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# Arson or Accident? The Burning of a Neolithic House at Çatalhöyük, Turkey

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*This paper presents the results of interdisciplinary research on the recently excavated Building 52 at the Anatolian Neolithic site of Çatalhöyük. This building provides the richest combination of faunal, botanical, and lithic assemblages of all those uncovered since work at the site was renewed in 1995. Occupation of the building ended with a high-temperature fire, after which a portion of it was emptied and reoccupied.*

*Our research synthesizes numerous data sets in order to describe the house and its sequence of incineration, modification, and reuse. Particular attention is paid to the intentionality of the burning and its interpretive implications. These data contribute to ongoing archaeological discussions of the nature of house abandonment and the intersection of ritual and domestic life in early agricultural societies.*

## Introduction

Among the issues prominent in archaeological discussions of early household-based societies are the intersection of ritual and domestic life and the processes involved in house abandonment. Insights into these issues are afforded by Building 52 at Neolithic Çatalhöyük on the central Anatolian plain (FIG. 1). Excavated to floor level in 2005 and 2006, Building 52 provides the richest combination of faunal, botanical, and lithic assemblages of all the buildings uncovered since work at the site was renewed in 1995. In addition, the building burned at a high temperature and was subsequently partially emptied before a new, second

building was constructed within it. The wide variety of data recovered from this structure contribute significantly to ongoing archaeological discussions of early agricultural domestic economies, space use, and ritual, as well as to the positioning of central Anatolia in relation to Near Eastern and SE European Neolithic cultures. Here we synthesize numerous data sets in order to describe the house, its sequential occupation, and its incineration, focusing on the intentionality of the burning and its interpretive implications.

## Building Closure

House closure or abandonment is a highly significant is-

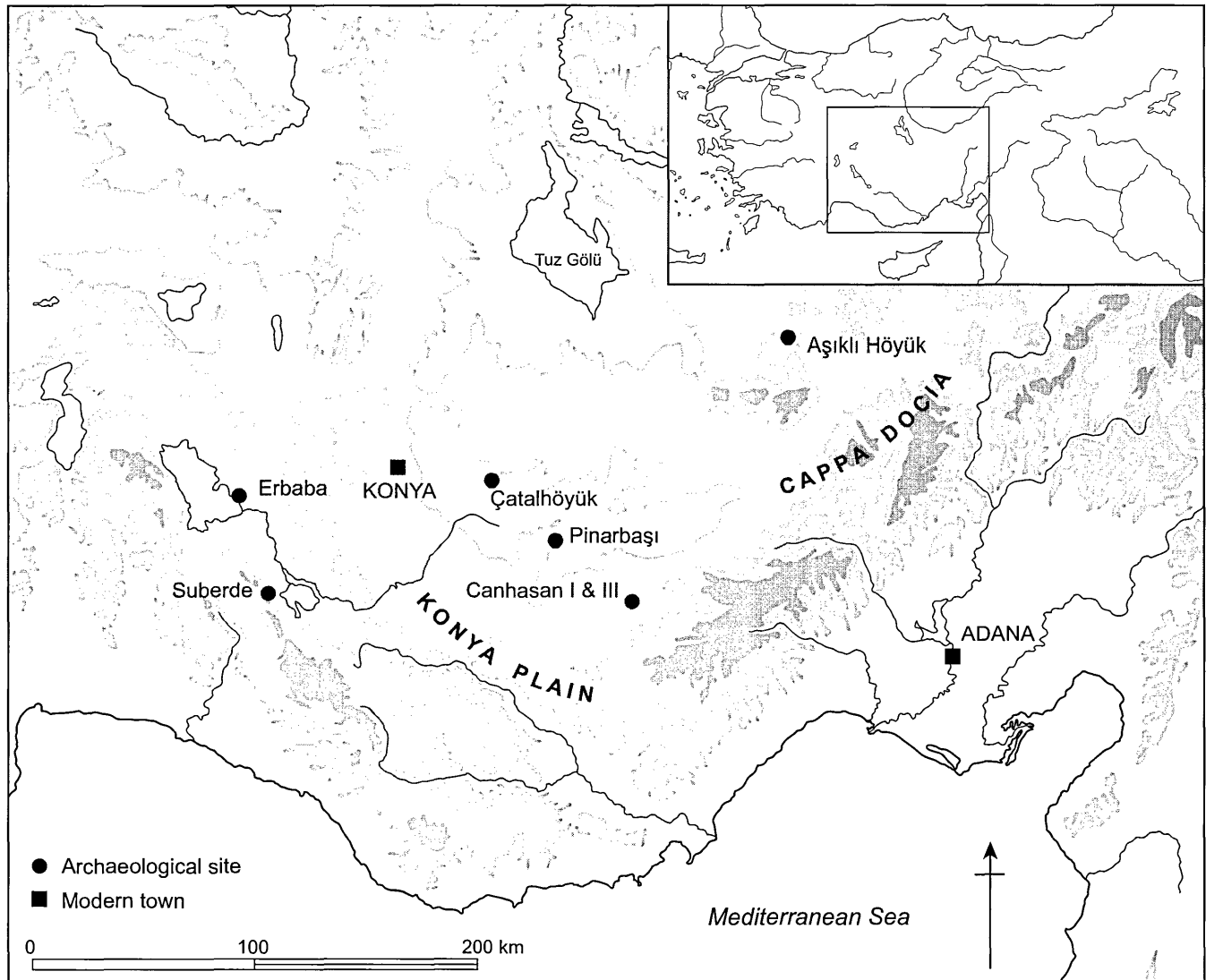


Figure 1. Map of the study area showing the location of Çatalhöyük and other sites in Anatolia. Light gray shading = 1000 m contour; medium gray shading = 1500 m contour; dark gray shading = 2000 m contour. Map drawn by Alison Wilkins.

