performed are very different. Because of this I do not believe that there is a typical pattern for the use of space for the four-room house—at least based on this comparison. Just as houses now can have similar layouts, (i.e. ranch style, cabin, craftsman) the space usage on the inside are very different, for instance, kitchens and bathrooms are in different places. While many of the activities are exactly the same, where they are carried out can differ greatly. I believe that space usage in the four-room houses fits this pattern as well. It is interesting to note, while there are a great many
activities that are the same, one activity is missing from the K8 house that the F7 house has; i.e. use of cultic artifacts. There are some cultic artifacts found in the larger section of the broadroom of the F7 house. However, there are none found in the K8 house. Is it because the broad room is completely eroded off of the tell, or is it because the F7 house is larger and serves as the Bet-’Av and so is the place where multiple families worship? Because I am completely missing the broad room of this dwelling it is impossible to tell. Resolution on this question will require further analysis of multiple dwellings across the regions that fit the four-room house architecture. Suffice it to say, at this point, that while four-room house architecture is ubiquitous throughout the region during this time, the inner workings and the activity areas of the dwellings can likely differ between each individual dwelling.
CHAPTER V
CONCLUSIONS

The four-room type architecture lasts for 600 years during the Iron Age in Israel. What makes this important is that there is very little change that takes place in the layout during this time. There is some variation on a theme, but overall the four-room house keeps its basic plan of three long rooms and one broad room throughout this time. Just as the Iron Age is beginning there is a huge palatial collapse where the kingdoms that surround Israel (Egypt, Anatolia, Mesopotamia) pull out and leave a power vacuum. In the place of these previous empires, the State of Israel emerges as a local power. During this time of great upheaval the four-room house appears and even through the next 600 years of continuous war, invasion, and local state formation, the four-room house type stays largely the same. It is an amazing feat. The idea of stasis in a world of change is what makes studying the four-room house so very interesting and also begs the question of why; why would this type of structure stay the same for so long during such upheaval? This question requires further research, which some archaeologists like Bunimovitz and Faust (2003) have already undertaken.

This small 8th Century Iron Age house would have likely only housed a small nuclear family. The size of the house would not have allowed for more than one generation of occupants. Each person requires a certain amount of personal space, and the size of the house here typically would not accommodate more than just a few people, e.g.
a nuclear family. "The population of a prehistoric settlement can be very roughly estimated as of the order of one-tenth the floor area in square meters" (Naroll 1962:587). The K8 four room house is approximately 7.5 meter long North to South, and approximately 7 meters long East to West. That would make the inside area about 52.5 meters squared. If I apply Naroll's (1962) formula to the area of the house about 5 people max could live comfortably inside.

The entry to the house is found in Room 2 and is on the east end of the dwelling. The whole east side of the dwelling (rooms 1A, 1B, and 2) is where most of the domestic activity takes place in the house. This area contains 55 out of the 77 vessels found in the house which means that 71.43% of all vessels found are located in these rooms. These areas function as the hub of the house. Primary storage took place in Room 1A, with supplemental storage taking place where people prepared and distributed food. Approximately 77% (76.92% Appendix B, Table: 4) of the entire house's cooking pots are found in Rooms 1B and 2. Furthermore, 58.82% of the bowls and 78.57% of the JDP are also found in Rooms 1B and 2. This large percentage total of vessels found in the house in these two rooms further shows that the main activity area is at the front (East) of the house.

The back Rooms (3A, 3B) may have been used for other domestic activities such as gathering together to eat, which might not have shown up in the archaeological record. Most of these rooms had a storage jar and a bowl or lamp. Since very little pottery was found in these areas it is difficult to make any real determination of the domestic use of these rooms.
I believe this house had 2 floors. The location and size of the pillars found in the house would indicate that there was a second floor, otherwise much smaller wooden beams would have been used (Netzer 1992). Also some artifacts like the saddle quern seem to have fallen from the second floor. The saddle quern was found sitting on charcoal which consisted of burned wood beams that would have made up the ceiling (Jacobs 1992). Because the size of the house is small, and at times the family would have needed to store some of their animals in the house; and given that some artifacts had fallen from a second story, I believe that people probably slept and were able to do other domestic activities on the second floor while most of the cooking, eating and storage activities were accomplished on the first floor.

