

Household Wealth in Elamite Susa
Archaeological Evidence from the Second Millennium B.C.E.

Rachel Maria Cohen
Honors Thesis in the Department of Anthropology
University of Michigan
April 27, 2013

ACKNOWLEDGEMENTS

I would like to thank Henry Wright for introducing me to Elamite culture, guiding me through this thesis, and providing me with access to the field reports and pottery and architecture data. His comments and support were invaluable and helped to make the process of writing this thesis exciting, interesting, and a lot less stressful. I am deeply grateful for all the time and effort he contributed.

Many thanks to Lisa Young for guiding me through the thesis-writing process and providing me with suggestions that made my research more comprehensive and well-balanced. I would also like to express my appreciation for all she has done to encourage my interest in archaeology. Thanks also to Lisa Nevett for introducing me to the field of household archaeology and for her assistance with this thesis.

Finally I would like to thank my parents, Bruce Cohen and Lynn Benore, for their unconditional love and support in this and in all aspects of my life.

ABSTRACT

Until recently, archaeological analysis of urban architecture has focused on grand public buildings, while ignoring domestic structures. However, household archaeology examines the lives of people from all social strata, which can be used to draw conclusions about social organization at every level of society. For example, household archaeology can provide important insights about wealth and status, which can in turn provide information about economic and social structures of ancient societies. Because changes in social structure are reflected at the household level, archaeologists can use changes in household wealth to draw conclusions about larger-scale political and economic issues.

This thesis applied household archaeology to the Elamite city of Susa, in modern-day southwest Iran. Because of its prominence as the Elamite lowland capital, Susa is an excellent site to look at changes in household wealth. An analysis of both architecture and artifacts revealed an increase in wealth and status in one neighborhood of Susa during the second millennium B.C.E., a change that may have been related to Susa's rise to power and the establishment of a stable and highly competent ruling dynasty.

TABLE OF CONTENTS

Introduction.....	1
Houses Archaeology and the Analysis of Wealth.....	3
Household Archaeology.....	3
Household Wealth.....	7
Social Institutions in a Near Eastern City.....	10
Accumulating Wealth and Status.....	12
Wealthy Houses in Ancient Iran and Old Babylonia.....	13
Susa and the Elamites.....	16
From Houses to Households: Architecture.....	19
Analyzing Architecture.....	19
The Houses of Ville Royale.....	20
Quantitative Methods for Analyzing Houses.....	25
Specialized Rooms.....	34
From Houses to Households: Artifacts.....	38
Analyzing Artifacts.....	38
The Pottery of Ville Royale.....	40
Tablets.....	43
Conclusions and Further Research.....	46
Contributions.....	47
References Cited.....	48
Appendix A.....	52

LIST OF TABLES

Table 1: The dates of Nippur and the two layers of interest at Susa.....	17
Table 2: Analysis of the architecture.....	34
Table 3: Pottery.....	42

LIST OF FIGURES

Figure 1: Map of the Middle East.....	12
Figure 2: <i>Salles à quatre pilastres</i> in the Palace of Darius.....	14
Figure 3: The Houses of Layer XV.....	24
Figure 4: The Houses of Layer XIV.....	24
Figure 5: Access graphs.....	30
Figure 6: Morphic map of the Villa of the Mysteries at Pompeii.....	31
Figure 7: Morphic map of the House of Temti-Wartas.....	33
Figure 8: House of Temti-Wartas with <i>salles à quatre pilastres</i>	35

INTRODUCTION

Architecture in general provides important insights into the organization of societies because “structures are both the medium and the outcome of social practices” (Pearson and Richards 1994: 3). While archaeologists often focus on monumental architecture such as palaces, temples, and tombs, the house provides important insights into the daily lives of individuals in ancient societies. Monumental buildings were the realm of the most wealthy and powerful, while the majority of people in ancient times interacted at the local level of houses and neighborhoods (Keith 1999). As a result, archaeology of households allows us to explore questions about people of all social classes and occupations (Smith 1987). Analysis of household activities provides insights into daily life, as well as into the general social and cultural structure of ancient societies (Keith 1999).

In this thesis, I integrate information from a number of recent archaeological studies (Stone 1987, Keith 1999, Kent 1987, Wilk and Rathje 1982) of domestic space with ethnoarchaeological analyses of studies of household wealth (Horne 1994, Kramer 1982, Smith 1987). Because the household is the basic economic unit of many human societies, analysis of household wealth can provide insights into larger questions of social organization and change (Smith 1987). The majority of archaeological studies of household wealth focus on agrarian societies, while few analyses have explored ancient households in urban settings, and particularly houses in early cities.

For my case study, I focus on the Elamite civilization of Iran, and particularly on the lowland capital city of Susa, which is generally considered to be the most significant Elamite site, as well as one of the best-excavated (Carter 1971, Hinz 1972). Because of its significance

in the course of Elam's rise to power and independence, Susa is a critical site for learning more about Elamite culture. While previous research (e.g. Carter 1971, Hinz 1972) has generated information about chronology, political events, and religion at Susa, essentially nothing is known about domestic life or social organization. In order to explain these areas, I examine the change in household wealth and organization between two layers of Susa's Ville Royale neighborhood. The earlier layer contains a block of fairly small houses, while the later layer contains a single large house, which replaced the earlier housing block. I compare the architecture and artifacts from these two layers to examine changes in the socioeconomic status of the residents of the Ville Royale neighborhood. The excellent preservation of both layers and the presence of entire houses and housing blocks make Ville Royale an ideal site for looking at change over time in household wealth.

This study aims to provide more information on Elamite social organization and domestic space by combining methods for analyzing architecture and domestic space (e.g. Keith 1999, Stone 1987) with methods for analyzing household possessions (e.g. Horne 1994, Kramer 1982, Smith 1987). The study also aims to examine the role of the house in conveying signals about wealth and social status to the community, both in Elam and in ancient societies in general. Finally, it touches on whether and how these indications of wealth and social status can be connected to larger political and economic issues in Elam and the surrounding area.

HOUSEHOLD ARCHAEOLOGY AND ANALYSIS OF WEALTH

A number of ethnoarchaeology studies around the world have focused on the house, the household, and their roles in society. These studies have looked at various aspects of material culture (e.g. architecture, material possessions) in order to draw conclusions about human behavior in particular societies. However, many of these studies have focused on villages and living communities. Only recently have archaeologists begun to apply similar methods to houses and households in ancient cities. While ethnoarchaeology provides a good foundation for this type of an analysis, archaeologists also need an understanding of how the ancient city functioned and the role of the house in an urban environment.

Household Archaeology

The concept of the house is something that nearly everyone deals with on a daily basis, and as such, it may seem deceptively simple. However, the house can vary across cultures on the most fundamental levels, from its basic architecture to its role in society. This is made even more complicated by the fact that archaeologists have only the material record to help them understand the ancient house. Nonetheless, archaeologists have devised a number of strategies to accomplish this, using architecture, artifacts, and the broader context of the house and the society to which it belongs.

What is a house, and what is a household? While the definitions of both these things seem intuitive, closer examination reveals that the answers to these questions are more complicated. Wilk and Rathje refer to three components of household archaeology: architectural (the house), social (the people) and behavior (the activities being performed). Defining the house as an architectural unit can become confusing when one considers that areas under the

control of a single family were not necessarily contiguous, and people, particularly wealthy people, could own multiple properties (Keith 1999). For individuals who owned multiple houses, all of these properties served an important role in social and economic activity (Stone 1987). This is further complicated by the fact that activities outside the building could play a significant role in household life (Rapoport 1990).

Gnivecki points out that individuals living in a house could include not only family members, but also slaves, lodgers, apprentices, friends, and political allies (Gnivecki 1987). In other words, household and family are not equivalent. Gnivecki makes the distinction that family refers to kinship ties (both by blood and fictive ties such as adoption), while household refers to physical proximity.

Because archaeologists rarely have information about either family ties or ownership, they often use a purely architectural definition of the house. For purposes of this study, “house” will refer to a unit of domestic space that has boundaries separating it from the units around it. Though this definition is straight forward, finding the boundaries of ancient houses is often a challenge. I will use the term “household” to refer to the social and behavioral aspects mentioned by Wilk and Rathje. Finally, “family” will refer to all individuals who are related to the head of the household by descent, marriage or fictive ties. It is important to note that while both houses and households are the subject of this study, only houses can be found in the archaeological record. In other words, we must study the house to learn about the household (Wilk and Rathje 1982).

Household archaeology comes out of a more general tradition of attempting to use archaeological methods to make a connection between the use of space and culture (Kent 1987).

Household archaeology can also be used to bridge the gap between theory and the practical reality of artifacts found (Wilk and Rathje 1982). According to Kent, the study of houses comprises two aspects: architecture, which deals with the organization of bounded space, and use of space, which deals with the organization of unbounded space. From analysis of the form of architecture and artifacts, archaeologists can infer information about the structure of ancient societies (Rapoport 1990). Although environmental and social conditions can influence architecture and the use of space, Kent believes that the social conditions are more significant, and that will be the focus of this research.

The construction of a house can be informed by social practices, but the organization of space can also have both overt and subtle psychological effects that can serve to enforce social norms or create new ones (Pearson and Richards 1994, Rapoport 1990). Domestic architecture can do this in a number of ways: by displaying wealth and prestige, by dividing up space based on distinctions such as age, gender or rank, by the practical and symbolic establishment of boundaries and by incorporating symbolic beliefs into things such as organization, geometry, and orientation (Pearson and Richards 1994). The partitioning of space for domestic activities is also important. For example, Gnivecki (1987) looks at artifact distribution within houses to determine whether certain rooms were used for certain activities, what he refers to as the “partitioning of human behavior”. Brody (2011) and Gnivecki (1987) stress the need to rely on both artifacts and architecture in order to more completely understand behavior. For example, architecture alone cannot be used to determine the use of a room (Keith 1999), in part because individual choices can have a significant impact on the use of space (Barrett 1994); instead, it is important to use both the artifacts found in the room and their location to determine use of space.

In addition to analyzing the houses themselves, it is also important to look at the house in its broader context, particularly the context of the neighborhood (Keith 1999, Stone 1987). Keith describes the neighborhood as “the area within which city inhabitants carry out most of their daily activities” (Keith 1999:4). Organization of neighborhoods within a community could also both mirror and influence the larger social structure. The location of the house, in relation to resources and to other houses, was often a significant decision and could have implications for social status and social organization (Bawden 1982, Horne 1994).

