

A large, moss-covered rock formation in a rural landscape under a clear blue sky. The rock is the central focus, with a smaller rock in the foreground and a wooden fence in the background. The sky is a clear, pale blue.

NEOLITHIC DIVERSITIES

**Perspectives from
a conference in
Lund, Sweden**

Edited by

Kristian Brink

Susan Hydén

Kristina Jennbert

Lars Larsson

Deborah Olausson



The members of the conference "What's New in the Neolithic", May 2013. Photo by Kristina Jennbert.

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Neolithic Diversities

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Editors:

Kristian Brink, Susan Hydén,
Kristina Jennbert, Lars Larsson & Deborah Olausson

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Cover photo: The dolmen at Hofterup, western Scania. Photo by Kristina Jennbert 2012

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Preface

In the study of the distant human past, certain events and periods have come to represent decisive passages from one human state to another. From a global perspective, the characteristic feature of the last ten thousand years is that people in different parts of the world, and at different points in time, started to grow plants and domesticate animals. The rise and dissemination of agriculture were crucial factors for the continued existence of humankind on earth. The incipient agriculture is often regarded as the very beginning of human *culture*, as it has traditionally been perceived in western historiography, that is, as control over nature and the “cultivation” of intellectual abilities.

As a result of the increasing national and international interest in the northern European Neolithic (4000–2000 BC), combined with large-scale archaeological excavations which helped to nuance and modify the picture of the period, senior researchers and research students formed a Neolithic group in 2010. The Department of Archaeology and Ancient History at Lund University served as the base, but the group also included collaborators from Linnaeus University and Södertörn University, and from the Southern Contract Archaeology Division of the National Heritage Board in Lund and Sydsvensk Arkeologi in Malmö and Kristianstad.

Meetings and excursions in the following two years resulted in the holding of an interna-

tional conference in Lund in May 2013 entitled “What’s New in the Neolithic”. Invitations to this conference were sent to two dozen prominent Neolithic scholars from northern and central Europe.

The conference was a great success, with presentations and discussions of different aspects of innovative research on the Neolithic. The members of the Neolithic group took an active part in the discussions following the presentations.

It was decided before the conference that the papers would be published. The members of the Neolithic group also had the opportunity to contribute current research to this publication.

After the conference an editorial group was set up, consisting of Dr Kristian Brink, PhD student Susan Hydén, Professor Kristina Jennbert, Professor Lars Larsson and Professor Deborah Olausson.

A grant was received from Riksbankens Jubileumsfond for the meetings and excursions of the Neolithic group 2010–2013. We would like to thank The Royal Swedish Academy of Letters, History and Antiquities and Berit Wallenbergs Stiftelse for grants which enabled us to hold the conference “What’s New in the Neolithic”. Grants from The Royal Swedish Academy of Letters, History and Antiquities, and Stiftelsen Elisabeth Rausing’s Minnesfond financed the layout and printing of this publication.

I. PERSPECTIVES ON PEOPLE, IDENTITY AND PRACTICE

The Neolithic house as a procurement, production and consumption unit

The case of the Late Neolithic at Çatalhöyük

Arkadiusz Marciniak

Abstract

The essay aims to discuss the pattern of acquisition, production, and consumption strategies applied by inhabitants of the Neolithic house by using high-resolution archaeobiological data. They provide a significant insight into the character and mechanisms of social change in the Neolithic, in particular in the light of hypotheses implying that significant social transformations in the Central Anatolian Neolithic involved a shift from the non-kin-based communal and collective organization to a more individualized mode of life, leading to the emergence of autonomous house units and individual farmsteads. These developments will be exemplified by sketching some changes taking place in the Late Neolithic at Çatalhöyük, Central Anatolia.

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Introduction

The house has played and continues to play a key role in Neolithic studies. It is usually debated in terms of its physicality, in particular size, architectural elaboration, monumentality, in-built structures, etc. The other dominant mode sees in the house a primordial cultural asset in creating and shaping Neolithic groupings. The nature and character of social entities inhabiting the house have been less intensively debated and often treated as unquestionable. Similarly, a range of actions aimed at physically maintaining the arguably family-based group, along with everyday activities performed in the house, were either treated as obvious and self-explanatory or left aside as uninteresting.

