Neolithic Houses and Households in Central Anatolia in multi-regional perspective

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ABSTRACT

I draw attention to the distinctive agglutinative or cellular house pattern observed at numerous prehistoric sites in Central Anatolia, and suggest that these are indicative of a suite of social relations that may have differed markedly from roughly contemporaneous village sites in southeastern Turkey and elsewhere in southwestern Asia. Looking at archaeological and architectural remains from major excavated sites such as Aşıklı Höyük, Çatalhöyük, and Canhasan, I argue that a strong local character that persists through a long period of time typifies these sites and many others in the region. This observed continuity underscores and supports views of in situ cultural development within the Anatolian interior. Rather than focusing simply on descriptions of house plan and floor area, integrative approaches explicitly working within a ‘House Societies’ model of social and settlement organization offer more insight into these unique cultural formations observed at early Holocene in Central Anatolia.

Introduction

When Flannery (1972) originally proposed his seminal argument concerning the relationship between architectural form and social organization, Turkish prehistoric archaeology was still in its infancy. Many of the sites he employed were located in the southern Levant and Iraq and had been excavated as early as the 1940s. At the time of his writing, Neolithic occupation in Central Anatolia had only recently been established in the mid-1960s at the now famous site of Çatalhöyük (Mellaart 1967; also Hodder 2007). This paper reviews ongoing research from Central Anatolia concerning the relationship between house form and social structure, and argues that archaeologists working in this region must reevaluate Flannery’s general hypothesis, and its wider social implications (see also Cutting 2005; Düring 2006; Steadman 2004). Rather than simply analyzing house form from an architectural
or art-historical perspective, archaeologists must begin to consider the types of social relationships and organization that are implied by these remains.

**Villages And social organization: Flannery’s original proposal**

Flannery (1972) suggested that archaeologists of his day had fundamentally misunderstood the processes underlying the emergence of the first villages and the adoption of agriculture. The problem was that researchers had “confused” three independent variables by assuming that they were interdependent and could act as mutual referents. The variables he listed were: 1) agriculture, 2) sedentism, and 3) villages; one would be hard pressed to put forward three more elemental aspects of the issue. In this mistake, the presence of full-time sedentism was used to infer village-type settlement structure, and then both of these were thought to necessitate the adoption of agriculture. These misconstrued lines of evidence were highlighted in order to show the development of cultural “systems”, as applied to the village-type settlement concept, as the result of unique “trajectories” (a sequence of systems through various “states”) and the interplay between each system and its environmental context. Flannery proposed a new understanding of culture change as a system against that of the “evolutionists”, in either their unilinear or multilinear forms.

Flannery’s approach was comparative, selecting prominent sites from the Near East and Mesoamerica to serve as case studies exploring the relationship between these three variables through time. Rather than a mere examination of structural form, Flannery proposed to examine social organization, subsistence strategies, and settlement structure, and how each of these were observed to change across the threshold of two different subsistence strategies. He suggested that changes in house form correlated with changes among the variables, but not in the previously thought manner. The subsistence change from foraging to farming saw a concomitant change in house form, from circular to rectangular structures. It was not simply a matter that buildings were circular then rectangular, something easily detectable by archaeologists, but these alterations indicated larger social changes that were not readily apparent. Thus, it was not only that buildings themselves had changed form, but that their spatial arrangement within the site as a whole also denoted a changed relationship between the inhabitants.

His primary guide in this respect was ethnographic information obtained from African contexts. For example, his idealized “circular hut compound” was largely derived from the Massa of Cameroon in western Africa (see Flannery 1972: 32, Figure 1). He makes use of seven such ethnographically documented cultures of sub-Saharan Africa, which ranged from Cameroon to the Sudan to South Africa (Rhodesia). From a synthesis of the ethnological works consulted, Flannery suggested a number of material correlates the archaeologist would expect to find based on social organization of a site’s inhabitants. House form was
but one category of evidence available to the archaeologist to infer the social organization of the inhabitants. He identified two primary forms of household types, namely Extended and Nuclear varieties that required different floor plan configurations and spatial organization of structures within a site because of differing social realities (Table 1).

**Table 1: Summary of archaeological correlates for Extended Family social organization (after Flannery 1972: 30-32)**

<table>
<thead>
<tr>
<th>Settlement Features</th>
<th>Social Reality</th>
<th>Material Correlate</th>
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| 1. Circular huts    | • Huts occupied by no more than 2 persons  
                     • Humans and animals co-reside in structures | • Small diameter of huts (3-5m diameter), providing approximately 7m² per person  
                     • Not all huts used as residences (some used as storage, kitchens, etc.).¹  
                     • Not all huts in use on a daily basis (e.g., used for entertainment of guests) |
| 2. Huts arranged around central area/space | • Production occurs in central space  
                                              • Conjugal partners (i.e., a man and his wives) may have huts grouped together, separated from relatives (i.e., brother and his wives)  
                                              • Or, huts may be segregated by sex, with male and female huts grouped on opposing sides of central area (like the Massa) | • Huts arranged in circle around central area  
                                              • Central area may be as small as 30m in diameter or as large as a hectare |
| 3. Shared food storage | • Granaries and other food storage are shared  
                          • Head man (and his wife) may have “private” storage units | • Storage units built like residential circular huts  
                          • Can be grouped (e.g., Rhodesian honeycomb arrangement) |
| 4. Extended Household | • Members of compound related  
                           • Form a basic labour group | |