Finally, because both use of space and architecture were frequently modified to suit the changing needs of the household through time, it is important to view the house as a dynamic building, rather than frozen in time (Gnivecki 1987). “Spatial relationships and material culture distributions...may reflect social, economic and political change” (Ilan 2011:143), and modification, destruction and rebuilding can indicate a household’s ability to respond to and recover from social and economic change, which can be related to wealth (Panitz-Cohen 2011). Brooks and Yellen, and Gnivecki, do this by looking at patterns of recycling and reuse. Others (Keith 1999, Stone 1987) have looked at the connections between architectural modifications and change in the number and relationships of members of the household. These studies focus in particular on modifications that increase or decrease privacy. Even with no significant change in household composition, use of space could change over the course of the day or the course of the year based on the scheduling of activities (Rapoport 1990).

Though the term seems intuitive, household archaeology and its components can be difficult to define and delineate. While we can only see architecture and artifacts in the archaeological record, there are a variety of methods to use excavated evidence to learn about

households, families, and activities taking place in the house. The most complete picture of the house and the household can be obtained by looking at artifacts and architecture in tandem, which can in turn tell us about social and economic organization.

Household Wealth

One way to examine changes in social and economic structure over time is to look at household wealth. Because “the household is the basic unit of production and consumption in agrarian societies” (Smith 1987:297), it is a good indicator of social and economic conditions. While the definition and nature of wealth can vary depending on the economic system in question, for the purpose of this study I will use Smith’s (1987:299) definition that wealth is “anything that has value”. Household wealth can include a number of things, such as material possessions, access to resources such as land and water (e.g. Horne 1994 and Kramer 1982), human labor, and financial assets. Of these, material possessions are the easiest to see in the archaeological record.

Smith (1987:301) describes the house as “probably the strongest and most consistent expression of wealth levels in agrarian states”, and notes that variation in house size and quality correlates strongly with wealth. The house has the added advantage that it is relatively resilient to the formation processes that distort the relationship between human behavior and the archaeological record. For example, artifacts are often moved from their original locations or damaged by later activities, whereas architecture is much more likely to remain in place, and is more difficult to damage than small fragile items such as ceramic vessels (Wilk 1990). As a result, it is more likely that the changes to architecture that appear in archaeological record were done intentionally.

Horne (1994) and Kramer used ethnoarchaeology to study household wealth in modern traditional Iranian villages. Both villages are agrarian societies in which wealth is determined by access to the means of production, namely land, livestock and sometimes water. In this type of society, owning land is the most prominent and most permanent kind of wealth (Kramer 1982). Other indicators of wealth in agrarian societies include number of livestock, number of fruit trees, and household utensils and furnishings. Kramer notes that there is generally a correlation between wealth, house size and household size, as a larger household can provide more labor. Not only does a large house have room for more people, it can also provide more space for livestock and more storage space for agricultural products. Number of rooms and total roofed space also correlated well with wealth (Horne 1994). Wilk (1990) found that among the Kekchi Maya, a modern-day traditional agrarian society, families tended to spend an increase in wealth on bigger, better and more prestigious houses. Wilk suggested that this was a method of evenly distributing wealth and uniting household members, as wealth brought in by wage-earning household members could be used for the benefit of everybody.

However, as these studies focus on rural societies, it is important to use caution when applying these conclusions to urban centers like Susa. When looking at ethnographies, “analogy for identifications is valid but analogy for explanations or understanding is not” (Kent 1987:42). That is, we can note that ancient and modern societies have similar structures and we can posit that these structures have similar uses, but we cannot assume that these societies had the same ideology behind these spaces.

The Peruvian site of Galindo is an excellent example of an archaeological site where household wealth can be used to draw conclusions about social organization. Bawden (1982)

found that larger and better planned houses had better access to the water source. These wealthy houses were also associated with workshops and llama corrals, suggesting that the wealthy were involved in the economic functions of the site. Finally, these houses had larger and better planned *salas* (living rooms), which suggests the importance of entertaining for wealthy households.

In another study, Smith (1987) uses ethnographic data from modern-day traditional Maya households to examine what types of possessions correlate with wealth and how. Smith concluded that “size and composition of household artifact inventories are strongly associated with wealth levels in both industrial and agrarian states”, which suggests that looking at the distribution of artifacts is in fact a good method of deducing wealth (302). This holds true for a number of unrelated agrarian societies around the world. Smith found that certain classes of items had either positive or negative correlations with wealth. Some of these items, such as furniture, clothing, and jewelry, almost never preserve in houses in the archaeological record, but Smith also found that certain types of pottery can be strong predictors of household wealth, upon which I will elaborate later. Finally, while archaeologists have only the material record to study, wealth and status could be encoded in immaterial forms, such as the symbolic value of an object. For example, in ancient Canaan, houses were often rebuilt in the same location, as the connection to one’s ancestors and their house was an important status symbol in and of itself (Panitz-Cohen 2011). Archaeologists therefore cannot assume that the wealth of a household was simply the sum of the material value of its possessions, even when those possessions that preserve can be taken to be representative of the entire house.

Along similar lines, Smith (2013:3) places wealth under the heading of “quality of life”. According to Smith, quality of life comprises not only economic wealth, but also “a social component linked to the achievement of social goals”. This social component can be measured by looking at the diversity of goods—representing choices available—and at participation in social networks, particularly those beyond the local level, such as wide-reaching trade networks. Quality of life is outside the scope of this study, but Smith brings to light the interesting point that material wealth is only one of several factors involved in measuring well-being.

Social Institutions in a Near Eastern City

The ancient Near East was the location of the development of the world’s first cities. For archaeologists, it is also an invaluable source of information due to its extensive and well-preserved archaeological record. As a result, the ancient Near East is an excellent place to apply household archaeology and in particular to look at household wealth. Because little is known about social or economic organization in Elam, I will use Mesopotamia in the Old Babylonian Period (2000-1600 B.C.E.) as a comparison; the time period is contemporary with the layers of interest at Susa, and Mesopotamia and Elam had close cultural and political ties during this time (Carter 1973). Stone’s (1987) work on neighborhoods in Old Babylonian Nippur (southern Iraq, see Figure 1) provides a good comparison to Elamite Susa. As this study looks to understand social organization through household wealth, it would be useful to understand what we already know about social organization in Old Babylonian Mesopotamia.

The neighborhood was an important arena for social interactions in ancient Mesopotamia. Stone argues that the Mesopotamian neighborhood functioned like a miniature village, with “familial, professional or institutional cohesion”. Van der Mierop (1997) argues that textual

evidence does not support the idea that neighborhoods were organized by profession. However, Stone (1987) discusses a number of other “institutions” that served to unite the neighborhood and regulate social organization. The governing bodies of neighborhoods, rather like town councils, are one such example of an institution. Prominent households could also serve to govern and coordinate neighborhood activities. In her study of houses at Nippur, Stone found, based on textual evidence, that one prominent family that occupied House K served as a patron for the surrounding households. In fact, Stone proposes that most Mesopotamian neighborhoods were centered around an institution, either a prominent household or a temple.

In the ancient Near East, the nuclear family seems to have been a fairly standard unit, though extended families living in a house were possible (Panitz-Cohen 2011, Stone 1987). Households at Nippur practiced an inheritance system in which property, including the house, was divided among male heirs. As a result, family members often owned adjoining property, and the house itself could be divided into independent units through the blocking off of doors and other measures (Stone 1987). This change in the “assignment of space” (Ilan 2011:143) is found elsewhere in the Near East and was related to changes in family structure, such as marriage.



Figure 1: A map of the Middle East showing Susa and Nippur. The blue shows the approximate boundaries of Old Babylonia.

Accumulating Wealth and Status

While the city was the center of civilization, Mesopotamia was an agrarian society, in which most cities relied on the hinterland to sustain them. As a result, agriculture was the most significant form of interaction between the city and the country (van der Mieroop 1997). As in contemporary villages such as those studied by Kramer and Horne, land ownership was an important source of wealth, and the basis of leadership during the time of Stone's study at Nippur. Van der Mieroop believes that private individuals, whom he refers to as "entrepreneurs", paid landowners for the right to collect their surplus goods, then transported these goods to the

city and sold them at a profit. This provided a means by which individuals who didn't come from elite backgrounds could accumulate wealth.

The source and nature of wealth was also significant. In her study of neighborhoods at Nippur, Stone notes that although the two neighborhoods, TA and TB, both had at least one wealthy household, the two neighborhoods had distinctly different flavors. TA was dominated by the House K family, who textual records indicate moved from the country, bringing their clients with them, and who obtained money by buying and selling temple offices. They were also involved in economic transactions involving orchard property. This neighborhood was residential from the start, and most houses appear to have been built without the aid of an architect. By contrast, the TB neighborhood originally contained public buildings, and later became a neighborhood for wealthy, established bureaucrats. The houses here had the same basic setup as those in TA, but these houses were built more carefully, with the assistance of a professional. This difference between "new money" and "old money" is visible in the response these households had to an economic crisis in 1739 B.C.E.. The residents of TB stayed, whereas many of the residents of TA left the city.

Wealthy Houses in Ancient Iran and Old Babylonia

Ancient Near Eastern houses had relatively standardized layouts. Many houses had an entrance chamber which connected the street to the courtyard. The courtyard itself was an important center of activity, and could also provide access to other rooms in the house (Keith 1999). The living room, located on the side of the courtyard, was probably used for entertaining (Stone 1987). Storerooms, kitchens, and bathrooms were also present (Keith 1999).

One of the notable features of wealthy households in ancient Iran and other parts of the ancient Near East is what is referred to as the *salle à quatre pilastres* (“four-pilaster room”). As the name suggests, this is a long reception room with four pilasters, near but not at the corners of the room. The room often looks out onto the short side of a courtyard and is accessible only via the courtyard through a grand doorway. This room first appears during the Suktalmahhu Period at Susa and continues to be present in large houses for several centuries afterward (Perrot 2010). After an absence during the Middle and Neo-Elamite periods, the room makes a reappearance in the Palace of Darius at Susa (Figure 2) and several Babylonian palaces (Perrot 2010, Roaf 1973), in which two *salles à quatre pilastres* are arranged in succession.

