Emerging Evidence about Neolithic Western Anatolia: What can be Gained from Studying Architecture?

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Knowledge of Neolithic western Anatolia has grown greatly over the last two decades due to an increase in systematic excavations undertaken in the Aegean and Marmara regions. A synthesis of the architecture and settlement organizational features of the settlements is important in expanding knowledge of both social organizations of the prehistoric peoples, and the relation of areas in western Anatolia to those to areas to the east and west at the time. This paper serves as a beginning of the comparison of some key features related to the built environment in western Anatolia. From here, the ideas about architecture that have already been applied to settlements in central Anatolia and southeastern Europe can then be used for a better understanding of western Anatolia and its role in the spread of the Neolithic way of life.

Introduction

Over the last two decades there has been a surge in information about Neolithic western Anatolia due to a number of new excavations undertaken in the area, more than 20 in the last two decades.[1] Previously, knowledge of the Neolithic period in this area had mainly come from surface surveys and from a small number of excavations in the northwestern part of the region.[2] The wealth of new information from the last two decades is still being added to through continuing excavations and publications expanding on preliminary reports of the completed excavations.[3]

Though the data is not yet complete, beginning an assessment of the sites that are finished is important. The description of architecture specifically has been done by a few authors as part of larger, general discussions for some of the sites in western Anatolia.[4] However, there has been fewer comprehensive and comparative discussions for excavated sites in the Aegean and Marmara region, and the architecture has not been the singular focus of such comparisons. As a preliminary piece of research, a summary of the well documented architecture at excavated sites can serve as a starting point for the comparison. Such a comparison can then be used to understand more about each site, and about regional interactions between western Anatolia and areas to the east and west.

Background

The use of the term Neolithic can be vague or misleading because of the different meanings and implications it can have based on the intention of the person using it.[5] Before examining the architecture of the Neolithic, and before comparisons can be made between sites given the label of 'Neolithic' it is important to define. Neolithic can be defined as a set time period for a region, a 'package',[6] or a way of life. Rather than picking a firm date for this comparison, it may be more meaningful to compare architecture based on the arrival of the Neolithic way of life, defined as sedentary village life with all of the social networks and regulations that would entail.[7] The Neolithic settlements of western Anatolia do not all have the same temporal range of Neolithic occupation, and they certainly do not match the dates applied to the central steppe region of Anatolia.[8] Not every site in western Anatolia has accurate radiocarbon dates from the Neolithic, and some of those that do either have very few dates or disputed results.[9] According to the radiocarbon dates given at sites throughout Western Anatolia the 'package' arrived at various times, roughly beginning around 6500 BC.[10] The designation of a settlement level as "Neolithic" is generally based on the presence of various components recognized as part of the Neolithic way of life. However, taking those factors into account, there is a general range that the majority of occupation layers attributed to the Neolithic fall within. Although there are outliers, the early occupation layers appear around 6500 BC, and the settlements in the western region transition into the Chalcolithic period after 5500 BC.[11]

Western Anatolian sites, specifically those in the Aegean and Marmara regions, can be grouped together due to both the similar state of research throughout the area, and because of the apparent division of this region from others culturally and geographically during the Neolithic period. The Lake District is not included because it has been an area of focus for Neolithic excavations and research for many years, much like the central steppe region.[12] Accessibility to the hinterland via a number of east-west oriented rivers and the