sue in archaeology, not only with regard to site formation processes but also because it reflects specific cultural concerns (Lévi-Strauss 1982; Schiffer 1985; Tringham 2000). As household continuity reveals ancestry, so the ends of houses, as the architectural and spatial manifestations of households, may confirm or contest ancestral sequences. Building-closure practices encompass not only themes of shared identity and household traditions but also the transmission of material goods, including their encapsulating architecture (Gillespie 2000; Lévi-Strauss 1982; Tringham 2000). Household memory and reproduction are also linked to such crucial issues as sedentism, agricultural production, and social integration or differentiation (Hodder

2006c; Hodder and Cessford 2004; Kuijt 2001; Tringham 2000). Continuity of house occupation is therefore a focus of research in the archaeology of the Neolithic Near East (Esin and Harmankaya 1999; Hodder 2006c; Hodder and Cessford 2004; Kuijt 2001), particularly at Çatalhöyük, where it appears that throughout much of the site's occupation "spatial continuity was a key aspect of the maintenance of household identity as we see by the repeated construction of very similar buildings on the same spot" (Baird 2006: 71). This emphasis on house perpetuation may decline during the later occupation of the site, but it persists in some form beyond the Neolithic into the Chalcolithic (Hodder 2006a).

Intertwined with the topic of building closure is that of ritual in the Neolithic, particularly the interrelationship of ritual and daily life and the domesticity (as opposed to collectivity) of ritual practice. Several scholars have explored the intersection of the quotidian and the symbolic, as well as the relative prominences of household and community ritual (Kuijt 2000; Verhoeven 2002; Watkins 2004). Much of this work has concentrated on mortuary practice (Goring-Morris 2000; Kuijt 2000, 2001) or on art (Last 2006), but house abandonment behavior is equally relevant.

It has been argued that ritualized destruction through burning was one form of house abandonment in the SE European Neolithic (Stevanović 1997); a similar practice has been identified in the northern Levant (Verhoeven 2000). It is as yet unclear whether such a practice extended into central Anatolia and to Çatalhöyük in particular (see Cessford and Near 2005; Farid 2005). The normal procedure for house closure at Çatalhöyük did not involve fire, but rather the removal of household contents and useful building materials (e.g., roof posts), scouring of floors, dismantling of the roof, truncation of walls, and filling of house spaces and crawlholes with crushed building material (Farid 2007). An aim of this paper, therefore, is to critically review the identification and interpretation of intentional house burning, specifically with reference to Building 52.

### The Site

Çatalhöyük consists of an Early Ceramic Neolithic East Mound and a considerably smaller Chalcolithic West Mound. Building 52 is on the 34-acre East Mound, which at its peak was home to between 3500 and 8000 people (Cessford 2005). Eighteen occupation levels have been identified there, representing approximately 1400 years of continuous habitation (ca. 7400–6000 CAL B.C.) (Cessford et al. 2005). The East Mound appears to have been the only Early Ceramic Neolithic settlement in the well-watered alluvial fan of the (now dry) Çarşamba River, perhaps indicating that Çatalhöyük was drawing in local populations (Baird 2002, 2006).

Çatalhöyük's population was supported by a combination of crop agriculture and caprine herding, supplemented by hunting and by intensive gathering. The population lived tightly packed together, in mud-brick houses built directly against each other so that their occupants entered and exited their homes through the roofs. Streets have been found only in the site's latest levels. All of the site's buildings appear to have been lived in: no dedicated shrines or temples have been found (*contra* Mellaart 1967).

Çatalhöyük was initially excavated by James Mellaart in 1961–1965 (Mellaart 1962, 1963, 1964, 1966, 1967);

the Çatalhöyük Research Project (ÇHRP) began research anew in 1993 under the direction of Ian Hodder (Hodder 1996, 2005, 2007). Whereas the Mellaart excavations produced numerous elaborate “shrine” buildings, containing rich deposits and unusual features such as bucrania, no comparable structures were found during the first eleven seasons of the recent excavations. In 2005, however, the discovery of Building 52 changed matters. This building contains complex installations as well as uniquely rich and spatially well-defined deposits of artifacts and ecofacts. The exceptional preservation of the contents is at least partially attributable to its having been burned, but the sequence and causality of the building's incineration and abandonment remain contentious, even among the contributors to this article.

### The Building: An Introduction

Building 52 is located in Çatalhöyük's 40 × 40 area (FIG. 2) and consists of a large central room (Space 94) and a medium-sized room to its north (Space 93) (FIG. 3). The west of the house contains a pair of narrow rooms, Spaces 91 and 92; a small passage links Spaces 91 and 93, and there may also be a passage between Spaces 91 and 92. South of Space 94 lie two rooms, Spaces 255 and 290, which also belong to Building 52. An access hole links Spaces 94 and 290.

“Building 51” was originally believed to represent a separate, single-room structure constructed atop the remains of the eastern portion of Building 52. Upon complete excavation, however, it became clear that Building 51 was the latest phase of modification and reuse of Building 52. After a conflagration ended the use of most of Building 52, the burnt collapse was cleared out of the northeastern part of the structure and a small living space—Building 51—was installed there. To maximize comparability with previous reports, we retain the name “Building 51” when discussing this space.

Building 52 has only been excavated down to its floor surfaces, and subfloor deposits such as burials and caches remain unknown. Further excavation is not anticipated as the building has been conserved and left intact for exhibition. Most specialist analyses (e.g., faunal and botanical analyses) have focused on deposits of primary interpretive interest, such as features, bin fills, and floors, although a total accounting of some of the building's contents (e.g., ceramics) has been possible.

### Dating the Building

#### *Chronology*

Radiocarbon dates are not yet available for Building 52.