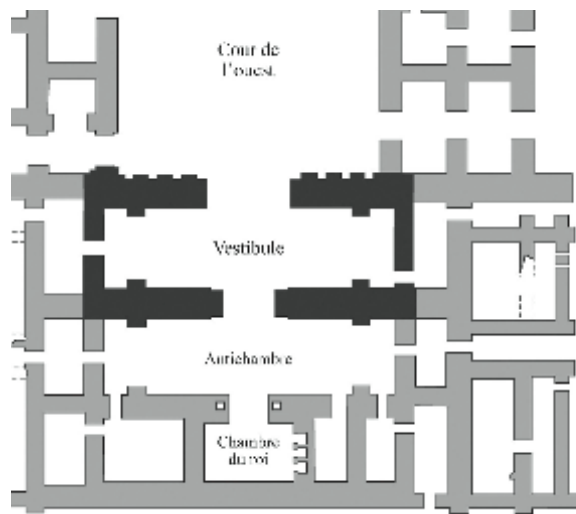


Figure 2: Two *salles à quatre pilastres* at the Palace of Darius at Susa (Gasche 2011)

Several Iranian palaces in the Parthian period also contained a pairing of living room and courtyard. The living room was not necessarily a *salle à quatre pilastres*, but it often featured pillars (Azarnoush 1994). Many of these buildings had two sets of living-room-courtyard pairs, similar in form, but with one larger than the other. Azarnoush postulates that these represent a

division between public and private “sub-sections”, with the larger courtyard and living room being used for more public receptions, and the smaller being used for more private events.

It is interesting to note that the *salle à quatre pilastres* and the Sassanian living room appear in palaces and in wealthy houses, suggesting a connection both in function (entertaining) and in ideology. While the *salle à quatre pilastres* originated in houses, I believe the connection could have eventually gone either way: wealthy people may have used it in their houses as a status symbol, and rulers may have used it in their palaces to make it feel more “homey”.

Another important type of architecture in ancient Near Eastern cities was the neighborhood sanctuary. Similarly, “house plan” temples were found throughout Mesopotamia (Crawford 1977). In both cases, the name essentially says it all: a temple that looked like a house. In the Mesopotamian worldview, this made perfect sense, as the Mesopotamian gods, like humans, needed food and a place to live (Crawford 1977). According to Crawford, the house temple mirrored the form of the ideal house, with a central courtyard with rooms on three sides. Both Crawford and Keith note the presence of neighborhood shrines in Mesopotamian cities, and Crawford also cites a palace at Mari which contained a religious enclave. In fact, it was not uncommon for private, public, and religious space to be combined to some degree in the same building (Crawford 1977).

Most of the evidence in this study is architectural, but artifacts found within households are also an indicator of wealth, although the relationship between quantity of artifacts and wealth is complicated. For example, large numbers of vessels correlate well with household size but not necessarily household wealth. However, the quantity, quality, and variety of ceramic vessels can be used to identify wealth (Panitz-Cohen 2011). Additionally, the presence of texts suggests

literacy, another indicator of wealth and status of household residents. Practice texts, used to teach students the basics of writing, indicate either a school (Stone 1987) or a house which employed private tutors (Ghirshman and Stève 1966). Stone considers the appearance of schools and texts to be an indicator of an increase in wealth and status, and found that the number of texts diminished dramatically after an economic crisis at Nippur.

Susa and the Elamites

This thesis examines household wealth at Susa, the lowland capital of Elam. The Elamites occupied a large portion of Iran, including the mountainous areas in the north and east, known as Anshan, and the flat southwestern portion known Sushan to the Elamites and the Susiana Plain to modern scholars. Much of what we know about the Elamites comes from Mesopotamian accounts, which portrayed the Elamites as greedy, aggressive, and users of evil magic (Hinz 1972). The rest of what we know comes from Elamite king lists, court records and other administrative documents, artwork on cylinder seals, and excavated evidence, most of which comes from temples, palaces and other monumental buildings.

The Elamites borrowed many components of their religion, language, and other aspects of their culture from Mesopotamia to the west. Elam was “a civilization that grew up from native roots but was fatefully overshadowed by Mesopotamia” (Oppenheim 1977:62), as can be seen from the dominance of Mesopotamian linguistic, religious and cultural traditions for a significant portion of Elam’s history. Elam was also frequently at war with its Mesopotamian neighbors (Carter 1971). Because of this, much of what archaeologists know about Mesopotamia can also be cautiously applied to Elam.

This study examines two layers from the Sukkalmahhu Period, which lasted from 1900 to 1600 B.C.E (See Table 1). At the end of the third millennium B.C.E., the Elamites rose up against Babylonian control and established Elam as an independent nation. The Sukkalmahhu Period marked a period of political stability and economic growth (Carter 1971). During this period, Elam was ruled by a triumvirate of related rulers, the Sukkalmahhu, who were very successful.

Date	Site
1970-1720 B.C.E.	Old Babylonian Nippur
1820-1740 B.C.E.	Layer XV at Susa
1760-1680 B.C.E.	Layer XIV at Susa

Table 1: The dates of Nippur and the two layers of interest at Susa

Susa, located in southwestern Iran, was the most prominent Elamite city, and also the lowland capital, based on textual evidence. Of the three Sukkalmahhu rulers, two resided permanently in Susa (Hinz 1972), and Susa was the dominant center in terms of both population and land area, as well as an important center for trade and transportation (Carter 1971). Excavations at Susa have focused on several areas within the city: the residential area of Ville Royale, the religiously focused Acropolis, and the Apadana, home of the later Palace of Darius. Ville Royale, the focus of this study, was located in the center of the city and was first occupied at the end of the fourth millennium B.C.E. (Schacht 1973).

Because we have so little information on the social organization and daily life of the Elamites, I will instead look to Mesopotamia for comparisons. It is important to keep in mind

that Mesopotamia is not an exact mirror of Elam. However, due to the strong linguistic and cultural ties between the two during this period (Carter 1971), and because the two civilizations had similar geography and climates, Mesopotamia provides a good template for what life in Elam might have been like.

FROM HOUSES TO HOUSEHOLDS: ARCHITECTURE

Analyzing Architecture

As has already been mentioned, architecture preserves well in comparison to artifacts. Not only is architecture partially determined by social norms, but the division and organization of space can also have a profound effect on behavior (Pearson and Richards 1994). Because of this, architectural analysis can be used to draw conclusions about the household at both modern rural sites and ancient urban sites. For example, several studies have found correlations between house size and household wealth. In her ethnoarchaeology study of a modern traditional village in Iran, Kramer (1982) found few dramatic differences in architecture among residents, but she did find that larger houses corresponded to wealthier households. In ancient societies, differences in house size can also be suggestive of differences in wealth (Panitz-Cohen 2011, Crawford 1977), though it is important to note that size is not an automatic indicator of wealth, as wealthy people could own multiple properties throughout the city (Keith 1999).

Architecture can also be used make inferences about the types of household activities that occurred within houses. Stone (1987) used a combination of textual evidence and architecture to draw conclusions about family relationships in ancient Nippur. In particular, she made connections between architectural modifications and changes in ownership based on textual evidence for inheritance and for the buying, selling and renting of the property or parts of the property. Without textual evidence, however, all we can conclude from architectural modification is that the social use and needs of the space changed (Gnivecki 1987).

Because it was found at a similar type of site (a Near Eastern urban center) at around the same time period, I will use House K at Nippur as a model of a wealthy house in the ancient

Near East. Stone (1987) found that House K at Nippur was much larger than the houses around it. House K also controlled a large open space at the front of the house, which suggests social status. Shai et. al. (2011) also found that in Israel, “patrician houses” (wealthy, high-status houses) had a combination of public space, which was more accessible, and private space, which was more restricted. This public space often took the form of a courtyard. Shai et. al. further suggest that wealthy houses can be identified by the presence of architectural features that are more often found in public buildings, such as pillars. Looking for similar characteristics in the houses at Ville Royale can provide insights into household wealth.

The Houses of Ville Royale

The residential district of Ville Royale at Susa was excavated by the French Archaeological Mission in Iran, under the direction of Roman Ghirshman. My research focuses specifically on two layers, XIV and XV, which were excavated during the winter of 1964-65 and winter of 1965-66, respectively. Layer XV is dated to 1820-1740 BCE, while Layer XIV is dated to 1760-1680 BCE (Gasche 1973:14), placing both firmly within the Sikkalmahhu Period, a time of political stability and growth for Susa and the Elamites.

Thus far, only preliminary annual reports, architectural floor plans and pottery have been published from these layers. Other artifacts, semi-permanent features and tablet records are not currently available, though some of them are summarized in the annual reports. I believe that this will nonetheless be sufficient information to examine some aspects of domestic architecture and possessions and their ties to wealth and status.

Layer XV was the last layer dug by the Mission, and covers the majority of one housing block, as well as parts of two other housing blocks. In their preliminary reports, the excavators

had little to say about this layer, and did not attempt to divide the block into individual houses. Based on the floor plans, I have identified seven distinct houses (labeled A through G: see Figure 3) and what the excavators described as a neighborhood sanctuary (Ghirshman 1967). Unfortunately, the northeastern part of the block is too poorly preserved to be able to identify how many houses were present or what they may have looked like. In particular, because large sections of the exterior walls had to be reconstructed based on later data, we cannot determine the location of the entrances.

Layer XIV is dominated by the presence of a grand house, which tablet records indicate belonged to a man by the name of Temti-Wartas. While the tablet records have not been fully translated or published, the preliminary reports state that Temti-Wartas owned a large amount of land and livestock. At the end of the period of Layer XV, Temti-Wartas bought the entire central housing block and set about converting it into a single house. The tablets also suggest that Temti-Wartas had some connection to the sanctuary from Layer XV; unfortunately, the excavators do not specify the nature of this connection (Ghirshman 1965). Architecturally there is almost no evidence of the sanctuary by the end of Layer XIV.

While the architecture in Layer XIV is fairly clear-cut, the first step in analyzing the architecture was to determine the boundaries of the individual houses in Layer XV. Unfortunately, previous scholars (e.g. Stone 1987, Keith 1999) have not enumerated the methods they used to distinguish individual houses. The boundaries of the houses in this block appear to be unusually ambiguous; for example, the housing block across the street to the northwest appears to have more clearly defined houses, in which each house has only a single entrance and individual houses are marked off by double walls. I assigned the boundaries of Houses A

through G based on accessibility, the location of entrances, and the presence of double walls. I assumed that the presence of double walls suggested that two rooms belonged to different houses; because a double wall would have taken extra time and resources to build, the most likely reason to build one is if the builder clearly wanted to establish a boundary for a separate house with a different owner. I labeled these houses in the west and center of the block A through G. Because of its poor preservation and confusing architecture, I was not able to determine the boundaries of the houses in the rest of the housing block.