Extended families were identified with the circular shape of individual huts, as well as the circular or ovular shape of compounds. This circular hut and ovular compound settlement type was occupied by a man and his polygynous family residing with other members of his family (and their families) in the compound. Specifically, Flannery notes that African compounds typically were comprised of 6-8 males and their families, which could range from one to three
wives each and associated children. Tasks were carried out by all members of the compound, and typically took place in the central area. Flannery suggests that this type of social organization characterized the Pre-Pottery Neolithic A (PPNA) of southwestern Asia (11,700-10,500 cal. BP; see Simmons 2007: 89). He notes that sites often have between ten to fifteen circular huts arranged around a large open area. Archaeobotanical evidence from selected sites point to the exploitation of wild or early domesticated cereals, and the complete lack of domesticated animals (except for Beidha in Jordan).

**Table 2: Summary of archaeological correlates for Nuclear Family social organization (after Flannery 1972: 38-40)**

<table>
<thead>
<tr>
<th>Settlement Features</th>
<th>Social Reality</th>
<th>Material Correlate</th>
</tr>
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<tbody>
<tr>
<td>1. Rectangular houses</td>
<td>Accommodate families, not individuals</td>
<td>Large structures (&gt;15m), able to house 3-4 adults &lt;ul&gt;&lt;li&gt;Complete inventory of artifacts, including mixed sex artifacts (needles, cooking pots, projectile points, etc.)&lt;/li&gt;&lt;/ul&gt;</td>
</tr>
<tr>
<td>2. Individual food storage</td>
<td>Household (and family) basic unit of production &lt;ul&gt;&lt;li&gt;Granaries and other food storage facilities are not shared&lt;/li&gt;&lt;li&gt;Segregated work spaces (labour not shared)&lt;/li&gt;&lt;li&gt;Marked by competition&lt;/li&gt;&lt;/ul&gt;</td>
<td>Houses have granaries and food storage facilities inside structure or immediately adjacent to it &lt;ul&gt;&lt;li&gt;Walled courtyards&lt;/li&gt;&lt;/ul&gt;</td>
</tr>
<tr>
<td>3. House plan flexible</td>
<td>Able to accommodate the addition/subtraction of immediate family members</td>
<td>Evidence for wall construction and modification</td>
</tr>
<tr>
<td>4. Social Organization</td>
<td>Creation of institutions that “move beyond kinship” (e.g., sodalities)</td>
<td>Tasks requiring large number of individuals (e.g., land clearing)</td>
</tr>
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</table>

In contrast, the shift from Extended households to Nuclear families as the basic unit of production and social organization is thought to coincide with the adoption of rectangular house plans (Table 2). This is primarily observed in the construction of a single rectangular structure capable of housing a smaller number of individuals (i.e., the conjugal couple and their offspring), as well as an enclosing wall around the central courtyard. In this configuration, the household was supported solely by the labour of its members rather than through pooling inter-household labour, as seen in the circular hut model. Tasks typically taking place within the courtyard would be hidden from neighbors, who would then
(presumably) be in direct competition with each other. Food was not shared between households, with granaries and other storage facilities similarly hidden from view. With both production and storage concealed from view, individual households were able to accumulate and maintain (i.e., not share) surpluses. However, Flannery’s model posits that the overall reduction in the number of individuals per household was offset by, even required, the formation of social relationships that extended beyond the house walls. Rather than being able to rely on the collective labour of extended family members residing in the same compound, household-type societies needed to form alliances to carry out tasks requiring large numbers of individuals. These alliances were “social institutions that hold households together beyond the bounds of simple kinship” (Flannery 1972: 39-40), and are envisioned to be similar in form (and function) to ethnographically known *sodalities* from North America. Flannery (1972: 47) provides a description of one such institution, the *guelaguetza* of the Zapotec in the Valley of Oaxaca, Mexico. The two primary functions of this Mesoamerican institution were the pooling of labour and ceremonial functions. Each house unit that contributed to the completion of communal tasks benefited from their participation. Similarly, Flannery envisioned participation in ceremonial functions as increasing individual household or lineage prestige and prominence within the village.

Flannery offered three clarifications of his model to avoid misunderstanding or confusion. The first is a basic issue, namely that the house form is not as significant as the number of individuals it would have sheltered, which in turn provides a clue as to social organization. Specifically, circular huts typically only accommodate one or possibly two individuals, while families of three or more could occupy rectangular multi-room houses. While individual house units reach a maximum based on total area, net population size in compounds are much more fluid because of the addition or fissioning of members. Similarly, economic issues concern the identification of the basic unit of production, whether it is a co-resident extended family or a nuclear family. These contrasting forms of social organization allow for (and limit) certain kinds of production. The individualized focus within circular hut compounds allows for the expressing of autonomy through fissioning related to elevated instances of inter-personal conflict; individuals are able to express their displeasure by simply walking away because they are only loosely tied to each other. Furthermore, each addition to the compound increases stress between members in terms of allocation of space and “social distance.” Increased numbers in the compound also leads to increased fissioning, as member families that reach a certain size would invariably break off to form their own compounds. In contrast, Flannery’s model suggests that Nuclear family households are more stable socio-economic units because they are able to minimize the amount of social conflict between members,
typically envisioned through ritual practices (e.g., Kuijt 2000). Village-type settlements, identified with the rectangular house form, allow for greater intensification of production precisely because they are better able to ‘keep the peace’ among village members through the creation of supra-kinship bonds. In this way, village-type settlements are able to expand beyond the limitations placed on circular hut compounds in terms of community size, as well as overcome issues related to available labour.