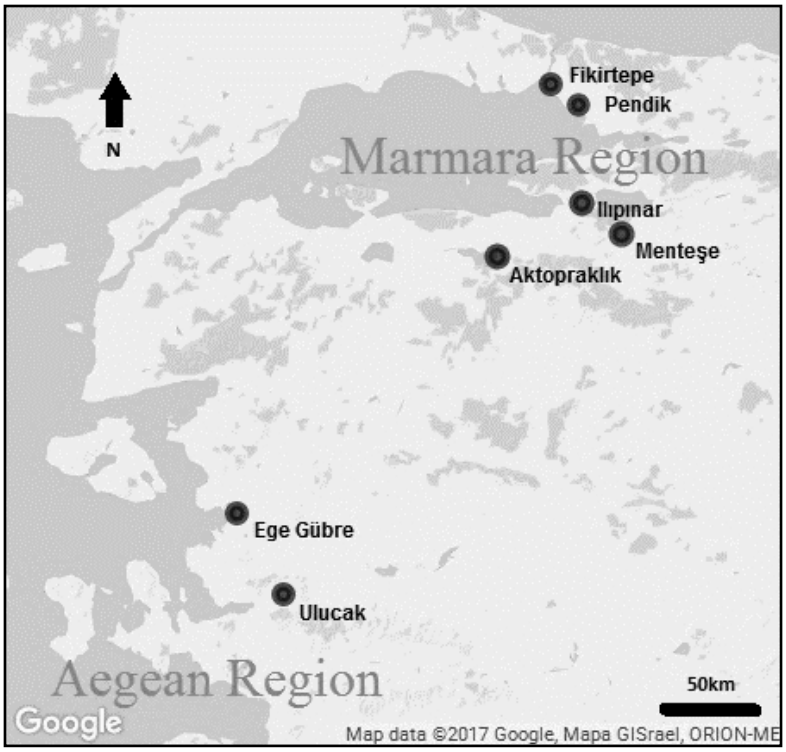

Figure 1. The location of the Neolithic sites in western Anatolia discussed.

presence of broad, fertile plains separated the west physically from the coastal regions of the south and the Black sea, where mountains limited access to the interior of the land mass.[13] The best Neolithic sites for this brief comparison are those which have been excavated and for which the architecture has been exposed and outlined by published reports or articles. Ulucak[14] was the first excavation, in 1995, of a Neolithic site in Aegean Anatolia. Ege Gübre, located within 50 kilometers of Ulucak in the northwestern direction, is important for comparison because it shows the variability in building form and settlement organization in the Aegean region, despite proximity.[15] The sites of Fikirtepe and Pendik were first excavated more than fifty years ago in the Marmara region, and the two have very similar architecture. The remaining sites in the Marmara region that fit the criteria for comparison includes Aktopraklık,[16] Ilıpınar, and Menteşe. Neolithic occupations at Ilıpınar were present in levels 10-5A at the site, but distinct differences in architecture allow for the division and separate consideration of levels 10-7 and 6-5A. The map in Figure 1 shows the location of the sites in western Anatolia. There is an apparent clustering of sites in two areas, however this is not indicative of broad swaths of land outside of those areas without inhabitants. Surveys that have found sites throughout the western coast and northwest show that the two clusters may be the result of modern biases effecting excavation.[17] There are currently far more prehistoric sites known than those seven, but some are only known through surface survey and others are without sufficient published

data yet available for comparison.

Western Neolithic Architecture

Organization of the features of the excavated sites in western Anatolia for the purposes of comparison can be difficult because there is so much variability between them. Descriptive features related to architecture can be divided into two general categories: features related to the buildings and those related to the overall organization of the settlement. Each of the two categories contains many different features, but there are several that are discussed most frequently in publications regarding western Anatolia and which would then be easiest to compare across a larger number of sites. The building features category includes the materials used for construction, the general shape, and the size of domestic buildings. Though not present for all sites, the number of storeys, floor composition, and the presence or absence of burials under the floors are also mentioned multiple times. These features are often mentioned in publications because, in general, they are discernable during excavation or shortly thereafter, and are often repeated features at multiple buildings across the same settlement layer. The settlement organization encompasses the orientation of houses to one another, presence or absence of communal space, partitions in or around the settlement, and the uniformity of building features throughout the settlement layer at one time. Settlement organization may be harder to discern from excavations because in order to understand how all of the settlement is arranged and how all buildings and open spaces relate to one another, a great deal more of the settlement needs to be exposed through excavation. This is not feasible at all sites for many reasons including the destruction of parts of the site due to later occupations in the same location and the inability for the excavations to uncover the entire site when there is limited time or funding.

Building material, though somewhat dependent on available resources,[18] can be highly variable due to the choices made by the builders about how the resources are prepared and combined within the building. Although there is some correlation between materials and the shape of the building, they are not always related and are also likely to vary due to cultural choice.[19] The structures excavated at the sites of Fikirtepe and Pendik[20] were very similar, with both settlements comprised of irregular ovoid sunken hut structures. These structures measured between 3 and 6 meters in diameter, and were constructed of wattle and daub.[21] Similarly, at Aktopraklık C the structures were wattle and daub, circular and some seemed to have had concave floors.[22] Structures composed entirely of wattle and daub are also present in the Aegean region, at Ulucak. However, the structures at Ulucak were generally sqaure. At Menteşe, wattle and daub may have been used in the rectangular buildings present during the Neolithic as part of an upper half of a structure, with a base of mud with wooden posts. The use of mud with wooden posts is seen also in the square structures of nearby Ilıpınar levels 10-7, though the posts were only present in some of the buildings. Ege Gübre's Neolithic wattle and daub structures were rectangular buildings of one or two rooms, which measured either 9x6 meters or 10x8 meters.[23] This variability in size and shape is more pronounced than at the other settlements.