However, even for Houses A through G, this method was not perfect. For example, the structure I have identified as House B is has a doorway leading into a structure to the east, yet is separated from that structure by a double wall. Because the two structures had nothing in common, I designated them as separate buildings. The most difficult houses to assign were Houses D and F. These two houses share an entryway, which at first glance may suggest that they were a single house. However, at Nippur, it was generally the case that entryways led into only one other room, usually a courtyard (Keith 1999). Thus, it would have been unusual, based on the pattern at Nippur, for a house to have an entryway that led into two different sections. Additionally, these two areas are on two different axes, and other than the entryway, there is no way to access one from the other. As a result, I tentatively designated them different houses with a shared entryway.

It's important to remember that this map only shows the architecture at the end of Layer XV. It's possible that these structures were either in the process of being remodeled due to changes in ownership, or that they were owned by individuals with some sort of close relationship, familial or otherwise, as discussed by Stone (1987). Several narrow, less sturdy

walls appear to have been added after the rest of the structures. For instance, it appears that House E was once accessible from the east corner of the courtyard in House F, but that this entrance was blocked off in the final plan. Finally, I was not able to identify a collection of three rooms to the south of House C. These rooms are accessible from House C but separated from it by a double wall, and also have a separate entrance from the street. As a result, I will not consider this area in the study. Finally, the sanctuary will not be included with the analysis of the houses, though it will be discussed. The boundaries of the large house in XIV, the House of Temti-Wartas, are fairly clear, except to the east, where it runs into what is described by the excavators as “the remnant of the west sector of the central complex” (Gasche 1973). I have not included these in the analysis.

House A will not be used for those analyses involving room organization, due to the fact that a section of it was destroyed by a later pit, and as a result it is impossible to determine how many rooms it may have had. It is important to note that not all of the House of Temti-Wartas has been excavated, though the excavators seem to believe that the excavated area is the majority of the house. Ghirshman and Stève (1966) show a map of how they envision the entire structure, though it is not clear how they came to conclusions about what lay outside the excavation unit.

The buildings in both layers were made of mud-brick, and most or all of them contained a courtyard. These courtyards were generally accessed by an entryway, which Stone (1987) sees as an indication that livestock were not kept in the courtyard, as the entryway would have made it difficult for them to get in; according to Stone, houses that kept livestock generally had the main entrance leading directly into the courtyard. The loci from which pottery was collected were identified as either indoor rooms or courtyards, though in some cases the excavators

weren't certain. For those rooms which were not identified by the excavators, I identified courtyards by two factors, location and size. The courtyard was generally the second room to be entered after the entryway, and ethnographically for this region, the maximum roofable distance is 480 cm, and anything larger than that was likely an unroofed courtyard (Sumner 2003).

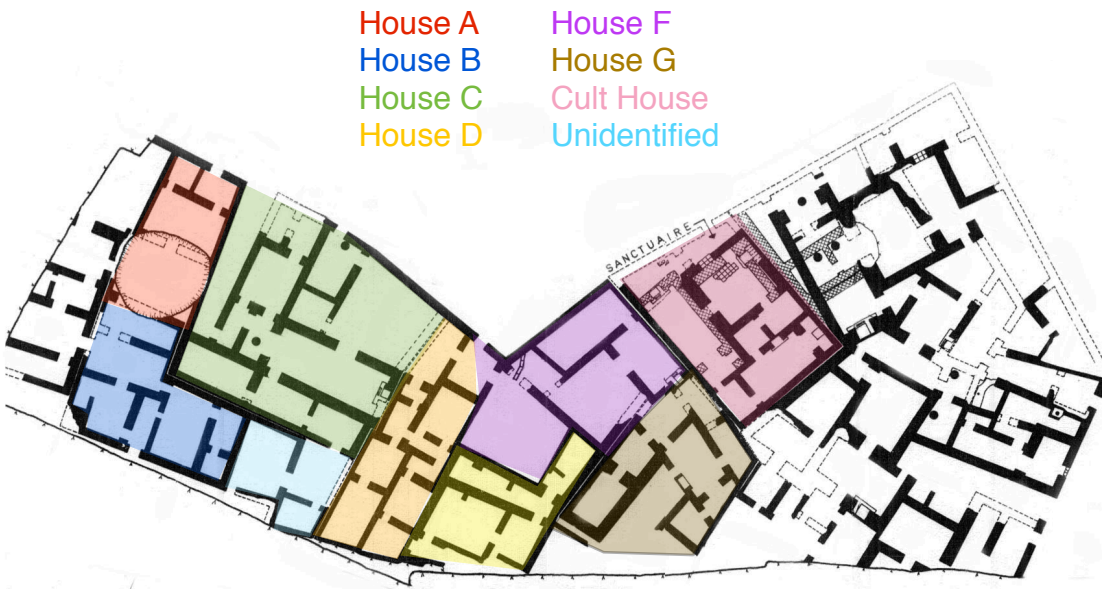


Figure 3: The boundaries of the houses in Layer XV, as well as the sanctuary.

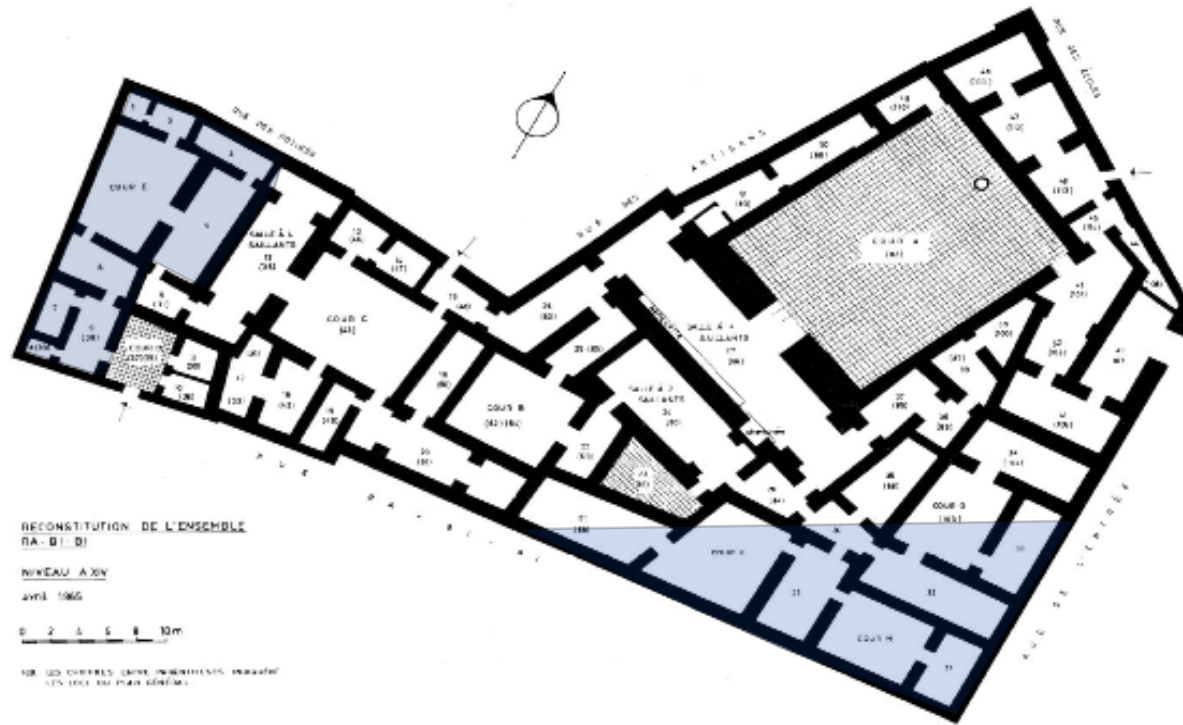


Figure 4: The House of Temti-Wartas. The dashed line shows the limits of the excavation; the areas in blue were reconstructed by the excavators.

Quantitative Methods for Analyzing Houses

Several quantitative methods have been used to analyze architecture. While some of these methods aren't practical for a small sample size, those relevant to this study are described below. These methods are simple, objective, and can be applied to any type of house, these methods will be used to look for differences between Layer XV and XIV that may relate to wealth and status. It has already been established that wealthier households tend to have larger houses; we would expect that these larger houses would also show differences in room layout and organization.

House Size

As has already been discussed, wealthier households generally have larger houses. In order to measure the size of the house, I used total floor area and total area covered, average room size, roofed versus unroofed space, and number of nodes. Stone and Keith do not discuss the total area covered by the houses in their studies, but it is an objective measurement that easily compares the size of houses. Average room size is also not discussed by Stone and Keith, but provides another means of comparison that may be related to wealth. Percentage of roofed space is also not discussed by Stone and Keith. However, Horne found that total roofed space correlated with wealth, though she suggested that this was because in the village she studied, roofed space was related to agricultural production. On the other hand, because courtyards (which were usually unroofed) were used for both entertaining and production, courtyard size also correlated weakly with wealth. Because of the variation in total floor space, I decided to measure the percentage of roofed space to see if there was a different that might be related to wealth. Finally, Keith used number of nodes as a measurement of house size.

Total floor area and total area covered: Both of these values reveal what is evident to the eye, namely that the House of Temti-Wartas is extremely large in comparison to Houses A through G, which is highly suggestive of greater wealth.

Average room size: This is also not discussed by Keith or Stone. While the House of Temti-Wartas had a larger average room size than the average for Houses B through G—25.22 m² compared to 11.89 m²—the average room size for the House of Temti-Wartas is not that much larger than the largest average room size in layer XV—20.48 m² for House G. Thus, the House

of Temti-Wartas may not have been that far outside the range of normal variation. At any rate, it is not clear whether this result is suggestive of greater wealth.

Roofed vs. unroofed space:

The average percentage of roofed space in Houses B through G was 73.2%, as compared to 61.48% in the House of Temti-Wartas. This is due to the presence of two large courtyards in the House of Temti-Wartas. Keith did not use this analysis. It is not clear whether a lower percentage of roofed space is an indicator of wealth, but in a house that was not involved with agriculture, large courtyards would not have been necessary for storing crops or livestock, though they could have been used for craft production. One possibility is that because the size of a roofed room was limited by the width of the roof beams, wealthy people who wanted to have impressive large space had to make them unroofed.