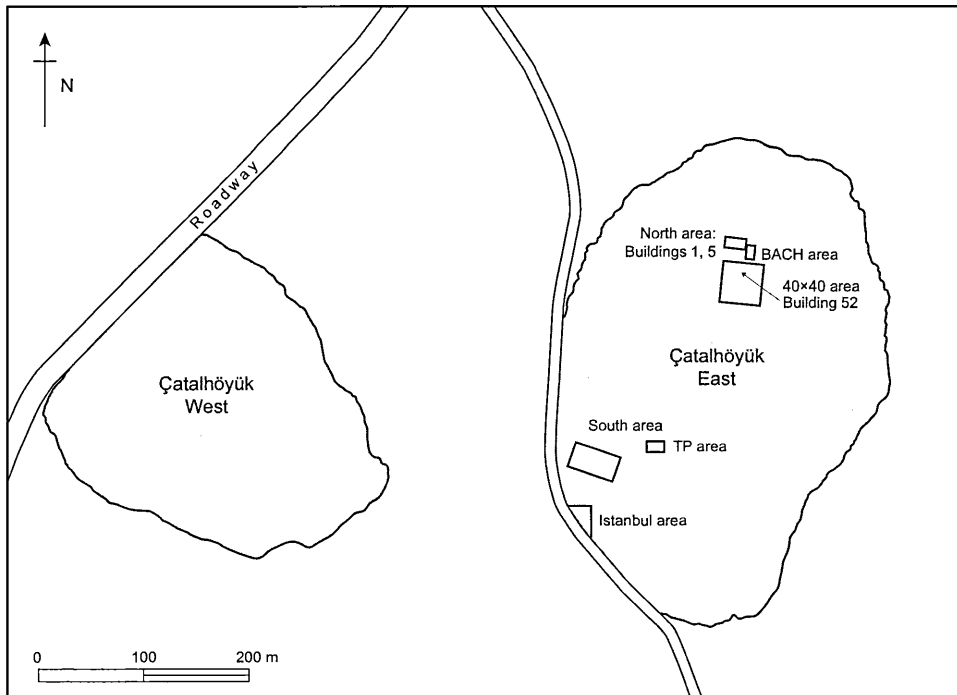


Figure 2. Map of the site of Çatalhöyük. Drawn by Alison Wilkins.

Artifactual data indicate that Building 52 dates to the middle of the Çatalhöyük occupation, or the mid-7th millennium CAL B.C. Techno-typological characteristics of the chipped stone artifacts suggest that the structure's occupation dates to approximately Level VI, as defined by Mellaart. Two points found inside bins parallel those found previously in Level VI contexts, and each of six complete obsidian points found in the southern rooms' infill has a direct parallel from Level VI contexts of the 1960s excavations (Bialor 1962: fig. 3.2, 8–9). A biconvex biface preform from Building 51 has parallels found thus far only in later levels, notably Levels IV and III, but it comes from fill.

A total of 12 potsherds was recovered in Buildings 51 and 52. Of these, only one, a small unidentified body sherd, comes from a reliably closed and in situ context. Such scarcity of pottery suggests that the building dates to relatively early in the occupational sequence of the site, although the mineral inclusions and dark color of the majority of the Neolithic sherds found link them to ceramics from the site's middle levels, ca. VI–V. The scarcity of clay balls in the building is also indicative of a post-Level VII date, as few clay balls are found in Levels VI–0 (Atalay and Hastorf 2006).

Artifactual data thus indicate that Building 52 probably dates to the middle of the site's occupation (approximate-

ly Level VI). This conclusion is consistent with the Level VI attribution of Building 1, located just to the north of Building 52, the date of which is based on both artifactual data and radiocarbon dating.

### *Duration of Occupation*

Building 52 was constructed of mud-bricks, timber, and daub, and plaster coats were then repeatedly applied to the walls, floors, platforms, and other architectural features (FIG. 4). Evidence for the lengthy occupation of Building 52 comes from the sheer number of plaster layers. One fragment of plaster, for example, is 1.8 cm thick and is comprised of 134 layers (67 paired ground and finishing layers). Another plaster fragment includes 42 pairs of layers.

### **Internal Configuration and Contents**

#### *Space 93*

Space 93 is the northern room of Building 52 (FIG. 3). Its internal area measures 2 × 2.5 m, but the amount of open space is reduced by storage bins along two of the walls. Multiple layers of fine whitish plaster survive on all of the indoor wall surfaces. Posts originally stood at either end of the central partition wall (F.2032): there are carbonized timber voids in the clay at its western end and plas-