More recently, Flannery (2002) revisited his original formulation and suggested a number of corrections and improvements to his prior statement. The most important of these was to reiterate that house form by itself was not the most important variable to observe (contrary to interpretations by some), but the social relations that it implied. Rather than emphasize the house form or even the number of individuals residing in individual structures, Flannery (2002: 421) points out that the issues of risk minimization and the “privatization of storage” are central to understanding observable changes. Restating his previous view, Flannery proposes that subsistence intensification is curtailed because there is little “incentive” to accumulate surplus among societies with shared food storage. This contrasts with the Nuclear family household in which the privatization of storage encourages intensification because only household members directly benefit from surpluses. The mechanism invoked for the change in house form and social organization itself is rapid population increase that (presumably) led to social fragmentation. Unfortunately, this still does not explain a number of important factors, not least of which includes the fundamental reason for population increase itself. This results in a ‘chicken-or-the-egg’ scenario that renders his model incomplete as an explanation for observable changes in house form. Despite this inability to precisely locate the historical sequence of social change, Flannery’s observations touch on critical issues relating people, their increasingly complex social relations, and use of space.

From Houses to Households

The relationship between architectural form, social organization, and community interaction has been a long-standing area of research among social scientists (e.g., Hillier and Hanson 1984; Rapoport 1969). This is especially true for archaeologists whose primary research focuses on the traces of past human behavior and activity as related to the structure and function of domestic architecture (see Banning 2003; Blanton 1994; Wilk and Rathje 1982). Many so-called traditional approaches look to architectural remains themselves, with little concern for the possible clues they may have for larger questions of social organization and interaction. Newer approaches drawing upon various social scientific methods, ethnographic, and ethno-historic records have sought to understand the social relations between a building’s residents, especially practices
related to production and reproduction. Arguably, the most promising approach has been to employ models based on ethnographic observations initially made by early twentieth century anthropologists working in the Northwest Coast of British Columbia. Specifically, the pioneering fieldwork of Franz Boas (1924, 1920) among the Kwakiutl has been extended and applied to various archaeological examples with varying degrees of success (see Banning 2010; Coupland et al. 2009; Gillings 2000; González-Ruibal 2006; Vaneeckhout 2010).

While Flannery demurs from elaborating on the ideological and social implications of the architectural shift from hut to rectilinear-house societies made by anthropologists such as Lévi-Strauss (1982), it is a clear acknowledgement that he was aware of the issue (even if he chose to ignore it). For his part, the French anthropologist noted that the interplay between heredity, property, and corporate identity observed by his mentor Franz Boas marked this dynamic as an institution distinct from traditional kinship studies (Lévi-Strauss 1982; see also Gillespie 2000). In Lévi-Strauss’ estimation, the social institution observed by Boas had significant parallels to diverse cases, even to ones as far away as Medieval Europe. Furthermore, the “House” as a social phenomenon was defined by Lévi-Strauss rather broadly as

a corporate body holding an estate made up of both material and immaterial wealth, which perpetuates itself through the transmission of its name, its goods, and its titles down a real or imaginary line, considered legitimate as long as this continuity can express itself in the language of kinship or of affinity and, most often, of both. [1982: 174]

Based on this generous reading, medieval royalty and the Kwakiutl can share a basic concern for the continuity and transmission of rights and property to be held within the power of a coherent and defined entity based on affiliation (however fictitiously that entity may be defined). Moreover, the house itself, seemingly in spite of its various and competing individual members, becomes the unit of interaction with society at large, as the example of a widowed woman among the Yurok of California illustrates: “it is not the individuals or the families that act, it is the houses, which are the only subjects of rights and duties” (Lévi-Strauss 1982: 173).

Archaeologists have used a number of different empirical methods to examine the relationship between house form and aspects of social organization like kinship and residence patterns or even to estimate site populations. Most of these have relied on interior areas of exposed house plans. For instance, Naroll (1962) measured the floor area of eighteen societies to investigate the relationship between site size and site population. He found that the variables of floor area and site population were allometric, meaning that their relationship was defined by a linear regression. Based on his calculations, Naroll found that the population of a
site could be estimated as one tenth of the total area of the floor area. In a similar vein, Ember (1973) argued that patrilocal and matrilocal residence patterns could be identified based on the average total area of house floors. Based on his use of the Human Relations Area Files (HRAF), Ember calculated that societies with patrilocal residence tend to have a total floor area less than 550-600 ft² (approx. 51-56 m²), while societies with matrilocal residence patterns have much larger houses.