Nodes: Rooms, courtyards, and private alleys all count as nodes. The entire outside counts a single node, even if there is more than one door to the outside. Thus, a house with six rooms and a private alley would have eight nodes (Keith 1999). Keith found that the most common number of nodes was four or five. Horne (1990) found that total number of rooms (which is closely related to nodes) correlates well with wealth.

For Houses B through G, the average number of nodes was 9.67, with a range from 7 to 13. All of these values are a good deal higher than Keith's finding that the most common number of nodes for her sample was 4 or 5. The House of Temti-Wartas has 44 nodes, which was also a good deal higher than the highest number of nodes in Keith's study, which was 34. This difference is interesting, though there is not enough evidence to determine for certain whether this means that the households in Ville Royale were wealthier than the houses at Nippur.

Based on total floor space and area covered, average room size, and number of nodes, the House of Temti-Wartas was clearly significantly larger than the houses from Layer XIV, suggesting that it was also significantly wealthier. Additionally, the House of Temti-Wartas had a lower percentage of roofed space, which is a tentative indicator of wealth.

Circulation and Accessibility

Architecture determines the boundaries and organization of space, and as a result it also affects the organization of activities. Looking at the arrangement of space can help answer the question, “Who does what when and where?” (Keith 1999:3) Archaeologists have developed several methods for examining the arrangement of space and how rooms were organized in relationship to each other, including access graphs, plan types, depth, integration, and morphic maps. These methods also look at circulation, or what pathways were available to people to move through the house, and accessible, or how easy or difficulty it was to get to a room from the outside or from another room. While circulation and accessibility are not as clearcut indicators of wealth as household size, a large (and therefore presumably wealthy) house requires certain decisions to be made in the organization of space. I chose to analyze organization of space and accessibility to determine what differences, if any, exist between large and small houses, differences that may relate to wealth.

However, there is a note of caution here: because the house of Temti-Wartas was built on top of an existing housing block, certain aspects of circulation and organization of space were dictated by the already established architecture, and thus do not necessarily represent a choice made by Temti-Wartas, or even the most efficient organization of space. Additionally, in comparison to Houses A through G and the partial housing block visible across the street to the

northwest, the House of Temti-Wartas appears to be far less regular and well-planned. Walls do not meet at right angles, rooms have a variety of shapes, and paths through the house are often circuitous (Figure 6). As a result, certain aspects of the organization of space in the House of Temti-Wartas may be the result of bad planning or bad construction, and may not be particularly significant.

Access graphs: An access graph shows possible paths through the house. Each room is given a number, with the outside being labeled as 0. Different branches of the graph can show clusters of rooms (Keith 1999). However, it is important to note that circulation patterns can be the result of practical, social or functional factors, and that “there is no single way to interpret a given type of circulation pattern in social terms” (Keith 1999:230).

Plan type: Keith (1999) also described her houses by plan type. In a row plan, each node links to a maximum of two other nodes. Branched plans have at least one room that opens onto three other nodes. Courtyard plans have the a central room which opens on at least four nodes (not every house with a courtyard is a courtyard plan house, and the central room isn’t necessarily a courtyard, though it often is. For this study, “courtyard house” will refer to any house with a courtyard, while “courtyard plan house” will refer to a house that follows Keith’s courtyard plan). Of Keith’s sample of 129 houses, courtyard plan houses were the most common, at 33%. Keith found that the courtyard plan was particularly common in public buildings.

Of Houses B through G, one (House F) had a row plan, one (House G) had a courtyard plan, and the other four (Houses B, C, D, and E) had a branch plan. This is in contrast to Keith’s data (1999) which suggests that the courtyard plan was slightly more common but that the three

plans occurred with similar frequencies. However, we must keep in mind that this is a very small sample size.

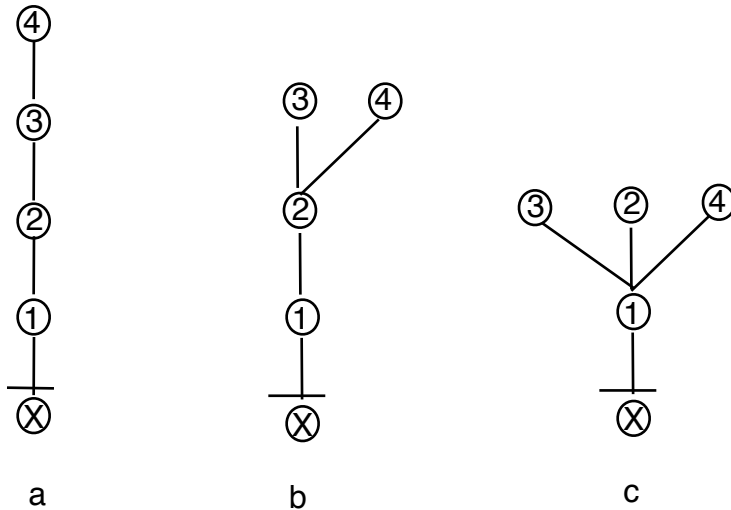


Figure 5: Access graphs for row (a), branched (b) and courtyard (c) plan houses (based on Keith 1999:192)

Depth: Depth is the number of levels from (but not including) the outside to the least accessible room. Keith found that the most common depth was 4, with a range from 1 to 8. Depth is determined by number of rooms and also by how many other rooms each room opens onto. She also found that larger houses are more compact, that is, further from their maximum possible depth, due to the fact that they tend to have central courtyards which open onto a large number of rooms. Keith found that this room is usually at a depth of two: that is, a courtyard accessed via an entryway. Keith hypothesized that this system was more efficient for circulation.

The most common depth for Houses B through G was 4, which matches Keith's findings. The House of Temti-Wartas had a depth of 7, corroborating Keith's view that larger houses tend to develop more circulation routes and therefore do not come close to their maximum depth (which in this case would be 43).

Integration: Integration is the number of doorways divided by the number of nodes. An integration of 1 means that there is only a single pathway through the house. Keith found that increased depth and integration was associated with differentiation in rooms. The average integration of Houses B through G is .99, with very little variation. The integration of the House of Temti-Wartas was .91. However, this data is skewed by the fact that several of the rooms were not accessible from the part of the building within the excavation limits. As a result, this comparison is not very useful.

Accessibility and morphic maps: Similar to Keith's study of depth, Longfellow (2000) used accessibility to look at public and private space in Roman houses. Accessibility includes depth, but it also includes the number of routes to a room. Longfellow theorized that those rooms that were less accessible (further from the entrance and with fewer routes to get to them) were more private, and were therefore reserved for residents of the house and trusted guests. A morphic map is essentially an access graph superimposed on a plan of the building: nodes are represented by circles, connected by lines which represent pathways of access. This allows us to define the relationships between rooms, and also provides an immediate visual of which rooms are most accessible.

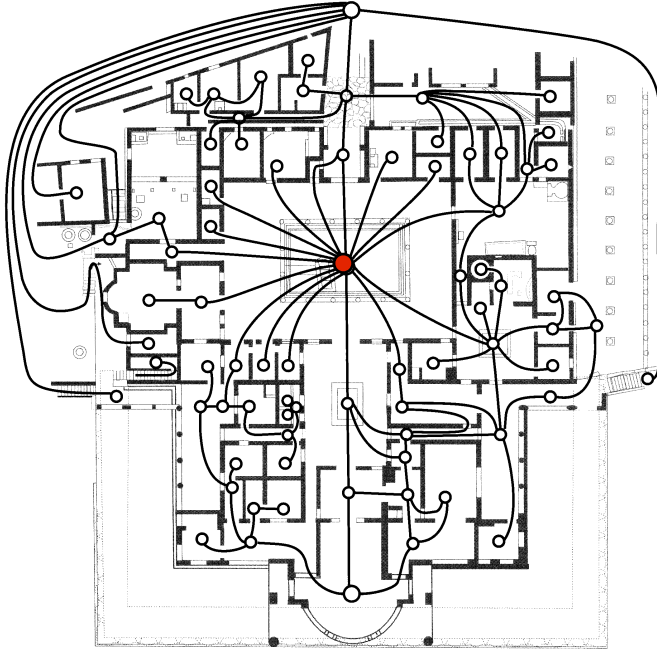


Figure 6: A morphic map of the Villa of the Mysteries at Pompeii (Longfellow 2000). The map shows the accessibility of each room; for instance, the node in red, representing a courtyard, is highly accessible.

Longfellow (2000) does not give a numerical method for measuring accessibility, though it appears to have to do with the number of other rooms that can be accessed from a given room. Additionally, her analysis focuses on large houses with a large degree of circulation. As a result, I only constructed a morphic map for the House of Temti-Wartas (figure X). While some of the house is outside the excavation limits, the excavators (Ghirshman and Stève 1966) believed that there was only one other entrance to the house, which is shown on the map as a third possible entrance to the southwest.

The morphic map reveals that, like several of the Parthian palaces in Azarnoush's study (1994), the House of Temti-Wartas appears to have been divided into two sub-sections or axes, a larger north-south axis and a smaller east-west axis. There is circulation within each section, but only one route connecting them, and each section has its own entrance. This may, as Azarnoush

suggests, represent a division between public and private, similar to that present in palaces, which would again indicate that Temti-Wartas, as a high-status individual, had an important public role but also wanted space in his house for himself and his family. Based on its size and the size of the courtyard, the north-south axis appears to be the public section.