This house is a typical Israelite four-room house. It is built using the same architecture as other houses during this time period (Brody 2009, Stager 1985, Bunimovitz and Faust 2002, Bunimovitz and Faust 2003, Hardin 2004, Hardin 2010, Shiloh 1970, Schmidt and Albertz 2012, Tringham 2012). This house follows the same patterns of domestic use as other four-room houses of its time (Brody 2009, Stager 1985, Bunimovitz and Faust 2002, Bunimovitz and Faust 2003, Hardin 2004, Hardin 2010, Shiloh 1970, Schmidt and Albertz 2012, Tringham 2012). I believe that while the pattern of architecture that is found in this house can be used as a blueprint for other Israelite four-room houses, the "where" of the inner activities would have varied greatly. It may be true that the original intent of the four-room house is a pure Israelite concept gleaned from an internal mind (Bunimovitz and Faust 2003). However as time progressed the architectural plan of the four-room house caught on like wildfire and spread throughout Trans and Cis Jordan in areas associated with Israel and Judah. The four-room house
became the dominate architectural and social plan of the Israelite and Judahite nations
during the Iron Age and then faded into complete abandonment upon the Israelites return
from Babylonian captivity (Bunimovitz and Faust 2003).
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APPENDIX A

ARCHAEOLOGICAL AREAS
Figure 10   Archaeological Areas and Broad Room
Figure 11  Activity Areas (Rooms)
Figure 12  Pottery Types by Activity Area
Figure 13  Archaeological Areas and Walls
APPENDIX B

POTTERY STATISTICS
Table 1  Total Number of Types of Vessels

<table>
<thead>
<tr>
<th>Total Number of Types of Vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>26  Storage Jars</td>
</tr>
<tr>
<td>13  Cooking Pots</td>
</tr>
<tr>
<td>14  JDP (Jug, Pitcher, Or Decanter)</td>
</tr>
<tr>
<td>2   Juglet</td>
</tr>
<tr>
<td>5   Lamp</td>
</tr>
<tr>
<td>17  Bowl</td>
</tr>
<tr>
<td>77  Total</td>
</tr>
</tbody>
</table>

Table 2  Pottery counts by Room

<table>
<thead>
<tr>
<th>Room 1A</th>
<th>Room 1B</th>
<th>Room 2 (including instillation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Storage Jars</td>
<td>6 Storage Jars</td>
<td>4 Storage Jars</td>
</tr>
<tr>
<td>1 Cooking Pots</td>
<td>5 Cooking Pots</td>
<td>5 Cooking Pots</td>
</tr>
<tr>
<td>1 JDP</td>
<td>6 JDP</td>
<td>5 JDP</td>
</tr>
<tr>
<td>1 Juglet</td>
<td>0 Juglet</td>
<td>0 Juglet</td>
</tr>
<tr>
<td>0 Lamp</td>
<td>3 Lamp</td>
<td>0 Lamp</td>
</tr>
<tr>
<td>1 Bowl</td>
<td>3 Bowl</td>
<td>7 Bowl</td>
</tr>
<tr>
<td>11</td>
<td>23</td>
<td>21</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Room 3A</th>
<th>Room 2B</th>
<th>Room 4</th>
<th>Room 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Storage Jars</td>
<td>2 Storage Jars</td>
<td>2 Storage Jars</td>
<td>3 Storage Jars</td>
</tr>
<tr>
<td>1 Cooking Pots</td>
<td>0 Cooking Pots</td>
<td>1 Cooking Pots</td>
<td>0 Cooking Pots</td>
</tr>
<tr>
<td>1 JDP</td>
<td>0 JDP</td>
<td>0 JDP</td>
<td>1 JDP</td>
</tr>
<tr>
<td>0 Juglet</td>
<td>1 Juglet</td>
<td>0 Juglet</td>
<td>0 Juglet</td>
</tr>
<tr>
<td>0 Lamp</td>
<td>1 Lamp</td>
<td>0 Lamp</td>
<td>1 Lamp</td>
</tr>
<tr>
<td>3 Bowl</td>
<td>0 Bowl</td>
<td>3 Bowl</td>
<td>0 Bowl</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>
## Table 3  
Pottery Percentages within Rooms