Concern with intra-house spatial variability has carried over into research concerning the social and functional relationships between major architectural features such as hearths and sleeping areas within structures themselves, rather than simply total area measurements. This research investigates the relationships between architectural features and social organization. For instance, Kapches (1990) conducted a proxemic, or spatially dynamic, analysis of structural features in Ontario Iroquoian longhouses dating to the proto-historic and historic periods (c. AD 1450-1650) to investigate residence patterns. Likewise, Coupland and colleagues looked at the position of hearths and interior sleeping areas in Northwest Coast plank houses as a means of investigating rank and hierarchy among various people groups along the British Columbia coast (Coupland et al. 2009).

Finally, as a middle ranging method that originally sought to generate material cultural correlates from ethnographically documented behaviors, ethnoarchaeological approaches to houses have highlighted how socio-political realities faced by individuals and communities affect house form (Lyons 1996). In her study of house form in the village of Déla in northern Cameroon, Lyons (1996) argues that a transition from round to rectilinear structures must be considered within a much wider assessment of culture change and interaction, including culture contact, shifting ethnic demographics, and social and economic competition. Moreover, she contends that among the four major ethnic groups residing in Déla (the Mura, Urza, Wandala and Shuwa), house form is a primary means of social differentiation. A desire to differentiate group membership along lines of ethnic, religious, and political affiliation emphasizes the changing and historically contingent nature of house form. Much of the status of the Wandala is related to their ability to control the best soils for cotton production and sorghum cultivation, as well their control of local leadership (i.e., the village chief must come from the Wandala royal lineage). Rectilinear house form dominates among the Wandala, while it occurs in less than half of examples from other ethnic groups in Déla. Lyons notes that rectilinear buildings are commonly believed to have been introduced by the Wandala through their connection to the Islamic sub-Saharan trade. Moreover, members of Mura or Urza communities who convert to Islam (ostensibly for socio-economic benefit) are said to “become Wandala”, which permits the adoption of rectilinear house forms and taking up residence in
the Wanadal quarter in Déla (Lyons 1996: 356); Mura or Urza who convert are shunned by their families and are considered “dead”. Lyons asserts that while house form reinforces local hegemonic relationships between competing ethnic groups, the transition from round to rectilinear domestic structures is also tied to perceptions and definitions of “modernity.” More specifically, she stresses the connection between attempts by nineteenth century Colonial and 1960s Cameroonian administrators to modernize Cameroon that were imposed on local status contests between contending ethnic groups. Originally used for administrative purposes in earlier periods, the Wandala adopted the rectilinear building for domestic use as a stylistically expressive way of asserting their hegemony, while the Mura may have similarly, although less frequently, adopted its use as a way to contest Wandala claims to social dominance. Ultimately, the changing shape of house form in Déla underscores the close connections between house form and the social status and ethnic identity of their residents.

Neolithic Central Anatolian households in Context

In this section, I bring together the archaeological evidence for structures in various parts of Turkey with the three main theoretical approaches adopted by archaeologists working in the region. These include the traditional area measurements like those proposed by Naroll (1962). Another approach is the use of a suite of analytical methods under the rubric of Space Syntax, specifically looking at the concept of accessibility. Lastly, a more ethnographically informed perspective based on the “House Societies” model is explored based on the “clustering” of structures at many Central Anatolian sites, and most notably Çatalhöyük.

The Neolithic of Central Anatolia: review and summary

The two larger geographical regions discussed here are Southeastern and Central Turkey (Figure 1). Many Southeastern sites date to the Aceramic or Early Neolithic, while sites in Central Anatolia are primarily dated to the middle-to-late Neolithic. These roughly correspond to Levantine Pre-Pottery Neolithic (PPN) and Pottery Neolithic (PN) periodization for sites, although there is less fine resolution in terms of sub-phases (i.e., PPNA, PPNB, etc.). This brief review will focus on putting key sites in their regional and temporal contexts and will discuss the architectural data from the few excavated sites.

Important sites from the southeast with Aceramic Neolithic or Pre-Pottery Neolithic architectural levels include Çayönü (Özdoğan 1999; Schirmer 1990), Hallan Çemi (Rosenberg 1999), and Nevalı Çori (Hauptman 1999) (Figure 2). Excavations of building levels at Çayönü revealed a clear shift from circular to
rectangular wattle-and-daub structures (Schirmer 1990). Likewise, a change from rounded huts to rectangular houses was also seen at Hallan Çemi (Rosenberg 1999). The rectilinear “grill plan” building phase at Çayönü began immediately after the round hut phase. Özdoğan (1999: 43) theorizes that the construction of regularly spaced rows of stones adjacent to the rectangular structures would have supported a raised platform, which could have been storage areas or due to seasonal flooding. Grill plan buildings were replaced by “channelled” buildings sometime around 8700 cal. BC (the early PPNB), which are characterized by the appearance of closely spaced stone rows that form drainage channels supporting the house floor. This new building type, seen across southeastern Anatolia from sites like Çayönü, Hallan Çemi, and Nevali Çori, consisted of a long multi-cellular rectangular structure. This type of structure is thought to have housed a number of individuals, most likely members of an extended family.