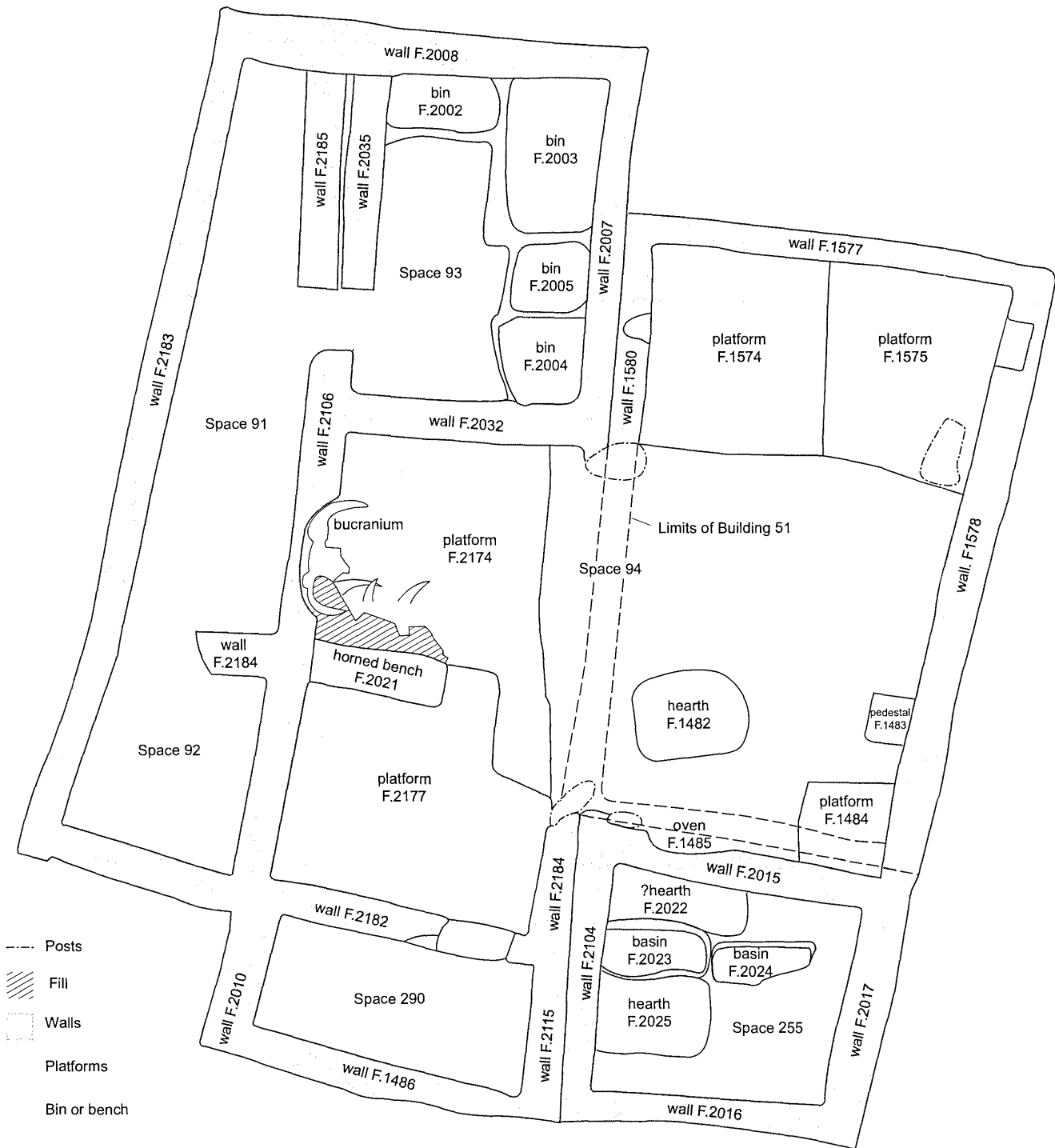


Figure 3. Plan of Building 52. North is to the top. Drawn by Alison Wilkins.

ter layers still encircling a burnt post at its eastern end. A passageway cut into this wall may have linked Space 93 to Space 94, but there is no direct evidence for this. Wood imprints on clay bricks found in the fills of both Spaces 93

and 94 suggest the use of a timber frame and possibly of wattle.

A cluster of bones was found on the floor in the southern part of Space 93, apparently having originally been

stored in a perishable container. The bones, which are primarily complete caprine metapodia, seem to represent a store of raw materials for bone working, probably for making bone points which are ubiquitous at the site. An associated 8.16 cm long obsidian blade was presumably for shaping the material. Numerous stones were found on the floor nearby. Some of these stones bore markings made by hard objects, supporting the hypothesis that bone working occurred inside Space 93.

A thin layer on the floor of Space 93 contained significant quantities of burnt material and ash, probably produced in the early stages of the fire that destroyed the house. Associated with this initial fire debris were several concentrations of cereal grains and crucifer seeds that we interpret as the remains of bags of foodstuffs that fell from the rafters. On top of the thin ashy floor layer lay a highly calcined and very fragmented cattle skull fragment, including a lengthy horn core. It may have been in this location before the fire started inside the room, or perhaps the skull and the horn were attached to the wall and fell to the floor in the early stages of the fire.

The four bins lining the eastern and northern walls of Space 93 (FIG. 3) sustained differential amounts of damage, which we interpret as evidence that they were filled to varying degrees when the architecture around them collapsed. Bin F.2002 was probably full at the time of the fire; its contents included an antler tool and ten pieces of largely unremarkable obsidian, as well as several small concentrations of different plant foods, akin to those found in the main floor area.

Bin F.2003 was more severely damaged, and we believe it to have been emptier, although it yielded material including barley grains, a stone grinder (quern?), part of an obsidian blade, a large piece of worked antler (perhaps a tool preform), and several animal bones. These remains reflect a range of activities from raw material storage to meal consumption to perhaps ritual deposition. The fire damage to the osteological remains in this cluster varies in intensity.

The fragile walls of bin F.2005 are preserved up to a height of 0.5 m above floor level, and the bin's contents were still in place at the time of excavation. A thick layer of very fine whitish clay was packed in the upper part of the bin, sealing the fills beneath. One of these fills consisted of more clay constructed in the eastern half of the bin, creating an internal ledge with a very neat vertical surface. The remaining bin space was packed with over 30 liters of seeds from small-seeded crucifers, a subsample of which has been identified as *Descurainia sophia* (L.) Webb ex Prantl (FIG. 5).

Finally, bin F.2004 was the most affected by the fire of any of the four bins. Its interior and exterior were plastered

with multiple layers of fine white clay that the fire turned reddish orange and black, suggesting that the burning was more intense in the southern end of Space 93 than in its north. Several interesting finds near the top of this bin probably fell in from somewhere above. They include an upside-down, moderately weathered and calcined wild boar mandible, an antler tine, and a very heavy piece of stalactite. These finds lay on top of burnt clay, ash, and charcoal, so they were not inside the bin when the building started to collapse. The heavy burning of the boar mandible may also indicate that it was outside the bin during at least some of the conflagration. The low density of botanical remains in this fill also suggests that they are not deliberate deposits but rather the result of dislodgement during the fire. The in situ contents of the bin include dense concentrations of both faunal and botanical remains: peas, crucifer seeds, cereal remains, a second wild boar mandible, a red deer antler tine, and five worked cattle-sized rib shaft fragments. A very fine used projectile was also found. Numerous charred mouse pellets and burnt mouse bones suggest that this storage area was infested with mice.

#### *Space 94*

The central room of Building 52, Space 94, originally included the entire space occupied by Building 51 (FIG. 3). Building 51's north and east walls and the northern end of its west wall were actually reused walls from Space 94. The size of this room and the installations within it strongly suggest that this was the core space of the house. At least two of the fine plaster layers on its walls, floors, and platforms were painted red.