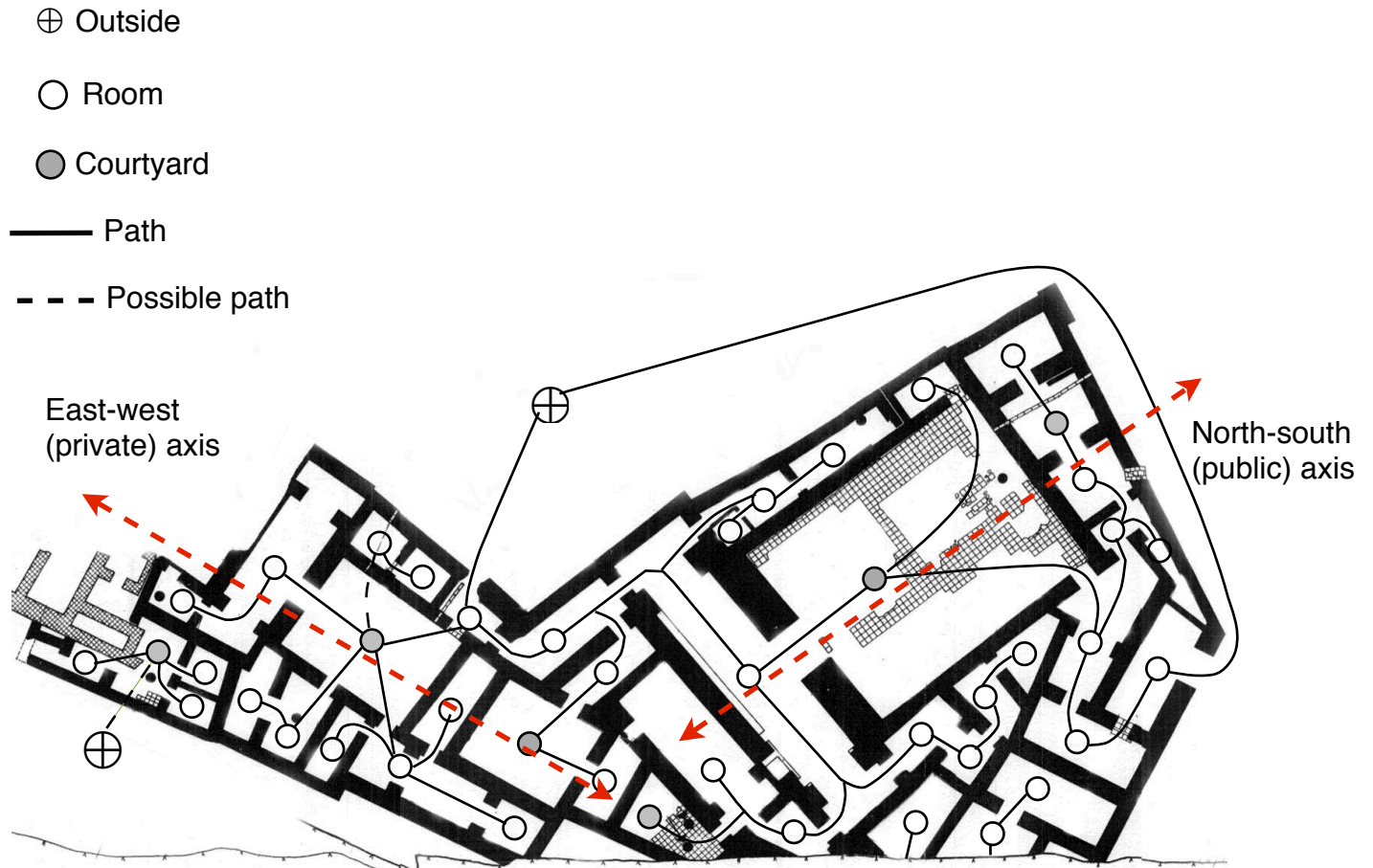


Figure 7: A morphic map of the House of Temti-Wartas, showing the public and private axes. The possible path is based on the the slightly altered map published by Ghirsman and Stève (1966).

Structure	Number of nodes	Total floor area (m ²)*	Integration	Total area covered (m ²)**	Average room size (m ²)	Depth	Percent roofed space
House A	N/A	58.23	N/A	84.48	N/A	N/A	N/A
House B	9	74.24	1	120.32	9.28	4	77.1
House C	14	158.72	1.07	272.64	14.08	6	69.5
House D	12	84.48	1	123.52	7.68	8	87.1
House E	8	53.12	1	88.96	12.16	4	62.65
House F	7	121.6	1	166.4	20.48	6	66.84
House G	9	59.52	0.89	131.2	7.68	4	76
Average	9.67	87.13	0.99	141.07	11.89	5.3	73.2
House of TW	44	1074.53	.91***	1653.88	25.22	7	61.48

*Refers to indoor space.

**Includes walls and outdoor space such as alleys and forecourts that appears to be associated with the house.

***Several rooms in the House of Temti-Wartas are not shown to have a door in the excavators' plan

Table 2: Analysis of the architecture

Specialized Rooms

As labeled by the excavators, the House of Temti-Wartas contains two examples of the *salle à quatre pilastres* (rooms 3 and 37) looking out onto courtyards (rooms 4 and 30, respectively). 3 and 4 are significantly bigger than 37 and 30 and on a different axis of the house, as shown on the morphic map. It's important to keep in mind that these two different axes could very well be a product of the shape of the previously existing housing block and that the design of the House of Temti-Wartas was forced to conform to that. However, it was a choice on the part of the builder to limit access between the two parts. Additionally, the excavators noted

the presence of a bench in room 3, which they believe may have been for receiving guests. Room 3 also had a large, decorated fireplace in one corner, a feature that was generally reserved for reception rooms. The two *salles à quatre pilastres* and the bench, as well as the sheer size of courtyard 4, suggest that the House of Temti-Wartas had a significant public function, which in turn suggests that Temti-Wartas was wealthy and of high status. By contrast, these features are absent from Houses A through G, suggesting that these households were of lower status than the household of Temti-Wartas.

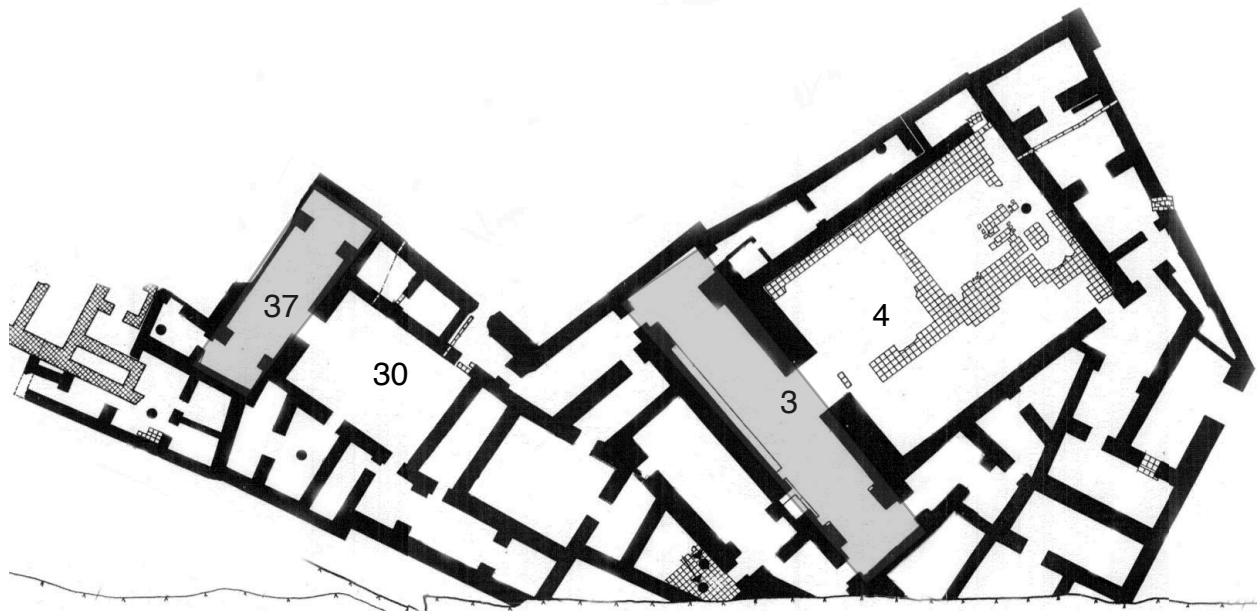


Figure 8: The House of Temti-Wartas, with the *salles à quatre pilastres* highlighted.

In addition to the houses, another important feature of layer XV is the sanctuary. This is a small building with a similar size and layout to the houses. It is separate from the houses around it and accessible from the street. It was identified as a religious structure presumably based on the presence of an altar and several religious objects found inside. According to the excavators (Ghirshman 1965), the sanctuary was at one point within the walls of the House of

Temti-Wartas, and Temti-Wartas was associated with it. The excavators do not specify the nature of this connection or say whether they drew this conclusion based on textual or architectural evidence, but there is almost no sign of the sanctuary in the final plan of the House of Temti-Wartas. However, the buying and selling of temple offices was an important way to obtain wealth in Nippur (Stone 1987); if the same was true at Susa, Temti-Wartas's involvement with the sanctuary may have been part of a system in which he obtained wealth and status through religious positions.

House K at Nippur has four characteristics that mark it as a wealthy household: it was larger than the houses around it, it did not share walls with another house, it had an open area under its control that may have had a public function, and it had service quarters. The House of Temti-Wartas meets the second and third criteria, if we consider courtyard 4 to be similar to the open space controlled by House K.

The first criteria is more ambiguous. While at first glance the House of Temti-Wartas is enormous, it is not the only large house in the neighborhood: to the east is a poorly-preserved house that wasn't fully excavated but that appears to be on a similar scale. It even has a *salle à quatre pilastres*. On the other hand, the houses to the north are much smaller, similar in scale to those of Layer XV. Without excavating more of the neighborhood, we cannot say which of these two types was the norm or whether both were present equally, but we can say that unlike House K, the House of Temti-Wartas is not the only large, well-appointed house in the area. While it certainly seems that Temti-Wartas was well-off compared to the residents of XV, he may not have been particularly wealthy in comparison to his neighbors. The presence of another wealthy household, however, does support the view that the change in wealth at Ville Royale goes

beyond the single housing block that is the focus of this study. Finally, the location of service quarters is extremely difficult to determine without an extensive artifact inventory, and even then service areas are not easy to identify. If there was a service area, it may have been centered around the trapezoidal courtyard in the southwest part of the house. This courtyard contained three “floor jars”, large jars set into the floor which may have been associate with the production of food or beer, as they were sometimes found in association with clay filters. However, with the present evidence it is impossible to say for sure whether this was a service area, and even if it was, it may not necessarily suggest the presence of slaves or servants.

Layer XIV, including the House of Temti-Wartas, is also the first time in which fireplaces become common at Susa, usually living rooms, reception rooms and courtyards. These fireplaces were framed with decoration of painted and sculpted earth. Indoor bathrooms, similar to modern-day Turkish toilets, were also present, suggesting a focus on comfort and hygiene. Houses in XIV were also equipped with brick or earth channels to carry run-off rainwater and waste out onto the street. These features are among the factors that led the excavators to conclude that the XIV neighborhood enjoyed a high standard of living (Ghirshman and Stève 1966). Additionally, the lack of these features in earlier layers suggests that XIV marks a transition toward greater wealth in Ville Royale.