Recent developments in the social archaeology of the Neolithic provide a growing body of evidence indicating that social arrangements in subsequent periods were much more diverse and complicated than previously thought. These ranged from different forms of com-

munal organization to nuclear and autonomous households inhabited by the kin-based family or extended family (Düring & Marciniak 2006; Hodder 2013). However, these claims are hardly based upon systematically analysed datasets; they extrapolate individual observations to larger processes and are not satisfactorily justified. This lack of in-depth understanding of a complex nature of social groupings in the Neolithic is largely due to excessive focus on monumental architecture and burial practices, which, important as they are, cannot possibly deliver firm and solidly grounded evidence to grasp the character of these pivotal social developments.

Hence, the chapter aims to focus on the Neolithic house as the unit of acquisition, production, and consumption. The recognition of these variables provides important insight into the nature of social groupings inhabiting the house and ultimately the nature of social changes in the Neolithic. These goals are now

more achievable than ever before due to significant methodological advancements in Neolithic studies. These comprise integrated studies of the settlement micro-stratigraphy, often linked to the application of Bayesian modelling, the recognition of formation processes, and advanced scientific methods including stable isotopes, lipids and aDNA on a wide range of materials from systemically sampled contexts.

The aim of the chapter is to discuss the significance of the mode of acquisition, production, and consumption for understanding social changes in the Neolithic. This will be exemplified by the analysis of their character in the Late Neolithic house at Çatalhöyük, central Anatolia, as revealed by the results of high-resolution archaeobiological data. The observed changes in the house's existence will be scrutinized vis-à-vis a hypothesis implying the beginning of individualized social organization in the Late Neolithic at the expense of its communal character in the preceding period.

The transformative character of changes at the end of the Neolithic at Çatalhöyük

The site of Çatalhöyük is located on the Konya Plain in southwestern Turkey. According to the chronological scheme of James Mellaart (1967), it was occupied in 13 distinct horizons labelled XII to 0. The sequence as a whole can be dated to approximately 7100–5950 cal. BC (Bayliss *et al.* 2015; Cessford 2005; Marciniak, Czerniak 2007; Marciniak *et al.* 2015a). The early levels, defined by Mellaart as Levels XII–VI, are dated to the Early Neolithic. A major shift arguably occurred in Level VI around the middle of the 7th millennium cal. BC, and the following period is known as Late Neolithic.

Recent dynamic studies of the Near Eastern Neolithic provide ample evidence of significant changes in social and religious domains in the Late Neolithic (e.g. Düring & Marciniak

2006; Marciniak & Czerniak 2012; Hodder & Pels 2010). The Early Neolithic groups were believed to live in clusters of approximately 30 to 40 individual buildings, constructed directly adjacent to one another. The superimposed houses were constantly reused and reoccupied through centuries, indicating the sustainability of this social organization. The group buried their dead underneath the house floor and platforms. In some buildings, as many as 70 individuals were interred. The Early Neolithic house was pretty standardized. It was built of mudbricks and had neither windows nor doors. It was accessed from the roof in its southern part, which also served as a chimney. It had one main room, usually divided into two parts. Its southern part had hearths and ovens and served for everyday activities, including manufacturing, tool making and food preparation. The northern part had platforms along the walls under which fully fleshed bodies were interred. The walls, platforms, and floors were systematically plastered over and the walls were often decorated. The house often had one or two side rooms used for storage (Hodder 2006b).

The spatial arrangements of buildings, along with asymmetric distribution of art, burials, and paraphernalia, indicate that individual houses were distributed amongst the members of the neighbourhood community rather than owned by specific families (Hodder 2006a). Evidence for units occupying discrete residences in which they performed most of their domestic activities is problematic. Moreover, individual clusters appear not to be kin-based but made up of genetically unrelated people, as revealed by dental phenotypes of those buried underneath house floors (Pilloud & Larsen 2011).