It is also worth noting the presence of smaller, potentially non-domestic construction or connected rooms related to the domestic structures in several settlements. At Ege Gübre some of the buildings have a side room,

and several round structures are seen within the settlement that were used simultaneously with the rectangular buildings.[24] As of yet, there are no parallels to these circular buildings in the Aegean region, nor are there other mixtures of circular and square building shapes simultaneously.[25] At Menteşe there are similar structures, referred to as silos, concentrated around a single building.

Table 1 displays the features of the buildings related to shape, size, and material only. The shaded division in the table replicates the division between the Marmara and Aegean settlements in order to display at the very least the general proximity of one settlement to another. As is visible in the chart and from the descriptions, the use of mainly wattle and daub and mudbrick, and with mostly rectangular, square or ovoid buildings is repeated throughout western Anatolia. However, the combination of said materials varies. Though there is some correlation, the differences in the architecture of closely related settlements shows that there are no similarities based solely on this proximity.

The excavations of several sites have yielded information about the open spaces that are incorporated into settlements. The entrances of Ege Gübre's domestic structures all face a central courtyard that covers an estimated 900 square meters.[26] At Ilıpınar 10-7, the courtyards were associated with single structures, rather than a large, singular courtyard for all houses. The later Neolithic occupation of Ilıpınar[27] follows a radial plan of domestic structures, with a nearby spring as its focal point, and a large, open space within.[28]

In addition to the empty space, the marked division of space by walls, ditches, and embankments is present at some sites. A defensive wall made of stone was found in Ege Gübre level IIIb,[29] but was later replaced by an enclosure wall.[30] The occupation layers at the end of the Neolithic period at both Aktopraklık and Ilıpınar are surrounded, though not entirely, by a ditch with an embankment. At Aktopraklık, the edges of the ditch was repeatedly plastered. Not all of these are seen as defensive structures, as several were too small to act as a barrier from intruders and most of them do not surround the entire living space of the settlement. Instead, these partitions are often assumed to be symbolic settlements boundaries.[31] The wall present on the north-eastern axis of the settlement Ege Gübre was interpreted as a barrier from occasional flash-flooding.[32]

Though the location of burials would not normally be considered a concern for those studying architecture, the burial of the deceased below the floor of houses is common across Neolithic Anatolia. Burials located below the floors are important to note because they would likely effect the residents, through the physical effects of burial in a living floor, and potentially through the social effect the burial would have on the people inhabiting the space. At Aktopraklık several burials were found within house floors. This is also the case at Fikirtepe and Pendik, however burials at these sites are also located in open spaces. Menteşe has only one burial under the floor of a building, also an outlier within the site because it is the only double burial present. Although there is only one known burial at Ege Gübre, it too was found under the floor of a building. Many burials were found at Ilıpınar and, although their locations were poorly preserved, the bodies are all assumed to have been interred in open spaces.[33]

Table 1. The building details of Neolithic western Anatolian sites discussed in the present article. The sites in the white rows are located in the Marmara region, while those in the shaded rows are located in the Aegean region.

Fikirtepe	wattle and daub	irregular ovoid	3-6m diameter
Pendik	wattle and daub	irregular ovoid	3-6m diameter
Aktoprakhk C	wattle and daub	circular	3-6m diameter
Ilıpınar (level 10-7)	mud with some posts	square or rectangular	6 m in length
(level 6)	molded mudbrick	square	3.4-4.5 m length
Menteşe	mud with some posts, wattle and daub upper	rectangular	<6m length
Ege Gübre	wattle and daub	square (one room) or rectangular (two room) with associated circular buildings	9 x 6 m or 10 x 8 m
Ulucak	wattle and daub	square	4.5 x 4.5 m