Figure 2: Examples of architecture from major southeastern Aceramic Neolithic excavated sites discussed in text. a) Çayönü (after Schirmer 1990: 365, fig. 1); b) Hallan Çemi Tepesi (after Rosenberg et al. 1995: 9, fig. 1); c) Nevali Çori (Hauptman 1999: 74, fig. 6b)
An important change in the construction of the superstructure that was detected at this time in houses at Çayönü in particular was the construction of (presumably) flat earthen roofs rather than the vaulted *pisé* type seen in previous building styles. Such reconstructions are admittedly speculative, but a gabled roof seems more probable given winter conditions. Central Anatolia is comprised of three sub-regions, including the Konya and Karman Plains, western Cappadocia, and the Lakes District. The cultural and temporal relationships between these regions are still under discussion, but it is generally believed that the Konya/Karaman Plain sites are related to earlier western Cappadocia ones. Important sites from western Cappadocia discussed here are Aşıklı Höyük, Kış Höyük, and Musular. These sites begin earlier than Çatalhöyük (East) and other sites to the west, primarily dating to the Aceramic Neolithic. In the case of the more extensively excavated site of Aşıklı Höyük, radiocarbon assays show a range of occupation from c. 8200-7400 cal. BC with the majority of samples (68%, n=32) coming from Level 2C-A (Thissen 2002: 301-302). Radiocarbon samples offer a similar early date for Musular (Özbaşaran 1999). Düring (2011: 73-74) has argued that early Holocene settlements in Central Anatolia like Aşıklı Höyük should not be viewed as derived from the northern Levant based on the distinctive nature of its lithic repertoire and settlement and architectural patterning. He sees strong evidence for continuity in microlithic technology between Epipaleolithic occupations in the region. However, he emphasizes much more intra-site spatial arrangement and house plan morphology. The presence of domesticates like cereals originating in the northern Levant should be understood in terms of local adoption brought about through contact and trade, rather than demic diffusion (i.e., population movements or replacement).

Sites on the Konya and Karaman Plains are similarly thought to derive from *in situ* cultural development in Central Anatolia. The famous site of Çatalhöyük is composed of two mounds (Hodder 2007; Mellaart 1967). The Eastern mound contains levels dating from the Aceramic Neolithic (or PPNB) period to the beginning of the Chalcolithic (levels Pre-XIIIE to 0), while the West mound was inhabited after the East mound was abandoned sometime during the Early Chalcolithic; occupation of the west mound points to continuous settlement at the site during the early Holocene. Extensively preserved architectural data has revealed successive building phases with over a thousand-year (c. 7400 – 6200 cal. BC) history of occupation at the site (Cessford 2005; Hodder and Cessford 2004). The closely spaced structures from Çatalhöyük are similar in form to many sites in Central Anatolia (Figure 3). Evidence from Canhasan I demonstrates that this building style continued well into the Chalcolithic (layer 2B), even when it does not appear at contemporary sites elsewhere.
Figure 3: Plans of Central Anatolian sites. 

A) Aşıklı Höyük (after Esin and Harmankaya 1999: 118, figure 3); b) Çatalhöyük (East), building level VIB (after Mellaart 1967: 59, figure 9); c) Çatalhöyük (East), building level VII (after Mellaart 1967: 59, figure 10); d) Canhasan I, layer 2B (after French 1998: 29, figure 12)

Sources: a) redrawn after Esin and Harmankaya 1999: 118, figure 3; b) redrawn after Mellaart 1967: 59, figure 9; c) redrawn after Mellaart 1967: 59, figure 10; d) redrawn after French 1998: 29, figure 12
Lastly, it is generally thought that sites from the Lakes District are derived from populations originating from Central Anatolia that moved westward (Duru 1999). Major sites in the region include Bademağacı, Erbaba, Hacılar, and Suberde. Specifically, Mellaart (1975: 111) has argued that residents from Çatalhöyük may have in fact founded the site of Hacılar. He asserts this based on similarities in certain material culture types, and particularly the similarities in sculptural styles between the two sites. Mellaart claimed to have found Aceramic levels during his excavations at the site in the late 1950s, but subsequent work has challenged this assertion (see Duru 1989) (Figure 4). It appears that no pre-pottery levels at Hacılar can be substantiated, with the solitary radiocarbon date from the site discounted owing to stratigraphic and other methodological problems associated with Mellaart’s excavations (Thissen 2002). More generally, buildings from the region were constructed using a variety of dried mud brick shapes, ranging from rectangular to plano-convex forms, and some structures constructed with stone foundations (Düring 2011: 163). Overall, house form from sites in this region is markedly different from the two other regions in Central Anatolia.
A review of recent work on houses and households in Neolithic Central Anatolia