FROM HOUSES TO HOUSEHOLDS: ARTIFACTS

Analyzing Artifacts

Artifacts are crucial for determining room function (Brody 2011, Keith 1999). Artifacts can also be used to examine wealth. Smith (1987) found that in a variety of unrelated cultures, “size and composition of household artifact inventories are strongly associated with wealth levels in both industrial and agrarian states” (302), though their value is only a small proportion of household wealth. Quantity, quality and variety of goods are all important in analyzing wealth.

While Smith’s study focuses on ethnography, he believes that the same theory can be applied to archaeology, though some modifications are needed. For example, some of the best indicators of household wealth in modern societies, such as clothing and furniture, do not preserve in the archaeology record. Some types of artifacts have an ambiguous correlation with wealth. For example, food and craft production are activities that can be associated with high-status households, low-status households, or low-status households producing for high-status households, depending on the type of production and the society; thus, artifacts associated with these activities are not very useful for learning about wealth. However, Smith found that serving ware has a strong correlation with wealth, as it is associated with “household consumption rituals” in which wealthy individuals conveyed their wealth and status by sharing food, drink and other items with guests. Wealthy households hosted these events more often and thus would have had more and nicer serving ware. Smith also found that when serving ware is present in lower status households, it shows fewer signs of use.

Panitz-Cohen (2011) similarly suggested that both serving vessels and large cooking vessels could be associated with feasting and public obligations, which are in turn associated

with wealth and status. Smith suggested that wealthier households are generally larger and therefore consume more food, which may be associated with larger pottery volume. On the other hand, Panitz-Cohen notes that large pottery volumes can be associated with other things, such as stockpiling, gifts or tribute, ritual, or possibly potting. Finally, Smith concluded that wealth can be determined by looking at non-utilitarian items (artwork, jewelry, etc.) and imported items. However, Smith cautions that unlike architecture, artifacts are highly vulnerable to formation processes and can easily be scattered or crushed. Nicholas (1990) found that the positions of artifacts are not necessarily determined by their use. More durable items are more likely to preserve in the archaeological record. On the other hand, more valuable items were more likely to be reused and curated (an effort was made to keep them in good shape) (Smith 1987).

This study analyzes the composition of the pottery collections from Layers XV and XIV, focusing particularly on the XV central housing block and the House of Temti-Wartas. To look at serving vessels, I compare the number and percentage of goblets present in the two layers, as this was the type of pottery most likely associated with hospitality. Additionally, to assess quality and variety, I analyze the quantity of decorated pottery and the number of different classes in each layer. Finally, I also compare pottery styles of Mesopotamian origin with pottery styles native to Iran to determine whether there is a difference that may be related to wealth.

Brody (2011) and Gnivecki (1987) suggest that the best method of analysis involves looking at artifacts within their architectural frameworks. For example, Stone (1987) found that decorated pottery and tablets were often found in living rooms. Kramer (1982) similarly found that in a modern traditional Iranian village, prestige items were often displayed in the living room. The connection between decorated pottery and living rooms ties into Smith's household

consumption rituals, which likely took place at least in part in living rooms. The presence of nice items or decoration, then, supports the belief that a room was used for activities centered around hospitality, including entertaining, and we would expect high-status living rooms to be particularly well-appointed.

The Pottery of Ville Royale

The pottery collected from both layers seems to be limited to intact vessels and other things that were considered interesting by the excavators, such as decorated sherds. The excavators provided little information on the context of the pottery, though some of the vessels were found embedded in the floor of the structures. Additionally, the analysis of the pottery done by the excavators (Gasche 1973) was focused on chronology rather than use. However, the distribution of the pottery collected from Houses B through G and the House of Temti-Wartas are presented below in Table 3 (no pottery was collected from House A). Because there was so little pottery, I did not find it useful to normalize the analysis by factors such as number of rooms or total floor area.

The most common type of pottery was goblets, particularly in the House of Temti-Wartas, followed by jars. While the goblets were all of a fairly standard size and shape, jar size ranged from small hand-held jars to enormous “floor jars” that were found partially or entirely beneath the floor, often with the lip of the jar resting at floor level. The excavators suggest that these jars may have been used for keeping water. However, these jars also sometimes contained other vessels inside them, usually smaller jars or goblets, and in Layer XV (though not in Houses B through G), floor jars were found with clay filters over the top, suggesting they may have been used for food preparation. They may have had other uses, such as food storage, and the

excavators even propose that one may have been a bathtub. They are located both inside and in courtyards.

As predicted by Smith (1987), the wealthier household, the House of Temti-Wartas, had a much higher number of serving vessels, namely goblets, than the less wealthy household. The House of Temti-Wartas had a total of 44 goblets, while Houses B through G had an average of 3.2 goblets. However, the House of Temti-Wartas is a bigger house in general and has more of every type of pottery, and analyzing the pottery by the percentage of the total composition reveals that the House of Temti-Wartas and Houses B through G have similar percentages of goblets. This may suggest that the large number of goblets in the House of Temti-Wartas are actually not an indicator of wealth and status. On the other hand, 22 goblets were found in courtyard 16, which is close to the very large courtyard 4. Such a large collection was likely related to Temti-Wartas's high status public role, which would have involved providing beverages for guests.

All of the pottery found in Houses B through G and in the House of Temti-Wartas was described generically as goblets, bowls, etc. However, several sherds in the other part of the XV housing block were described as cooking ware, or the already-mentioned filters. While this is not enough for an analysis or to draw conclusions about room function, it is interesting to observe that none of this type of pottery (that specifically associated with food preparation) is found in the House of Temti-Wartas, possibly because, as Smith (1987) suggested, a wealthy household like that of Temti-Wartas had food produced outside the house or by neighboring lower-status households.

House	Goblets	Bowls	Jars	Other*	Decorated	Total number of vessels
B through G	20 (60.6%)	5 (15.1%)	7 (21.2%)	1 (3%)	3 (9.1%)	33
Temti-Wartas	44 (68.8%)	1 (1.6%)	13 (20.3%)	6 (9.4%)	9 (14.1%)	64

*Includes flasks and decorated sherds

Table 3: Pottery from Houses B through G and the House of Temti-Wartas

Gasche (1973) classified the pottery into groups based on form. These groups also included comparanda, or references to other excavations where the same type of vessel was found. For the pottery from the central housing block in XV (including Houses B through G, the sanctuary, Area H and the unidentified area to the southwest), 72% belonged to groups with comparanda in Mesopotamia, while 80.6% of pottery from the house of Temti-Wartas belonged to groups with comparanda in Mesopotamia. This suggests that a large percentage of the pottery found at Ville Royale was of a style common in Mesopotamia. The rest of the comparanda was from other sites in Iran or other parts of Susa. It's not clear whether this difference is based on a difference in wealth, with wealthy people preferring more exotic styles, or whether it is simply a change over time, with Elam importing more styles from Mesopotamia in the XIV period.

The House of Temti-Wartas has both a higher number and a higher percentage of vessels or sherds with decoration¹. This difference may suggest greater wealth in the House of Temti-Wartas, but it is not a very large difference. While there may have been other factors influencing

¹ Decoration includes paint, impressions, combing, and incised lines. Decoration does not include applied strips unless they have some other form of decoration on them, as clay strips could have a practical function of making the pot easier to pick up or tying down a covering.

the quality of the pottery, in general it seems that there was no real difference between the two layers. However, it is important to remember that the excavators only collected whole vessels and diagnostic sherds. Among other things, this may result in a disproportionate number of goblets, as this is the vessel type most likely to be found intact due to their small size. It also means that there is likely a disproportionate amount of decorated pottery, as decorated sherds were collected but undecorated sherds were not.

Tablets

The sheer size of the House of Temti-Wartas, the presence of two *salles à quatre pilastres* and two large courtyards, and the large number of goblets all strongly suggest that this was a wealthy, high-status household. While the tablets are not yet fully published, we can use textual evidence to corroborate this view. Tablets found in the House of Temti-Wartas reveal that he held a lot of land, requested large quantities of grain, and employed people in agricultural work. He had several thousand heads of livestock, and ordered large quantities of dates and barley. These tablets also contain records of a delivery of silver from a man living in the island of Bahrein, and donations from the king. Temti-Wartas's involvement in agriculture suggests that he may have been part of the system of agricultural "entrepreneurs" responsible for transporting agricultural products from the country to the city and redistributing it, as described by van der Mierop (1997), or he may have simply made money off the property he owned. The large amount of property and livestock is almost certainly an indicator of great wealth, and the fact that Temti-Wartas received donations from the king also demonstrates that he was of high status.

Using the archaeology and texts together, a tentative picture of Temti-Wartas begins to emerge. The household of Temti-Wartas had a strong connection to the countryside, which is

similar to the House K family and their neighbors in the TA neighborhood at Nippur. Ownership of land and connections to agricultural production were notably lacking for the households in TB, which belonged to urban bureaucrats. It's not clear what the nature of this connection was, whether Temti-Wartas was a rich man from the country looking to make his fortune in the city, or whether he was an urban man who bought or inherited land in the country. Either way, it is interesting to note that he bought other people's houses and remodeled them to create his own house rather than inheriting or purchasing a house that already fit his needs. One possible interpretation is that Temti-Wartas was a "self-made man", who earned his wealth rather than inheriting it, and then used this wealth to build a high-status house in a prominent location.

Finally, the House of Temti-Wartas doesn't appear to have lasted very long: by Layer XIII (1700 to 1620 B.C.E.), there is almost no sign of it, and it has been replaced by another house. Similarly, the House K family and their followers fled Nippur after an economic crisis. If Temti-Wartas, like the House K family, did not have strong ties to the city's elite, it's possible his descendants were unable to maintain his wealth and status.

Some rooms in Layer XIV appear to have been used for accounting and record-keeping, presumably by scribes. In what the excavators (Ghirsman and Stève 1966) describe as the private apartments of the residents, niches beneath the floor contained clay sticks used to inscribe tablets, which the excavators took as evidence that the owners of the house hired private tutors to teach their children. As at Nippur, this increased focus on literacy likely represents an increase in wealth.

In summary, evidence from both artifacts and architecture suggests that this area of Ville Royale experienced an increased in wealth between Layers XV and XIV. This appears to have

taken the form of at least one wealthy individual moving into the area, possibly a “self-made man” rather than a member of the established urban elite.