Along the western wall of Space 94 are two low platforms and a central bench. A thin layer of burnt room fill atop the layered plaster floors can be traced under Building 51's wall. The fine clay that constitutes the floors was probably originally white, but it was red and very friable when found because of exposure to very high temperatures.

The northwestern platform's surface was variably exposed to fire, with its northeastern half reddened and friable and its other half less heavily burned and in a condition comparable to that of the rest of the building. This differential burning probably occurred because collapse shielded the southwestern corner of the platform from the worst of the fire. The southern platform was covered by multiple layers of fine plaster, all of which were turned dark brown-black from exposure to very high temperatures.

Between the platforms a white plastered bench juts out of the western wall. This 1.05 × 0.4 m bench is damaged and slumps northward. Either the intense burning that reddened the clay inside the bench also cracked that clay



Figure 4. Photograph of Building 52 from the north.

and broke the bench, or the bench was partially destroyed by the collapse of the roof and walls. Despite this damage, three large left-hand horn cores were preserved protruding from its northern side (FIG. 6). There was no evidence for right-hand-side horn cores on the other side of the bench.

The plaster layers covering two platforms in the northeastern corner of Space 94 are not as highly calcined as the floors south and west of them, and the timber post that stood against the wall at the southeastern corner of platform E.1575 survived the fire (to eventually be retrieved for further use after the abandonment of Building 51). In general, the northeastern corner of Space 94 appears almost unaffected by fire.

In the northwestern part of Space 94, a tightly bunched collection of cattle horn cores was discovered in the fill near the surface of the mound (FIG. 7). Additional horn cores and fragments lay below and around this pile, with a minimum of 13 horn cores in total. All of the horn cores that could be assigned to one side or the other were rights. At least two very fragmentary cattle skulls were also found

here, more or less on top of each other. None of these appeared to have been in their original location, but were placed on top of the room fill. The skulls and horn cores were highly burned, but they did not look as if they had lain exposed for long periods of time.

Below the cluster of cattle skull and horn cores was the first complete bucranium found since excavations were reopened at the site in the mid-1990s (FIG. 6). This bucranium consists of the partial skull of a large mature bull set in a semicircular niche cut into the western wall of Space 94, just north of the horn-embedded bench. There are possible traces of a thin layer of plaster on parts of the frontal, but these are not clear, and there is no clay or plaster modeling.

Additional special faunal finds in this area were a nearly complete cattle scapula and the wealth of horn cores above the bucranium, a boar mandible and a cervid antler tine behind the bucranium in the back of the niche, and a goat frontlet on the raised floor beneath the bucranium cluster. An in situ mortar and pestle were also discovered on the floor in front of the bucranium.





Figure 5. Photograph of bin F.2005: crucifer seed concentration. The scale bar is 50 cm.

The southeastern portion of Space 94, which is part of the area covered by Building 51, seems to have been the house's food preparation area. In its southern wall was the back of an oven. This oven may, however, have fallen out of use prior to the abandonment of Building 52, with only the hearth in front of it serving as the house's cooking facility. Next to the hearth, in the southeastern corner of the room, was a pedestal (F.1483) covered with numerous layers of plaster. There are also traces of a possible ladder base in this area.

Space 94 contained little apart from the special finds concentrated in the northwestern portion of the room. There was virtually no animal bone in Space 94 apart from the special finds previously described and a few more horn core splinters. Figurines were not reported, and only a handful of ceramic fragments was found, all in the burnt house fill or collapse. Lithic artifacts were likewise sparse.

#### *Spaces 91 and 92*

Building 52's narrow western rooms, Spaces 91 and 92, represent a later addition to the building, replacing earlier rooms, and their floors are considerably higher than those in the central spaces. Space 91's walls and floors sustained severe damage from the fire as well as from erosion; Space 92's floor was not as highly burnt as the floor in Space 91. Space 91 is linked to Space 93 via an access passage and there may also be a passage between Spaces 91 and 92. The function of these two small rooms is not clear, but their faunal and lithic contents (a collection of caprine metapo-

dia similar to, but smaller than, the one found in Space 93, plus 13 groundstone fragments on the floor of Space 91) as well as the direct spatial linkage between Spaces 91 and 93 suggest that similar storage and processing activities may have occurred in all three rooms, or else that stored items were dumped in various locations around the house at abandonment.

#### *Spaces 290 and 255*

Spaces 290 and 255 lie south of Space 94 (FIG. 3). An access hole links Spaces 94 and 290, but a double wall between Spaces 290 and 255 suggests that they were constructed at different times (Daniel Eddisford, personal communication 2006). Space 290 shows minimal evidence for burning in comparison with the majority of the building, but appears to have fallen out of use directly after the fire (Daniel Eddisford, personal communication 2006). An additional space, Space 254, was uncovered south of Space 290. It is not currently believed to belong to Building 52. The irregularity of the building's plan and its multiple double walls, however, suggest that it underwent numerous modifications, and we cannot be certain of the relationship between Space 254 and Building 52 without further excavation.

#### *Building 51*

Building 51 was a modification and reoccupation of Space 94 (4.3 × 2.7 m) within the destroyed Building 52 (FIG. 3). It was erected on top of the fire-damaged floor of



Figure 6. Photograph of niche with horned bench and bucranium.

Space 94 and abutting its severely fire-damaged walls. Of all parts of the original building, however, this area appears to have suffered the least during incineration, which is probably why it was chosen for reuse.

Prior to construction of Building 51, the burned debris that filled the northern end of the space to a depth of over a meter was removed, revealing the topmost plaster layer on the platforms and the floor immediately in front of them. Elsewhere in the space some of the debris remained, to be leveled and covered with a thin make-up layer of brown clay.

After the burned collapse was removed, two mud-brick walls were erected. These western and southern walls were keyed in to existing Building 52 walls, and their lower bricks were placed either directly on the floors of Space 94 or in shallow foundation trenches cut through existing features. The southern wall was built directly in front of an existing Building 52 wall (F.2015); we believe that the old wall was too damaged to be reused. Building 52's eastern and northern walls, as well as a short northern section of

the western wall, were still standing up to a reasonable height and were simply replastered and reused.