Archaeologists working in Turkey have explicitly sought to compare data from Central Anatolia to Flannery’s general model (e.g., Steadman 2004). Attention has been placed on aspects of house floor area, with little attempt to look at intra-site distribution of houses. This is often complicated by the reality of limited exposures at many excavated sites on the Central Plateau, which do not permit a wide-ranging discussion supplemented by a robust data set. Specifically, some have tried to extract community level social organization from a handful of excavations structures (Steadman 2004). Attention is focused on the calculable floor areas of the few complete houses available. This is especially true of sites like Hacılar and Erbaba in the Lakes District. Even in regions with much better data, like Aşıklı Höyük, Canhasan (I and III), and Çatalhöyük (East), the number of individuals theoretically possible per house based on floor area is enumerated based on exposed architectural features. This is carried further when inventorying the small number of complete structures excavated, as well as providing the estimated areas of the buildings (Steadman 2004: 530, Table 2) without comment concerning the representativeness of each house, or the amount of alteration and “cleaning up” required to make them suitable for analysis. These difficulties problematize interpretations of social organization based on such a fragmentary dataset. For example, in discussion of sites in the Lakes District, Steadman (2004: 529) notes that two houses at Kuruçay (near Hacılar) were large enough to house extended families with total areas of 38m² and 24m² respectively. This is based on the use of Naroll’s (1962) assertion that individuals require 10 m². His calculations estimated total population of selected large-area excavated sites based on total roofed area; Naroll’s calculations included stables, storage areas, and other non-domestic structures.

This misreading is further evident in discussion of Aşıklı Höyük in western Cappadocia, namely “[t]hat houses were barely large enough for two adults does not rule out a polygynous marriage structure but more strongly suggests a monogamous system” (Steadman 2004: 539); one wonders how marriage patterns can be inferred based on a dubious floor area calculation. If these analyses were valid, the social organization of residents at Aşıklı Höyük could resemble Flannery’s Extended family circular hut societies, but most likely fit his rectangular Nuclear family houses. The economic base of inhabitants at Aşıklı Höyük more closely resembles that of complex foragers, as little evidence of domesticates have been found at the site. It should be noted that later sites, like Çatalhöyük on the Konya Plain, have similar architectural traditions, but a different subsistence and socio-economic base. One may be tempted to accuse her of offering a too literal reading of Flannery’s idea, but when compared to
Flannery’s own valuations, this may be entirely consistent with the original concept. Even in his follow up treatment, he only states that his use of Naroll’s estimated 10m²/person should be augmented by more recent estimates based on ethnoarchaeological studies (Flannery 2002: 423). The problem then does not seem to be with the application of the more general aspect of Flannery’s idea, but with the requisite living space applied to a site inventory that can only offer limited and fragmentary building plans.

Other Anatolian archaeologists have continued to focus attention on the configuration of interior space and the types of social interaction that they may have fostered during the Neolithic (Cutting 2005, 2003; Düring 2001). This work in particular has explored the possibility of applying the Space Syntax concept such as “accessibility graphs” to Central Anatolian houses, with the overall assessment of the undertaking being that the data is too fragmentary to produce reliable and substantive conclusions (especially Cutting 2003). For instance, Cutting (2003; also 2005) has criticized attempts to carry out accessibility graph analysis of structures where too little is known about the extent of excavated buildings and their form. Moreover, the articulation of social organization and room area size is further complicated by the fact that buildings in Central Anatolia are known to have had second stories. Cutting (2005) has suggested that models like those offered by Flannery are not supportable by the evidence currently available. Alternately, evidence from sites across the Near East appears to follow the model he and others have proposed only through an “oversimplification of the evidence” (Cutting 2005: 140). Likewise, Düring (2001) has pursued the application of social scientific methods to houses from Çatalhöyük with mixed results.

Elsewhere Düring (2006) has focused on the general variability of houses from Central Anatolian sites. He has argued persuasively that the unique form of houses at sites like Aşıklı Höyük, Canhanan, and Çatalhöyük are products of a number of variables. These include differences in local resource availability, climate, functional characteristics, and, more significantly, local traditions. The reliance on mud bricks and timber for construction materials differs from other sites in Turkey owing to the general lack of suitable stones for foundations seen elsewhere. In contrast, Early Neolithic structures at the coastal site of Mersin-Yumuktepe did not have stone foundations, but these begin to appear in the Middle Neolithic (see Caneva and Köroğlu 2010). However, issues related to seasonality and permanence at the site suggest that these early wattle-and-daub houses were not inhabited year round, with the excavators suggesting that a degree of transhumant pastoralism was practiced (Caneva 2002); availability of construction material should not be the only consideration in determining intended use and duration of occupation.
Düring (2006) highlights the importance of local tradition at Çatalhöyük to explain observable differences in the built environment. He identifies “clustered neighbourhoods”, or the close arrangement of houses in proximity to each other, as one of the most important and enduring traditions in the Central Anatolian Neolithic. As exemplified by cross-cultural ethnographic parallels from Jordan and North Africa, this configuration of houses is often based on a sense of commonality between residents. This cohesion can range from shared sense of ethnicity, tribal affiliation, or religious belief. Rooted in a theoretical framework influenced by the work of Bourdieu (1972) and Rapoport (1969), he argues that residents at such sites could be understood in terms of Lévi-Strauss’ “house societies” (Düring 2006: 299-301). Surpassing Hodder and Cessford’s (2004) hesitant suggestion to this effect, Düring argues that differences between houses at Çatalhöyük fit an expected pattern of such lineage-based societies, with differential concentrations of sub-floor burials and artifacts in select houses. Such buildings are envisioned as “communal buildings.” which were used by lineage members in ceremonial and other functions. Here he is specifically arguing against views like those expressed by Mellaart (1967: 68-69), who saw the tightly nucleated settlement plan as being designed to expose “an unbroken row of houses and storerooms” to invaders; there is little evidence to support the idea of hostile invaders attacking the site.