Discussion

Information about the buildings and the settlement organization at the site level alone is enough to begin to understand more about the Neolithic period in western Anatolia, however there is also the opportunity to delve deeper. As has been shown by other authors, there is a connection between architecture and the social organization of the people who occupied those structures.[34] Many publications linking architecture and social organization have focused on the Neolithic settlements of southeastern Europe or central Anatolia.[35] As more data emerges, these same methods can now be applied in western Anatolia. Rather than being randomly created or organized, settlements are often planned and collectively produced.[36] After completion, the architecture is also interacted with daily, and shapes the way in which the residents interact and view their community.[37] With the understanding of these notions, one can then draw conclusions about the social

organization of inhabitants. Levels of private ownership can be demonstrated by the presence of nonvisible storage spaces, which allow people to accrue their own property.[38] Similarity of contemporary buildings throughout the settlement may show that there was some degree of equality, with no singular person visibly asserting their superiority or power over others. The repetition of house location through time, evident at sites like Illıpınar 10-7, may indicate the physically enforced creation and repetition of the same social groups over time.[39] Central spaces may denote collective activity. These examples are some of the many ways that architecture can reveal the social organization of a group.

This preliminary information is also enough to begin to see the variability and trends of the western Anatolian Neolithic. With a more detailed analysis, and broader comparison of the exchange of ideas and potential relationships between sites may be discerned. Of great interest to archaeologists who work in both the Near East and Europe is the ability of such evidence to contribute to understanding how the Neolithic way of life spread out of the central Anatolian steppe region, into western Anatolia, and into Europe. There are many unanswered questions about exactly when, through what means, and along which paths the Neolithic way of life spread. Archaeological evidence in the decades prior to the intensification of research in western Anatolia focused on material gained in the region from surveys, and on the archaeological excavations located in Europe and central or eastern Anatolia. Archaeological evidence was also (and continues to be) supplemented with research in other fields, including, but not limited to genetic studies, linguistic research, and ethno-historic comparisons.[40] The combination of knowledge in western Anatolia with what has already been researched in the Lake District and the central steppe region can be used to begin piecing together a more comprehensive understanding of Anatolia in prehistory. Western Anatolian research may also now be used to fill in some of the missing pieces of information about the origins of the Neolithic in southeastern Europe, and the relationship between people in what is now two separate continents during their prehistory. Already, the information obtained from western Anatolia and southeastern Europe shows that this process was more complicated than previously thought. Many arguments were based on a single means or path, but now it seems more likely that those arguments would have been too simplistic, with the movement instead resulting from multiple simultaneous occurrences.[41] A great deal of attention has been given to northwestern Anatolia due to its potential role as the contact zone between Anatolia and southeastern Europe.[42]

If architecture is treated as a form of material culture, then the shared characteristics over time and space can be used to see relationships between the people creating these structures. This application of buildings as material culture has been demonstrated by Serena Love based on research in the Near East, where she has focused on both the materiality of structures and the act of production.[43] If the act of creating buildings is understood as a craft that incorporates the choice, knowledge, and skill of the creators then it is similar to other materials such as pottery, tools, and figurines. Though the buildings themselves are not transportable, knowledge about their creation and ideas about their design can be spread just as methods of molding and decorating a pot may be spread. Architecture adds another dimension of material culture comparison that should not be ignored. It has already become evident that despite similarities in pottery across the Aegean regions, the architecture shows

considerable variation.[44] Without including this information, differences in cultural knowledge, and therefore perhaps a more complex relationship between sites, may not be fully understood.

Conclusion

A synthesis of the information about architecture at the sites excavated in western Anatolia over the last two decades is important. The full understanding of architectural elements and site organization is far too extensive to be fully elaborated on in one article, but the beginning of comparison and recognition of emerging patterns is useful. The brief comparison here, once expanded upon, can be used to gain a better picture of the similarities and differences in the built environment across a larger area. This information about architecture can then be given the same treatment that buildings and settlement organizations in the areas to the east and west have been given, that is, extrapolating more information about social organization and daily life. If architecture is also treated as material culture, then it can be used to infer the relationships within and between larger regions. Ideas that are transmitted about organization, material composition, construction, and other related aspects shows the transfer of ideas and relationships over time and space.