<table>
<thead>
<tr>
<th>Total Pottery</th>
<th>Room 1A</th>
<th>Room 1B</th>
<th>Room 2</th>
<th>Room 3A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Jars</td>
<td>85.84%</td>
<td>26.09%</td>
<td>19.05%</td>
<td>28.57%</td>
</tr>
<tr>
<td>Cooking Pots</td>
<td>9.09%</td>
<td>21.74%</td>
<td>23.81%</td>
<td>14.29%</td>
</tr>
<tr>
<td>JDP</td>
<td>9.09%</td>
<td>26.09%</td>
<td>23.81%</td>
<td>14.29%</td>
</tr>
<tr>
<td>Juglet</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Lamp</td>
<td>0.00%</td>
<td>13.04%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Bowl</td>
<td>9.09%</td>
<td>13.04%</td>
<td>33.93%</td>
<td>28.66%</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Pottery</th>
<th>Room 4</th>
<th>Room 5</th>
<th>Room 3B</th>
<th>Room 5A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Jars</td>
<td>33.33%</td>
<td>60.00%</td>
<td>50.00%</td>
<td>28.57%</td>
</tr>
<tr>
<td>Cooking Pots</td>
<td>16.67%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>14.29%</td>
</tr>
<tr>
<td>JDP</td>
<td>0.00%</td>
<td>20.00%</td>
<td>0.00%</td>
<td>14.29%</td>
</tr>
<tr>
<td>Juglet</td>
<td>0.00%</td>
<td>0.00%</td>
<td>25.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Lamp</td>
<td>0.00%</td>
<td>0.00%</td>
<td>25.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Bowl</td>
<td>40.00%</td>
<td>0.00%</td>
<td>25.00%</td>
<td>42.86%</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Pottery</th>
<th>Room 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Jars</td>
<td>33.33%</td>
</tr>
<tr>
<td>Cooking Pots</td>
<td>16.67%</td>
</tr>
<tr>
<td>JDP</td>
<td>0.00%</td>
</tr>
<tr>
<td>Juglet</td>
<td>0.00%</td>
</tr>
<tr>
<td>Lamp</td>
<td>0.00%</td>
</tr>
<tr>
<td>Bowl</td>
<td>50.00%</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
Table 4  Percentages of the total Number of Vessels by Room

<table>
<thead>
<tr>
<th>Room</th>
<th>Room</th>
<th>Room</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td></td>
<td>2</td>
<td>3B</td>
</tr>
<tr>
<td>26.92</td>
<td>Storage</td>
<td>15.38</td>
<td>Storage</td>
</tr>
<tr>
<td>%</td>
<td>Jars</td>
<td>%</td>
<td>Jars</td>
</tr>
<tr>
<td>7.69%</td>
<td>Cooking</td>
<td>38.46</td>
<td>Cooking</td>
</tr>
<tr>
<td>%</td>
<td>Pots</td>
<td>%</td>
<td>Pots</td>
</tr>
<tr>
<td>35.71</td>
<td>JDP</td>
<td>0.00%</td>
<td>JDP</td>
</tr>
<tr>
<td>%</td>
<td>Juglet</td>
<td>%</td>
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</tr>
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<td>Lamp</td>
<td>0.00%</td>
<td>Lamp</td>
</tr>
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<td>Bowl</td>
<td>%</td>
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<td>Lamp</td>
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<tr>
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<td>Bowl</td>
<td>%</td>
<td>Bowl</td>
</tr>
<tr>
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</tr>
<tr>
<td>17.65</td>
<td>Bowl</td>
<td>%</td>
<td>Bowl</td>
</tr>
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</table>
Table 5  Test for Significance between Cooking and Non-Cooking Vessels

<table>
<thead>
<tr>
<th></th>
<th>Cooking</th>
<th>Non-Cooking</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room 1B</td>
<td>14</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>Room 2</td>
<td>17</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>13</td>
<td>44</td>
</tr>
</tbody>
</table>

Fisher’s exact test

The two-tailed P value equals 0.1936
The association between rows (groups) and columns (outcomes) is considered to be not statistically significant.