Düring’s argument draws upon a wide-ranging contextual analysis of the built environment from many of the most significant sites in Central Anatolia, including Aşıklı Höyük, Can Hasan III, Çatalhöyük, and Erbaba. While his comments are applicable to most sites, Düring focuses on the site of Çatalhöyük because of its large-scale exposure and excellent preservation. Noting the relative lack of change observed for houses in early levels at the site, he suggests that residents may not have owned the houses they occupied (Düring 2006: 298). Rather, individual structures may have belonged to lineage families, and slight modifications as to the placement of a wall or new feature may have been based on the needs of the community. Only in later levels (levels V to I) are the needs of the individuals inhabiting structures observable. This is seen in the increased shifting and placement of walls and deposits. This contrasts with structures at Aşıklı Höyük, where Düring (2006: 296) sees the lack of hearths in all buildings (a good indicator of domestic residence) as pointing to the possibility that households were grouped within “clustered neighbourhoods.” He views these aggregation areas as where production and consumption primarily took place, making the individual house subordinate to larger social and economic formations.
Neolithic houses and social organization in Context

Comparing the seven sites used by Flannery to support his observations with those selected from Turkey highlights the incongruence of the primary data with his model (Table 3). Sites from the southern Levant and northern Mesopotamia (Iraq and Syria) certainly display the pattern Flannery outlines in his model. In accordance with his general outline, sites from southeastern Anatolia roughly contemporaneous with his earliest sites also seem to conform to the pattern at a superficial level. However, there is a dramatic break in the model when Central Anatolian sites are factored in. As previously discussed, the agglutinative or pueblo-style house plan seen at sites like Aşıklı Höyük and Çatalhöyük is atypical for Pre-Pottery Neolithic sites in southwestern Asia. Furthermore, the social relations that configured space in this way certainly differed from those that built stand-alone structures seen elsewhere. In Flannery’s scenario, houses are seen to be in competition with each other, all seeking to minimize risk and increase household-level surpluses. Strategies employed to this end include segregation of activities and hidden storage. Because we do not know the configuration of second story levels at sites like Çatalhöyük, we cannot confidently assume that households would have concealed production or storage. We simply have no way of knowing what types of social interaction occurred on these roof tops. Moreover, the fact that second stories existed at all militates against over reliance on floor area studies (see Düring 2006: 298). Ultimately, the incongruence between Flannery’s model and data from prehistoric Turkey serves as a caution against simplistic applications of evolutionary models. Moreover, it serves as a warning against, as Cutting points out, the tailoring of data to fit a particular model or method.

This last point is also true of macroevolutionary models that emphasize the diffusion of traits associated with the “Neolithic Package” from a putative Levantine core into Central Anatolia (see Çilingiroğlu 2005). This view is often asserted solely on the presence of domesticates at a particular site. However, demic diffusion would also logically entail the movement of an established social organization and other cultural traits into new regions. Theoretically, these would contrast with local forms and traditions. In Cauvin’s (2000) treatment, which is taken to be typical of this line of argument, the “neolithization” – or, the process of becoming Neolithic – of Central Anatolia presents a particularly difficult situation. Despite this, he tentatively suggests that “there was a clearly diffusion phenomenon, but it is difficult to be precise about its form and even its exact origin” (Cauvin 2000: 164). This is precisely because the material culture and especially the architectural configuration of Central Anatolian differ so markedly from Levantine sites. I would offer that there is an implicit understanding that the unique house form recognized by Cauvin is evidence of a cultural continuity that
he too readily passes over. Even granting that many of the unique features of Central Anatolian houses have roots in functional considerations (e.g., mud brick construction in light of the lack of stone), the existence of continual occupation and fidelity to site plan over such a long period of time – sometimes nearly one thousand years – speaks more of Düring’s concept of “local traditions” than migrations of farmers from the Levant. If house form is embedded within local socio-political and religious contests, as Lyon’s research in Cameroon strongly suggest, then fidelity to house form over such a long period of time may indicate – and in light of contemporaneous and competing house form traditions elsewhere in southwestern Asia – that communities in Central Anatolia may have sought to establish and maintain local behaviours and social organization. The persistence of the agglutinative house form over such a long period of time in Central Anatolia strongly argues against models invoking population movements as a monocausal explanation for the “neolithization” of southwestern Asia.

Table 3: Comparison of Flannery’s Sites and Anatolian Sites (compiled from Düring 2011; Flannery 2002, 1972; Theissen 2002)