However, the nature of this non-kin-based communal and collective organization of the Early Neolithic groups is difficult to grasp. One viable possibility implies a clustered neighbourhood (Özbaşaran 2000). Individuals inhabiting

neighbouring houses were characterized by a considerable identity and differed from similar contemporaneous groupings. Hence, a single house served the needs of such a community rather than of a specific family. Individual houses possibly retained some autonomy, as implied by remains of domestic activities in a majority of them. Acquisition, production, and storage were organized by the group. The other possible interpretation indicates a “house society” (see Borić 2008, Gonzalez-Ruibal 2006). Following the original idea of Lévi-Strauss, the term “house” refers to larger entities beyond a lineage or extended family and inhabited by ever-moving individuals and social groupings. Hence, they might have been occupied by hereditary occupants, their cognates, agnates, and non-related individuals (see Gillespie 2000). They performed the production, everyday tasks, and ceremonial activities in and around multiple houses (Souvatzi 2008).

The demise of communal organization certainly had far-reaching consequences for the Neolithic mode of life. As indicated by a growing body of evidence, it was replaced by more individual and heterogeneous arrangements, which eventually led to the emergence of autonomous house units and individual farmsteads (Byrd 1994; Düring & Marciniak 2006; Marciniak & Czerniak 2007; Marciniak 2008). It became a locus of a more independent and more self-sufficient social group. These changes are inferred by transformations in house architecture, spatial organization, and burial practices. Houses were no longer placed in clusters; they were much larger and composed of a number of units around a big living room. Burials were no longer placed underneath the floor and the platforms. Further developments in the regional scale involved the occupation of different ecological zones, the emergence of numerous sites of different size and decreasing house size, all of which indicates the presence of a dynamically developing local population (Düring &

Marciniak 2006; Marciniak & Czerniak 2012; Marciniak 2008).

These significant social changes may not have remained without consequences for subsistence practices. One would expect that the processing of plant and animal products by inhabitants of these increasingly more autonomous households became specialized and intensified while procurement, production, and consumption-related activities became individually controlled. As recently argued by Hodder (2013), a “techno-economic complementarity” was increasingly achieved. Unfortunately, the economy and subsistence of these groups have hardly been recognized to date due to a lack of solid empirical studies of a range of materials from individual houses. A fine-grained approach to their study, advocated in the current project at Çatalhöyük, provided access to the character of procurement, production, and consumption strategies of these groups. I would argue that they provide much more solidly grounded insight into the character of the group’s activities than the building architecture. This will further contribute to an in-depth understanding of broader social changes in that period.

The Late Neolithic house at Çatalhöyük

The results of the recently completed excavations of the upper strata at Çatalhöyük carried out in the TP Area revealed a significantly different character of houses in the last 350 years of the settlement occupation. They were much bigger and made of a series of small, cell-like spaces surrounding a larger central “living room” with no symbolic elaboration. They no longer formed neighbouring clusters. Houses lacked intramural burials, which were replaced by a special burial architecture (Marciniak and Czerniak 2007, 2012).

Most houses in the TP sequence were occupied for one generation only. This challenges

an admittedly largely speculative estimation of 60–70 years as the average life of the house. Instead, houses in subsequent generations may have shifted across the neighbourhood area, which implies that the sequential development of superimposed clusters of dwellings ceased (Marciniak *et al.* 2015a).

Altogether, four solid houses, one light structure and one open space made up a roughly 350-year long occupational history in the TP Area. The most distinct category of houses comprise a large and carefully designed dwelling structure (B.81, B.62 & 61). All three of them had similar size, internal layout, and distinctive solid floors made of white pebbles, which appear only in the final centuries of the mound occupation. They were constructed at the beginning and the end of the TP Area's stratigraphic sequence and separated by a solidly built house (B.74), light dwelling structure (B.73) and open space (B.72) (Marciniak *et al.* 2015a).

The oldest Late Neolithic house in this area was Building 81, which went out of use around 6300 cal. BC (see details of chronology of subsequent occupational events in Marciniak *et al.* 2015a). It was an approximately 70 m² structure with only one fire installation and platform. It was reconstructed a number of times. The uppermost floor was made of numerous white pebbles mixed with silt. No individuals were interred in the building. The walls were not preserved, implying a lack of deliberate infilling. A very similar structure (B.62) was constructed after only about 160–170 years in the very same area (Fig. 1). It was built on the midden and infill deposits making up the open area. It lacked any inbuilt features except for the centrally placed square oven built directly above one of the fire installations from the preceding open space. The walls were also not preserved, indicating a lack of a deliberate abandonment practice. B.62 was used for a single generation. Immediately after its abandonment around 6120 cal. BC, the almost identical B.