A small living space was thus created using existing features and a few new or reconstructed ones. The two northeastern platforms were reused, with only a clay make-up layer and a thin layer of plaster added to their surfaces. The two niches in the walls above the platforms fell out of use and were sealed by the layer of plaster that covered the floors and walls of the new living space. A double basin and a small square pedestal were added, and a new raised-border hearth and another bench or pedestal were constructed exactly where their predecessors in Building 52 had been. This may indicate that the memory of Building 52 and its layout was still very fresh, and therefore that the reopening of this part of Building 52 took place reasonably soon after the fire. If debris was shoveled out prior to reconstruction, however, the remains of even long-abandoned features could have been easily visible.

Building 51 was occupied only for a short period of time, as only a single layer of plaster was laid on its walls.

There also does not appear to have been an extensive buildup of floor layers. When it was abandoned, the unburned timber post on its eastern wall was retrieved.

### The Fire

Fire, and specifically architectural burning, has long been a topic of conversation at Çatalhöyük (Cessford and Near 2005; Harrison 2004; Mellaart 1966). As Craig Cessford and Julie Near (2005: 171) note, “the presence of burnt buildings was one of the strongest initial impressions of Çatalhöyük when it was discovered in 1958 ([Mellaart 1967: 27]).” Mellaart generally presented these building fires as accidental, but recently other scholars have argued for intentional burning as part of the abandonment process (Cessford and Near 2005). The scarcity of excavation data from burned buildings (apart from Building 52, the ÇHRP has uncovered only one burnt building [Building 45] and two partially burnt ones [Buildings 1 and 63]) has allowed both interpretations to remain plausible (Farid 2005; Özbaşaran and Duru 2006). In the following section we discuss the burning of Building 52 and the intentionality of its incineration.

It is very clear that the collapse of Building 52 was caused by fire. The fill is characterized by burnt red clay mixed with charcoal, burnt plaster, and daub-like fragments. The floors and features of Spaces 93, 94, 91, and 92 were all burned. Large fire-baked pieces of building material in Spaces 94 and 93 suggest that the fire burned for a long time before the building collapsed completely.

The fire may have begun in the central part of Space 94, where the floors are highly calcined. Perhaps not incidentally, this is also where the hearth is located. The contents of these rooms were reduced to ash and charcoal; this forms the lower layers on the floors of Spaces 93 and 94. Several concentrations of cereals and crucifer seeds in the ash on the floor of Space 93 may be the contents of storage bags suspended from the ceiling rafters.

The fire reached its highest intensity in the north-central portion of Space 94 and the southern portion of Space 93. The floors in the center of Space 94 and in the southern part of Space 93 were hardened and orange-red; those in the southern part of Space 94 and the northern part of Space 93 were powdery and brown or black. Similarly, the architecture in the center of the building is red, intensely burnt and hardened, having been in a very high-temperature, oxygen-rich fire, whereas that on the building's periphery is black and less damaged, having been consumed in a slower, cooler fire. Burnt debris in Spaces 290 and 255 appears to come from the demolition of fire-damaged walls that separated them from Space 94, and it seems that the fire did not reach into these small southern rooms. The

quantity of burnt debris in Spaces 290 and 255 shows that these rooms were not reopened after the fire, but the items found in the room fill indicate more activity in the area before all the walls were demolished.

That the building superstructure collapsed during the fire is indicated by differential burning patterns on the floors of Space 94. In this room the northern floor and the eastern half of the northwest platform (F.2174) are highly burned, reddened, and very friable. The rest of the floor horizon, however, is only dark-brown and retains its integrity. It appears to have been shielded from the heat by collapsed architecture, recognizable as debris that is composed of the same material as the rest of the room fill, but less burnt. The collapse also apparently partially protected the bucranium, enabling it to survive with only the tip ends of the horns fully calcined. The horned bench next to it was more severely damaged. Fragments of burnt daub and other debris in Space 93's bins suggest similar collapse in that room, as do the fallen remains of a possible clay shelf.

We therefore reconstruct Building 52's end as follows. The fire probably began in Space 94, perhaps in the area around the hearth. It then spread through the house, although it remained less intense in the northeast part of Space 94 and does not appear to have affected the two southern rooms. As the flames consumed the contents of the building, a thin layer of ash and charcoal formed on the floors. Soon the walls and roof began to fragment, and a section of one or the other fell into Space 94 and protected part of the room from the direct effects of the fire. As burning continued, more of the building buckled and collapsed: a shelf in Space 93 fell, bits of the walls and roof tumbled into the bins, the horned bench in Space 94 cracked and slid north, and eventually much of the upper part of the structure was destroyed. Sometime reasonably soon after the fire cooled, the northeastern portion of Space 94 was shoveled out. Building 51 was constructed in this emptied space; it was occupied for a limited time before the Building 51/52 structure was entirely abandoned.

### Deliberate or Accidental Burning?

An obvious question is the intentionality behind this sequence of events: was the house deliberately incinerated, or did it burn down accidentally? The answer to this question has significant implications for interpretation of the house's contents, although some aspects of interpretation are more seriously affected than others.

Both deliberate and accidental burnings are plausible hypotheses. Deliberate burning can be carried out as a hostile act, as a way to ease reuse of clay house materials, as a reaction to insect infestation, or as a form of building closure (Apel, Hadevik, and Sundström 1997; Cameron



Figure 7. Photograph of *Bos* horn core concentration in fill of Space 94. The area shown is approximately 55 × 35 cm.

1990; Chapman 1999; Verhoeven 2000). Burning as a hostile act against the community can probably be excluded; Building 52 does not form part of a widespread burning event (though large-scale burning elsewhere has been interpreted as deliberate ritual destruction by the settlement's own inhabitants [Verhoeven 2000]). The scarcity of burning throughout the site also argues against it as a prosaic method of increasing clay portability for reuse elsewhere, as does the fact that Building 52's burnt mud-brick rubble was mostly left in situ. Deliberate burning to relieve insect infestation and/or to ritually 'close' the house are possibilities.