<table>
<thead>
<tr>
<th>Date</th>
<th>Region</th>
<th>Site Name</th>
<th>Building Form</th>
<th>Circular</th>
<th>Rectangular</th>
<th>Agglutinative</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000-8000</td>
<td>Jordan</td>
<td>Ain Mallaha</td>
<td>Flannery’s Sites</td>
<td>*</td>
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<tr>
<td>8200-8000</td>
<td>Middle Euphrates</td>
<td>Tell Mureybit</td>
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<tr>
<td>7500</td>
<td>Middle Euphrates</td>
<td>Tell Mureybit</td>
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</tr>
<tr>
<td>7000</td>
<td>Israel</td>
<td>Nahal Oren</td>
<td></td>
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<td>*</td>
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</tr>
<tr>
<td>7000-6500</td>
<td>Jordan</td>
<td>Beidha</td>
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<tr>
<td>6750-6000</td>
<td>Northern Iraq</td>
<td>Jarmo</td>
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<tr>
<td>6500</td>
<td>Jordan</td>
<td>Beidha</td>
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<td>5500</td>
<td>Syria</td>
<td>Matarrah</td>
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<tr>
<td>5500-5100</td>
<td>Northern Iraq</td>
<td>Tell Hassuna</td>
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<tr>
<td>8500-7500</td>
<td>Konya Plain</td>
<td>Boncuklu Höyük</td>
<td>Central Anatolian Sites</td>
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<tr>
<td>8200-7400</td>
<td>Western Cappadocia</td>
<td>Aşkılı Höyük</td>
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<tr>
<td>7600-7200</td>
<td>Western Cappadocia</td>
<td>Musular</td>
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<tr>
<td>7600-7100</td>
<td>Karaman Plain</td>
<td>Can Hasan (III)</td>
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<td>*</td>
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<tr>
<td>7400-6200</td>
<td>Konya Plain</td>
<td>Çatalhöyük (East)</td>
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<td>*</td>
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<tr>
<td>7040-6750</td>
<td>Lakes District</td>
<td>Suberde</td>
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<td>6700-6400</td>
<td>Lakes District</td>
<td>Köşk Höyük</td>
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<td>6690-6430</td>
<td>Lakes District</td>
<td>Erbaba</td>
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<tr>
<td>6300-5700</td>
<td>Lakes District</td>
<td>Hacılar</td>
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<tr>
<td>5730-5660</td>
<td>Karaman Plain</td>
<td>Can Hasan (I)</td>
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<tr>
<td>10,200-9200</td>
<td>Hallan Çemi</td>
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<td>Southeastern Anatolian Sites</td>
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<tr>
<td>10,000-9400</td>
<td>Çayönü</td>
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<tr>
<td>8800-6800</td>
<td>Çayönü</td>
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<tr>
<td>8550-7950</td>
<td>Nevalı Çori</td>
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<td>8400-6600</td>
<td>Griftiile</td>
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<tr>
<td>8300-7300</td>
<td>Cafer Höyük</td>
<td></td>
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</tr>
<tr>
<td>7000-5800</td>
<td>Western Cilicia</td>
<td>Mersin-Yumuktepe</td>
<td>Other Anatolian Sites</td>
<td>*</td>
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</table>
Conclusion

In this paper I have reviewed and critiqued three major trends in analyzing social organization and house form in Neolithic Central Anatolia. The three trends outlined are floor space measurement (Steadman 2004), Space Syntax applications (Cutting 2005, 2003), and approaches informed by ethnographic accounts of Household societies (Düring 2006). While all three explicitly engage with Flannery’s evolutionary model, I argue that only Düring’s approach incorporating ethnological and a sensitive contextual analysis can be viewed as successfully taking up Flannery’s challenge. Flannery’s nuanced argument, while ostensibly based on the traces of human activity recovered by archaeologists, can be easily lost amid the distraction of building plans and floor areas. As Düring correctly captures in his analysis of Central Anatolian houses, Flannery’s argument was about the formation of supra-kin groups typified as sodalities by North American ethnographers, or, more commonly, as House societies. Flannery’s model makes use of the built environment as an ancillary means of investigating social structure. Thus, approaches emphasizing the reconstruction and measurement of structures as-an-end-in-themselves unfortunately misread Flannery’s intent.

Düring’s emphasis on “clustered neighborhoods” as the primary level of social organization seems to be the most sensible of those reviewed, and offers interesting points of departure for future research. However, to carry out or extend this suggestion requires that we move away from focusing on individual rooms to focusing on larger intra-site spatial patterns. Given the current state of our knowledge concerning house form in the varied regions of Turkey, much more work is required in order to provide a conclusive understanding. Despite this, what I have hoped to show here is that the Anatolian evidence is not readily explained by Flannery’s evolutionary model. Moreover, when expanded to include more sites than used in his original statement, much of the general framework does not hold. This is largely because Central Anatolian sites roughly dated to the same period as the ones used in his analysis. Add to this Central Anatolia’s unique agglutinative settlement plan, and it becomes readily apparent that something more complex is occurring. In line with recommendations put forward by others, like those of Cutting previously discussed, we should not “oversimplify” the data to fit our models, no matter how elegant they may seem.
Acknowledgements

I would like to thank Dr. Gary Coupland for his original comments on the term paper submitted for his Household Archaeology seminar that this article greatly expands. I would also like to thank the anonymous reviewers for their helpful comments that greatly improved this paper. Finally, I would like to acknowledge the encouragement of Bes Doyle for suggesting that I submit this paper for review.

Notes

1 Flannery (1972: 31) cautions against counting these as residential units, as this mistake would greatly inflate population estimates.
2 Dates are approximate and uncalibrated BC. Calibrated BC dates are indicated by †.
3 Dates for Turkish Sites have been taken from the Central Anatolia Neolithic e-Workshop (CANeW) site inventory (see Thissen 2002).

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