Fig. 1. Çatalhöyük East, TP Area, Building 62. Photo: Jason Quinlan.

61 was erected in this very place. Similarly to their predecessors, it was reconstructed a couple of times. The latest floor was made of white pebbles set into a solid calcareous matrix. The building was almost devoid of any internal features except for a square oven placed in its central part. It also did not have standing walls, indicating that it was not backfilled following its abandonment.

The period of some 160–170 years between the abandonment of Building 81 and the construction of Building 62 witnessed different occupation. Building 74 was built shortly after the abandonment of B.81 (Fig. 2). It was significantly smaller (approx. 47 m²) than its predecessor and was composed of four distinct rooms built piecemeal and without internal features. In contrast to all three large buildings described above, it was deliberately abandoned and backfilled. It appears to be the very last time that this distinctively Early Neolithic practice was performed at the settlement. The following dwelling structure, Building 72, was built directly above B.74 immediately after its demolition. It repeated its size, shape, and internal layout. It was composed of an open space to the north, probably surrounded by walls, and a hut-type construction, with a light roof, to the south. The open space was intensively used, as

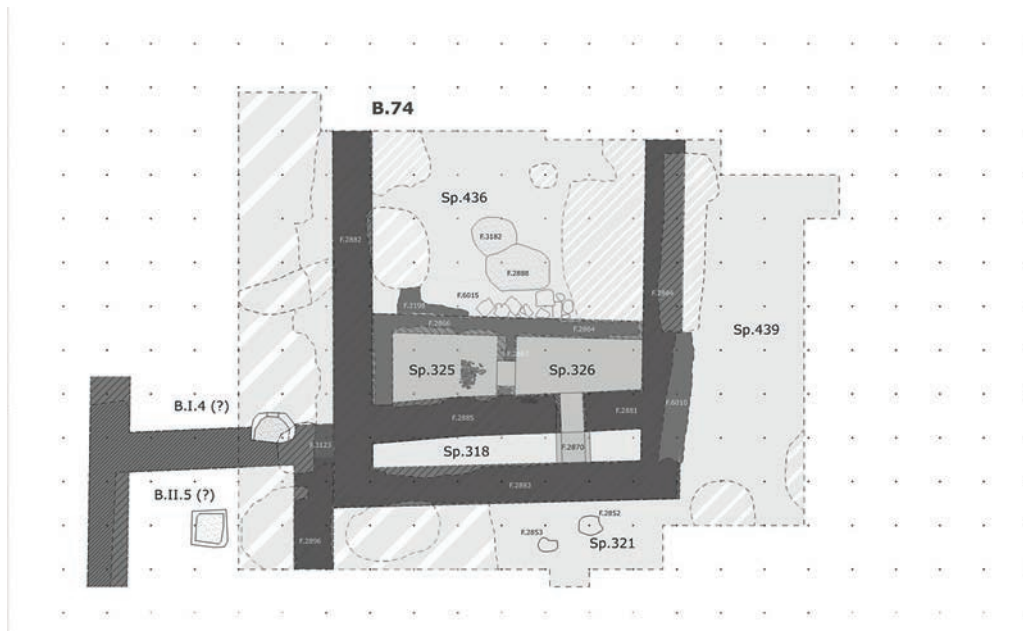


Fig. 2. Çatalhöyük East, TP Area, Plan of Building 74. Drawing: Marek Barański.

indicated by numerous hearths. This character of occupation continued in the next phase. The area became an open space on the accumulating midden (B.73). However, it appears to have been occupied, at least temporarily, as implied by five fire installations. When the open area went out of use, a solid B. 62 was built.

Changes in the house layout and its use are indicative of a continuous transformation of the Çatalhöyük community that began around 6500–6400 cal. BC (Marciniak and Czerniak 2007, 2012). They involved a gradual disassociation of domestic, ritual, and burial domains, previously integrated with the house premises. This in turn redefined regimes of acquisition, production, consumption, and reproduction performed by the differently organized social entities inhabiting the house.

Procurement, production, and consumption in the Late Neolithic house at Çatalhöyük

Intensive studies of a wide range of datasets unearthed in the TP Area make it possible to formulate some preliminary results as regards the regimes of procurement, production, and consumption of groups inhabiting different types of houses in the final centuries of the settlement occupation (see more Marciniak *et al.* 2015b). Some of them will be discussed here.