As for accidental burning, mud-brick buildings are difficult to ignite and burn slowly (Agarwal 1981; Cameron 1990; Seymour and Schiffer 1987; Verhoeven 2000; Wilshusen 1986). This would explain why accidental burning was not a common event at Çatalhöyük despite intensive daily use of fire, and perhaps also why the Building 52 fire did not spread to adjacent areas. It does not rule out

the possibility of an accident, however, especially since the quantity of flammable materials usually present in a Çatalhöyük house is unclear.

How can we distinguish deliberate from accidental burning of a house? Mirjana Stevanović (1997) identifies deliberate house burning in the Neolithic of SE Europe primarily on the basis of high-temperature burning (implying fuels other than construction wood) and multiple, floor-level ignition points. She also cites evidence that fires marked the end of house use-lives (the completeness with which the houses are burnt; the repetitive patterning of collapsed timbers' orientations, suggesting that the houses were pulled down in a strategic manner; and the lack of re-occupation after burning) as indications for intentionality of incineration.

Additional criteria for the identification of deliberate burning have been suggested by other authors. These include evidence for deliberately introduced fuels or other accelerants (Cessford and Near 2005); the presence of "ritu-

ally deposited floor assemblages” and/or large hoards of objects that represent implausible “snapshots” of the house’s use-life (Chapman 1999; Schiffer 1985: 29; Seymour and Schiffer 1987; Verhoeven 2000); and a diachronic change in the frequency of house burning within a settlement sequence when not correlated with other causes such as changes in settlement density or in the storage of potential fuels (Cameron 1990; Cessford and Near 2005). Some archaeologists are also beginning to embrace sophisticated fire engineering techniques that consider structural geometry, ventilation flows, and spatial distributions of thermal alteration (Harrison 2004; Icove 2006). Such models rely heavily on accurate reconstructions of structure form and habitually present fuel loads, however, and these data are uncertain at Çatalhöyük. Not only are standard domestic fuel loads unknown, oven fires lit inside an experimental Çatalhöyük house analog suggest an imperfect understanding of ventilation within these structures (Harrison 2004).

It is important to recognize that most of the criteria linking burning evidence to intent are ambiguous (Chapman 2000: 105) and that positive evidence for an accident is inherently difficult to identify. High-temperature burning need not indicate intentional fire—a fuel such as oil could be present within the house for consumption or use. The occurrence of ritual items (including human remains) on house floors has been interpreted as evidence of deliberate burning (Verhoeven 2000), but the presence of items normally removed at abandonment could equally plausibly be interpreted as evidence of accidental fire. As noted earlier, almost all of the other buildings excavated by the ÇHRP tended to contain very little, their contents having been removed as part of the abandonment process. Building 52 also lacks evidence for other abandonment behaviors typically seen at Çatalhöyük such as the scouring clean of floors and features, sometimes the destruction of the oven, and the “defacing” of the western wall.

The two most convincing indicators of deliberate burning are multiple ignition points and deliberately introduced fuels and/or accelerants. In Building 52 the fire appears to have started in a single location, near the hearth. As for fuels and/or accelerants, it has previously been argued that the presence of oil-rich crucifer seeds in burned rooms or buildings at Çatalhöyük reflects their use as an accelerant (Cessford and Near 2005; Cessford 2007). The ca. 30-liter store of crucifer seeds in bin F.2005 of Space 93, however, was hermetically sealed and located well away from the start of the fire in Space 94. Its presence therefore does not support intentional burning and suggests furthermore that such seeds were valued for their usefulness or edibility. Personal observations suggest that crucifer

seeds are difficult to ignite in any case. We thus conclude that we found no direct evidence of fuels or accelerants in Building 52.

Since the house did burn down, however, it is clear that adequate fuel was present. Moreover, it is possible that concentrated, high-temperature fuel would have been naturally present in the house. Depending on their content and preparation, animal dung cakes can be used to attain temperatures high enough to fire pottery (Ertuğ-Yaras 1997; Sillar 2000). Dung burned at such high temperatures may be reduced completely to ash and therefore be archaeologically invisible. Dung fuel appears to have been used regularly at Çatalhöyük, and there is possible evidence for dung storage inside houses (Matthews 2005). Given the low densities of archaeobotanical remains from Space 94, in the area where the fire started, it is likely that any such fuels were reduced completely to ash.

The identification of ritually deposited objects or assemblages is relatively subjective. Though such assemblages are crucial to the case for deliberate ritual burning or house closure, they are also difficult to identify unambiguously (Chapman 1999, 2000: 106). Part of the difficulty, at least at Çatalhöyük, is that it is only in burned buildings that extensive primary deposits of botanical and faunal remains are found inside houses; there are no unburnt house inventories to which cases like Building 52 can be compared.

The evidence of rodent infestation in bin F.2004 suggests strongly that this was an established store rather than a short-term event or abandonment offering deposited immediately before the fire. The house’s other faunal and botanical clusters, however, are much more ambiguous. In particular, the collection of cattle horns and skulls in Space 94 may constitute evidence of dismantling and placement of horn installations, perhaps as part of preparations for abandonment. The fact that two obsidian points were found in the Space 93 bins might be ritually significant as well. The recovery of a point in a bin is without precedent at Çatalhöyük. The occurrence of an obsidian point in a post retrieval pit is arguably also an aspect of closure ritual.

The final criterion, a change in the frequency of house burning, relates to a debate that goes back to Mellaart’s excavations at Çatalhöyük. Mellaart (1964: 115, 1966: 172) argued that burnt buildings in phases designated as Level VIB and later represented accidental events in which ‘blocks’ of adjacent buildings caught fire; Level VIA, he argued, related to a major ‘conflagration,’ and thereafter each phase ended with a fire. This hypothesis is not fully supported by current data indicating the presence of extensive areas of unburned post-Level VIA buildings. Recent exca-

variations in the site's lower levels (pre-Level VI) in the South area, however, did not reveal any burned structures, whereas burned or partially burned buildings assigned approximately to Levels VI and later have been uncovered in the South, Istanbul, 40 × 40, and North areas of the site (FIG. 2) (Cessford and Near 2005; Hodder 2006a; Özbaşaran and Duru 2006).