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Based on evidence from texts, architecture and ceramics, I have found that there was a significant change in wealth in Susa's Ville Royale neighborhood from Layer XV to Layer XIV. The neighborhood changed from one comprised of comparatively small houses with no signs of high status, to one with at least one house, the House of Temti-Wartas, which displayed clear signs of both of wealth and high status. Another house across the street from the House of Temti-Wartas was similar in scale and had at least one *salle à quatre pilastres*, suggesting that it also belonged to a wealthy, high-status individual. This change took place during the Sukkalmahhu Period, a time of prosperity and political stability in Elam, and a time during which Susa rose in power from a regional center to a national capital. While the current data isn't sufficient to prove that the success of the Sukkalmahs was the cause of the increase in wealth at Ville Royale, considering Susa's prominence as the national lowland capital, it no doubt had a profound effect on daily life.

However, only a small portion of Ville Royale has been excavated, about one fiftieth. The sample of excavated information is only a tiny fraction of the houses present and may not be representative of all the houses in Ville Royale. Larger-scale survey and excavation is necessary to draw better conclusions about the changes in wealth that occurred at Ville Royale, and excavations of other residential areas would give us a broader understanding of variation between households and neighborhoods in Susa and how Ville Royale compares to the norm for the city. The presence of more than one wealthy household in Ville Royale suggests the possibility that the house was a venue for competition and display among elite individuals and households, something that could be explored further if we could excavate more wealthy houses in Susa.

Future work could also expand on the textual evidence from the House of Temti-Wartas to try to learn about his connection to the countryside, and whether these connections between city and country for other households in Ville Royale. Future work could also look at textual evidence to gain information about wealth and social organization during the XV period. Finally, future excavations should focus on collecting artifacts for functional analysis rather than chronology, in order to determine how space was used.

Contributions

In order to understand Elam, it is necessary to understand Susa, the lowland capital of this area from approximately 2100 B.C.E. to 640 B.C.E. My conclusions about changes in household wealth, taken together with what we know about the political climate, paint a more complete picture of changes in households and changes in neighborhoods during the Sikkalmahhu Period. It also contributes to our understanding of social and economic organization at Susa and in Elam in general, about which relatively little is known.

On a more general level, comparing changes over time in household wealth with changes in larger-scale political structure contributes to our understanding of how large-scale social and economic issues manifest at the household level, and particularly how we can learn more about these changes by looking at household wealth. Additionally, it gives us a better understanding of how household wealth appears in the archaeological record. Finally, by drawing information from both elite institutions and the daily lives of ordinary people, we can gain a more complete picture of ancient societies.

REFERENCES CITED

Azarnoush, Massoud

1994 *The Sassanian Manor House at Hajiabad, Iran*. Casa Editrice le Lettere, Firenze.

Barrett, John C.

1994 Defining Domestic Space in the Bronze Age of Southern Britain. In *Architecture and Order: Approaches to Social Space*, edited by Michael Parker Pearson and Colin Richards, pp. 79-88. Routledge, London.

Bawden, Garth

1982 Community Organization Reflected by the Household: A Study of Pre-Columbian Social Dynamics. *Journal of Field Archaeology* 9(2):165-181.

Brody, Aaron J.

2011 The Archaeology of the Extended Family: A Household Compound from Iron II Tell en-Nasbeh. In *Household Archaeology in Ancient Israel and Beyond*, edited by Assaf Yasur-Landau, Jennie R. Ebeling and Laura B. Mazow, pp. 237-254. Koninklijke Brill NV, Leiden, the Netherlands.

Carter, Elizabeth Francis.

1971 Elam in the Second Millennium B.C.: The Archaeological Evidence. Unpublished Ph.D dissertation, Department of Near Eastern Languages and Civilizations, University of Chicago.

Crawford, Harriet E.W.

1977 *The Architecture of Iraq in the Third Millennium B.C.* Mesopotamia: Copenhagen Studies in Assyriology Vol 5. Akademisk Forlag, Copenhagen.

Gasche, H.

1973 *La Poterie Élamite du Deuxième Millénaire a.C.* Mémoires de la Délégation Archéologique en Iran Vol. 47. E.J. Brill, London.

2011 Modèles de L'Iwan dans L'Architecture Achéménide, pp 177-186. In *Un impaziente desiderio di scorrere il mondo*, edited by Carlo Lippolis and Stefano de Martino, pp. 177-186. Monografie di Mesopotamia, Vol. 14, Le Lettere, Florence.

Ghirshman, Roman.

1965 Suse du temps des Sukkalmah. Campagne de fouilles 1963-1964. Rapport préliminaire. *Arts Asiatiques* 11:3-21.

1967 Campagne de l'hiver 1965-1966. Rapport préliminaire. *Arts Asiatiques* 15:3-27.

Ghirshman, Roman, and Marie-Joseph Stève

1966 Suse. Campagne de l'hiver 1964-65. Rapport préliminaire. *Arts Asiatiques* 13:3-32.

Gnivecki, Perry L.

1987 On the Quantitative Derivation of Household Spatial Organization from Archaeological Residues in Ancient Mesopotamia. In *Method and Theory for Activity Area Research: An Ethnoarchaeological Approach*, edited by Susan Kent, pp. 176-235. Columbia University Press, New York.

Hinz, Walther

1972 *The Lost World of Elam*. Translated by Jennifer Barnes. New York University Press, New York.

Horne, Lee

1994 *Village Spaces*. Smithsonian Institution Press, Washington.

Ilan, David

2011 Household Gleanings from Iron I Tel Dan. In *Household Archaeology in Ancient Israel and Beyond*, edited by Assaf Yasur-Landau, Jennie R. Ebeling and Laura B. Mazow, pp. 133-154. Koninklijke Brill NV, Leiden, the Netherlands.

Keith, Kathryn Elizabeth

1999 Cities, Neighborhoods and Houses: Urban Spatial Organization in Old Babylonian Mesopotamia. Unpublished Ph.D. dissertation, Department of Anthropology and Department of Near Eastern Studies, University of Michigan.

Kent, Susan

1987 Understanding the Use of Space: An Ethnoarchaeological Approach. In *Method and Theory for Activity Area Research: An Ethnoarchaeological Approach*, edited by Susan Kent, pp. 1-62. Columbia University Press, New York.

1990 Activity Areas and Architecture: An Interdisciplinary View of the Relationship Between Use of Space and Domestic Built Environment. In *Domestic Architecture and the Use of Space*, edited by Susan Kent, pp. 1-8. University Press, Cambridge.

Kramer, Carol

1982 *Village Ethnoarchaeology: Rural Iran in Archaeological Perspective*. Academic Press, New York.

Longfellow, B.

2000 A gendered space? Location and function of Room 5 in the Villa of the Mysteries. In *The Villa of the Mysteries in Pompeii: Ancient Ritual, Modern Muse*, edited by E. K. Gazda, pp. 25-33. The Kelsey Museum of Archaeology and the University of Michigan Museum of Art, Ann Arbor, Michigan.

Nicholas, Ilene M.

1990 *The Proto-Elamite Settlement at TUV*. Malyan Excavation Reports Vol. 1. University Museum of Archaeology and Anthropology, University of Pennsylvania, Philadelphia.

Oppenheim, A. Leo

1977 *Ancient Mesopotamia: Portrait of a Dead Civilization*. Completed by Erica Reiner. The University of Chicago Press, Chicago.

Panitz-Cohen, Nava

2011 A Tale of Two Houses: The Role of Pottery in Reconstructing Household Wealth and Composition. In *Household Archaeology in Ancient Israel and Beyond*, edited by Assaf Yasur-Landau, Jennie R. Ebeling and Laura B. Mazow, pp. 85-106. Koninklijke Brill NV, Leiden, the Netherlands.

Pearson, Mike Parker, and Colin Richards

1994 Ordering the World: Perceptions of Architecture, Space and Time. In *Architecture and Order: Approaches to Social Space*, edited by Michael Parker Pearson and Colin Richards, pp. 98-112. Routledge, London.

Perrot, Jean

2010 *Le Palais de Darius à Suse : Une Résidence Royale Sur la Route de Persépolis à Babylone*. Presses de l'université Paris-Sorbonne, Paris.

Rapoport, Amos

1990 Systems of Activities and Systems of Settings. In *Domestic Architecture and the Use of Space*, edited by Susan Kent, pp. 9-20. University Press, Cambridge.

Roaf, Michael

1973 The Diffusion of the "Salles a Quatre Saillants". *Iraq* 35(1):83-91.

Schacht, Robert Marshall

1973 Population and Economic Organization in Early Historic Southwest Iran. Unpublished Ph.D. dissertation, Department of Anthropology, University of Michigan.

Shai, Itzhaq, Aren M. Maeir, Yuval Gadot and Joe Uziel

2011 Differentiating Between Public and Residential Buildings: A Case Study from Late Bronze Age II Tell es-Safi/Gath. In *Household Archaeology in Ancient Israel and*

Beyond, edited by Assaf Yasur-Landau, Jennie R. Ebeling and Laura B. Mazow, pp. 107-132. Koninklijke Brill NV, Leiden, the Netherlands.

Smith, Michael E.

1987 Household Possessions and Wealth in Agrarian States: Implications for Archaeology. *Journal of Anthropological Archaeology* 6(4):297-335.

2013 The Archaeology of Aztec Families and Communities. Manuscript on file, Anthropology of Program, Arizona State University, Phoenix, Arizona

Stone, Elizabeth C.

1987 *Nippur Neighborhoods*. In *Studies in Ancient Oriental Civilizations*, Vol. 44. The Oriental Institute, Chicago.

Sumner, William M.

2003 *Early Urban Life in the Land of Anshan: Excavations at Tal-E Malyan in the Highlands of Iran*. Malyan Excavation Reports Vol 3. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

Wilk, Richard R.

1990 The Built Environment and Consumer Decisions. In *Domestic Architecture and the Use of Space*, edited by Susan Kent, pp. 34-42. University Press, Cambridge.

Wilk, Richard R. and William J. Rathje

1982 Household Archaeology. *American Behavioral Scientist* 25(6):617-639.

Van der Mierop, Marc

1997 *The Ancient Mesopotamia City*. Oxford University Press.

APPENDIX A

Structure	Goblets	Bowls	Jars	Floor jars	Other*	Total
House B	12	0	1	0	0	13
House C	2	0	1	2	1	6
House D	3	1	0	0	2	6
House E	0	1	0	0	0	1
House F	2	1	0	0	0	3
House G	2	2	1	0	0	5
House of TW	44	1	5	8	6	64

*Includes flasks and decorated sherds
Pottery totals for individual houses