The Late Neolithic marks a significant change in clay and wood procurement strategy. Çatalhöyük is located on the Çarşamba alluvial fan formed by the eponymous river as it enters the Konya plain from its southern fringes. As argued by Doherty (2013), an Early Neolithic landscape was made of small streams connecting numerous shallow pools. The dark backswamp clays, carefully sourced from the thicker deposits that formed the Pleistocene channels around the mound, were used

for mudbrick production. The Late Neolithic brought about a shift to the exploitation of redeposited fine colluvium located directly around the settlement as well as lower alluvium areas (shallow pools) in between drier grounds. Backswamp clay as well as marl and Pleistocene deltaic sediments were no longer exploited.

Even more pronounced changes occurred in wood procurement, as recognized by study of in situ preserved charcoal across the settlement (Asouti 2013b). The beginning of Early Neolithic is characterized by a dramatic rise of deciduous oak and later juniper charcoal values. Both trees comprised an important element of diverse semi-arid woodlands on the lower upland zone and the hills surrounding the Konya plain 25–30 km away from the settlement. The collection and transport of a large volume of timber to the site entailed considerable logistic complexity and probably involved combined efforts of larger social groups.

The wood procurement strategy changed completely towards the end of the Çatalhöyük occupation. The significance of oak and juniper declined radically and they were replaced by the narrow range of riparian taxa including elm, ash, hackberry, and Salicaceae. This may represent the switch of wood-gathering activities from the surrounding uplands to the locally available riparian vegetation. Long-distance trips aimed at procuring these resources were abandoned. This pattern is unrelated to climate-induced changes in woodland composition and oak and juniper availability and can only be explained by changes in the fuel and firewood economy of the site (Asouti & Heather 2001). As revealed by the Eski Acigöl pollen record (Roberts *et al.* 2001), both oak and juniper did not disappear from the lower upland zone at that time. This strictly localized wood procurement strategy in the Late Neolithic, replacing spatially extensive subsistence procurement systems in the preceding period, is indicative of a full-scale wood manage-

ment pattern, in terms of territory definition and possibly also allocation of land use rights (Asouti 2013b).

In more general terms, changes in clay and wood procurement strategies between Early and Late Neolithic can best be characterized as a shift from exploiting high-quality resources derived from selected parts of landscape and requiring joint communal efforts at the expense of a wide range of poorer quality resources closer to the settlement as a means of meeting the needs of smaller groups.

A shift in production strategies between Early and Late Neolithic is well manifested in sheep husbandry and herd management practices, as revealed by studies of oxygen isotopes in sequential intra-tooth enamel samples and dental microwear on the occlusal surface of the same teeth (Henton 2012). Early Neolithic husbandry was characterized by a standard May birth season of sheep, which is in synchrony with optimal resources in the region. It further involved long-distance sheep herding and reliance on winter pasture, as indicated by dirty and later dry fibrous foods. The Late Neolithic husbandry was of a largely different character. It is manifested by a shift in sheep birth to March taking the breeding herds out of synchrony with resources. Keeping young lambs close to growing crops, however, is arguably more convenient for mixed farmers. This significant change implies that arable resources and fodder availability were now satisfactory to overcome losses arising from breaking natural resource synchrony. Equally significant were changes in pasture location in the Late Neolithic. They involved summer herding on the plains or in nearby river valleys while longer-distance herding remained minimal. This is another manifestation of integrated arable economy. This shift to exploitation of the areas adjacent to the settlement was only possible because the farmers were able to keep animals during winter, as indicated by the increase in soft food in the

form of fodder. Changes in sheep husbandry in the Late Neolithic – involving a high degree of arable/pastoral integration and dependence, which required a range of advanced managerial skills, such as controlling the breeding cycle, keeping herds near growing crops, and providing dry fodder – required flexibility and integration in labour scheduling, which could have possibly been achieved by a more fragmented household-based society (Henton in press).