With continued intensive surveys in order to discover more sites, and with more extensive excavations of those Neolithic sites, the interactions within and between regions will become clearer. Additional publications about the excavations that have been completed or are still underway will add to the growing body of knowledge of Neolithic western Anatolia. The analysis of additional criteria, such as wall thickness, door orientation, internal building organization, or floor composition, could also contribute to a more accurate understanding of the region during prehistory.

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Endnotes:

1. M. Özdoğan 2011, S420.
2. Lichter 2005, 63.
3. M. Özdoğan 2011.
4. Düring 2011, Karul 2011, for example.
5. For a detailed understanding of this issue see oilingiroğlu 2005.
6. 'Package' is defined generally as the material culture of the time. Though variable, it often includes the reoccurring elements found across Anatolia and southeastern Europe such as clay figurines, sling missiles, red painted pottery, or various ground stone tools.
7. M. Özdoğan 2011, S417.
8. Düring 2011, for example, marks the beginning of the aceramic Neolithic at 8500 BC in central Anatolia, and the end of the Late Ceramic there at 6000 BC.
9. Such as Fikirtepe, which was excavated in 1960, and is now buried by urban development (Düring 2011, 180).
10. There are some dates earlier than this, but they are few. 6500 BC seems to be when the majority of the earliest dates at sites in the western regions note Neolithic occupation. This date is used because by 6500 BC the Neolithic is present throughout the sites in the region, rather than at just a few scattered sites.
11. The division of the Neolithic into phases is not included in this comparison. As the focus is on the architecture, divisions are only necessary if there are major changes present in the architecture or settlement organization within the Neolithic.

Phase notations are difficult to rely on due to the potential inaccuracies between division designations and their associated broad/ regional cultural changes. Periodization is especially difficult in western Anatolia where the characterization of material culture across the entire region is not complete, and the times for periodization in neighboring areas cannot be used accurately in this area. For a more detailed explanation of these issues see Düring 2011, 126-129.

12. E. Özdogan 2016, 268.
13. Lichter 2005, 60.
14. The level dating to the Neolithic discussed throughout the article is Ulucak 5.
15. Düring 2011, 178.
16. Aktopraklık C in particular is used here because it appears to have been the earliest prehistoric layer at this location, and it is the occupation for which reports including details about the architecture have been published.
17. For a more detailed map of material known in western Anatolia through surface surveys see Lichter 2005, Figure 1 or Özdoğan 2011, Figure 1.
18. Serena Love demonstrates in her 2013 publication that although the environment dictates resource availability for housing materials, culture is more responsible for choice in architectural form and building material. Her study was based on pre-pottery Neolithic mudbrick structures from the Levant and Anatolia.
19. See Love 2013 for a more in-depth understanding of correlations between material choice and structure shape.
20. Both Fikirtepe and Pendik were rescue excavations of relatively shallow deposits where publications from the excavations are minimal (only preliminary reports). The exact chronology is still problematic due to lack of radiocarbon dates. Düring 2011, 180 and 182.
21. Düring 2011, 180.
22. Karul and Avcı 2011, 3.
23. Sağlamtimur 2012, 198.
24. Sağlamtimur 2012, 199.
25. Çilingiroğlu and Çakırlar 2013, 25.
26. Sağlamtimur 2012.
27. Ilıpınar 6.
28. Roodenberg 2008, 11.
29. Ege Gübre's Neolithic deposits are found in levels IIIa, IIIb, and IV.
30. Sağlamtimur 2012, 197.
31. Düring 2011, 192.
32. Based on the orientation of the wall to a nearby stream and the accumulation of silt (Sağlamtimur 2012, 199).
33. Düring 2011, 189.
34. See Parker Pearson and Richards 1994 for demonstrations of this from various times and places; Düring and Marciniak 2005 and Nanoglou 2001 provide specific examples from Neolithic southeastern Europe and the Near East.
35. Bailey 2000 and Düring 2001 for example.
36. Love 2013b.
37. Parker Pearson and Richards 1997, 3.
38. Bogaard et al. 2009.
39. Düring 2011, 189.
40. See Haak et al. 2010, Richards et al. 1996, and Semino et. al 2000 for example; Zvelebil 2001 offers a summary of the theories of European origins of the Neolithic (at the time of publication, which may therefore be outdated in parts), and evaluates the suitability of those methods.
41. M. Özdoğan 2011, S416.
42. M. Özdoğan 2011, S415.
43. Love 2013a, 2013b.
44. Düring 2011, 178.

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