The Late Neolithic at Çatalhöyük brought about equally significant changes in consumption and display modes. It became largely idiosyncratic and diverse, as compared with the highly structured and repetitive mode in the preceding period. Timber in the Early Neolithic was consumed in the structured way. Vertical juniper posts were used for fittings set against the walls that might have served some symbolic and/or decorative purpose, lacking an obvious structural function. A diverse woody flora was utilized as fuel, including a significant component of oak, used also as timber. Changes in the Late Neolithic involved a shift to the narrower range of riparian taxa. It was accompanied by changes in architectural practices and construction techniques which, unrelated to wood availability, were less timber-dependent than the preceding period (see Asouti 2013a, 2013b).

The consumption of animal products also witnessed important changes. The Early Neolithic is characterized by significantly different consumption of cattle vis-à-vis sheep/goat. The former was of special significance and mainly used for ceremonial purposes, as manifested by feasting debris and bucrania set for the decoration of the house interiors. The latter were used for ordinary food consumption; their bones were by far the most abundant faunal remains found in middens and fills used as a primary location for dumping consumption debris. Special treatment of cattle was significantly less common in the Late Neolithic. No plas-

tered bucrania were recorded, and the age and sex distribution is now dominated by females and more subadults, which appears to indicate a genuine shift. Overrepresentation of adults in sheep/goats mortality profiles may indicate changes in herding practices and a switch to the use of dairy products (Twiss *et al.* 2005).

Final remarks

As very briefly sketched in this chapter, the application of a wide range of high-resolution archaeobiological data made it possible to recognize the procurement, production, and consumption pattern in and around the Neolithic house. As these activities are at the core of any group's existence, this should potentially contribute to an in-depth understanding of the character and mechanisms of major social change in the Neolithic, in particular the demise of communal organization and emergence of a more individualized mode of living.

As the presented examples have amply shown, changes in the procurement strategies between Early and Late Neolithic involved a shift from the exploitation of high quality resources from selected parts of landscape at the expense of diverse resources of poorer quality closer to the settlement. This is particularly evident in a shift to summer herding in areas adjacent to settlement at the expense of longer-distance herding. This move facilitated easier access to fodder and triggered the practice of keeping animals in the house compound during winter. Similar changes occurred in consumption, moving from a highly structured and repetitive pattern to a more diverse mode.

The recognized changes in the procurement, production, and consumption pattern provide valuable insight into the nature of a major change in the course of the Neolithic involving a shift from some kind of communal organization (house society, neighbourhood community) requiring collective labour to more auton-

omous house units performing individualized and diverse activities. Life in the Early Neolithic was concentrated in and around clusters of elaborated houses that were set to establish historical and ritual ties. These large groupings organized acquisition, production, and possibly consumption. This typically Neolithic system came to an end some time after the middle of the 7th millennium cal. BC and were gradually replaced by smaller, less permanent and more self-sufficient houses. They initially developed as an intrinsic component of the Early Neolithic neighbourhood system and eventually contributed to their demise.

This process may have ultimately led to the emergence of individual farmsteads controlling storage and production. They appeared to become self-sufficient, shorter term, and more focused on consumption and the control of production (Souvatzi 2008) and increasingly more efficient in managing their own resources and inter-relations. Inhabitants of the emerging households had to accommodate the higher level of managerial and organizational skills in arable and husbandry-related activities. This increased autonomy of the household, along with the dominance of a domestic mode of production and consumption, contributed to a durable and successful economy in which crop and livestock husbandry were closely integrated and intensively managed. The increasingly more pronounced household ownership and autonomy may itself be linked to more intensive use of animals and plants. The ultimate outcome of these processes, as revealed by anthracological studies, were riparian woodlands around the settlement being converted into completely managed and distinctly anthropogenic habitats.

These significant changes provided solid foundations for large-scale developments far beyond the settlement or even the region. A largely homogeneous landscape exploitation in the Early Neolithic were fragmented and replaced by its differentiated use. More impor-

tantly, they provided necessary conditions for the appearance of strong, self-efficient, and flexible agricultural communities occupying a range of different ecological settings. Hence, it is possibly not surprising that these significant social changes in central Anatolia coincided with the spread of farming into adjacent areas. Paradoxically, the very foundations of this process have never been thoroughly and systematically scrutinized. Hence, explicit and fine-grained studies of practical and mundane aspects of dwelling in the Late Neolithic house can provide significant insight into this fundamental social change in the Near Eastern and European Neolithic.

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