It could be argued that the apparent increase in burning frequency in the site's later levels substantiates the case for intentional burning (Cessford and Near 2005), though mid-sequence burning events also appear to correlate with maximal levels of aggregation and crowding. Perhaps ritual burning—if it was practiced—arose as part of a gradual shift in the socioeconomic role of houses. Cessford and Near (2005) relate house burning to a decline in the duration of house occupation. Ian Hodder (2006a) suggests a mid-Neolithic shift in social emphasis away from diachronic (ancestral) relationships within houses toward synchronic relationships between houses. If Building 52 was deliberately burned, its immolation may be related to a decline in the importance of house longevity, ancestry, and lineage. Deliberate incineration was clearly not a strategy embraced universally, however, since many houses were abandoned unburned even in these later levels. Moreover, deliberate house burning at Çatalhöyük must be regarded as distinct from hypothesized house closure through firing in the SE European Neolithic, which is itself variable but can include the placement of artifact hoards and human bodies in buildings prior to burning (Chapman 1999, 2000).

Çatalhöyük's recently documented burned buildings also do not appear to reflect a consistent set of building closure practices. Building 45 in the 40 × 40 area is as yet only partially understood, as its analysis is still underway, but it appears to have been largely emptied before being burned. Building 63 in the Istanbul area has not been completely uncovered or analyzed, but it appears to have been partially burnt and subsequently reoccupied. Its excavators note that "whether the fire was accidental or intentional is not yet known, but the bin full of naked barley grain and the various and numerous finds [including the fragmentary remains of the current team's first plaster-coated bucranium] imply that it could be accidental, that it started somewhere on the southwest corner of the building" (Özbaşaran and Duru 2006). More complete data are available from Building 1 in the North Area of the site (Cessford 2007). Building 1 is roughly contemporaneous with Building 52, which it strongly resembles in its extensive burning and the relative richness of its organic and artifactual contents. Furthermore, a similar debate over the intentionality of burning surrounded Building 1 (Cessford

2007). There, a consensus emerged that the building was probably intentionally burnt, since there were several phases of feature remodeling leading up to the burning and multiple points of ignition. As noted previously, Building 52 lacks these signatures. Building 1's incineration also diverges from that of Building 52 in that the burning of the former was a complex and multistage event, wherein the largest botanical concentration—a lentil cache, on top of which were placed 13 wild goat horn cores—was burnt prior to and at lower temperatures than the major fire that scorched the floor and walls of the main space. These features of Building 1 continued to be used after the fire.

A final scenario for the burning of Building 52 is that it reflects a combination of accidental incineration and ritual immolation. The domestic contents of Space 93 appear to indicate that the building was initially lost by accident. The placement of ritually significant items (i.e., the horn core cache), however, on top of burnt debris that lay in clearly special locations (above the bucranium installation) seems characteristic of ideological activity, and the fact that these carefully placed items were also calcined indicates that they were probably present in the house during at least part of the fire. Perhaps after the original damage was done, additional symbolically weighted items were added to the pile and the burning was completed, or perhaps they were thrown in when the building was still aflame.

### **Interpretive Implications of the Fire**

In the absence of conclusive data pointing towards either deliberate or accidental burning of Building 52, we are left with a set of exceptionally rich deposits that could reflect a "snapshot" of occupation debris, a set of ritually structured deposits, or a combination of both. This ambiguity, however, does not preclude consideration of either the socio-cultural implications of the (indubitable) emic association of these materials with the house, or the clearly non-random spatial distribution of materials within the house. Whatever the prosaic or spiritual intent behind the placement of the faunal, botanical, and lithic contents of Building 52, there is clear emic patterning in their distribution, which must be taken as culturally significant.

Consider, for example, the spatial segregation of overtly ritual and seemingly quotidian items within the house. Building 52's overtly symbolic contents are concentrated in the western section of Space 94, where the large symbolic installations (horned bench, bucranium) are located; the interpretation of this location as the focus of domestic ritual activity is reinforced by the dumping of horn cores in this area. Conversely, the concentrations of plant foods in Space 93—some of them infested with pests—strongly suggest that this room was used for private storage. The

cluster of raw materials for bone working in this space, while interpretable as a ritual dump, is similarly very plausible as non-display storage of useful goods. These distributions, whether formed as part of normal household life or deliberately arranged as part of ritual activity, suggest that ritually charged display items were concentrated in one room of the house, whereas food and tool preparation and storage were intended to be kept separately.

Moreover, the ritual installations are located in the room with the structure's ladder scar, i.e., the entrance area of the house, whereas the "storage room" is relatively inaccessible. This suggests a public/private facet to the ritual display/household storage dichotomy. The coexistence of household economic privacy and ritual publicity in Neolithic sw Asia has been repeatedly discussed at a community level (Byrd 1994, 2000; Kuijt 2000; Kuijt and Goring-Morris 2002; Rollefson 1997; Wright 2000). The burning of Building 52 affords direct evidence for such differentiation within the living spaces of a single house (cf. Hodder 2006b: 109–168; Matthews 2005).

Çatalhöyük, like many other early Near Eastern agricultural villages, appears to have been a house-based society, wherein social alliances and economic production were centered on the household unit (Hodder 2006a; Hodder and Cessford 2004). The potential for Building 52 to provide insight into household organization and layout is therefore of tremendous importance. We argue that the building's rich inventory affords us rare insight into the material correlates of the basal Neolithic socioeconomic unit. This is true even if ritual actions modified the nature and arrangement of the building's contents. Building 52 was clearly not an exclusively ritual structure; its architecture is reflective of domestic occupation, and there is good reason to believe that at least some of the building's contents were established features rather than abandonment offerings. Moreover, any ritualized placement of objects and materials would have been done in relation to emic conceptions of building use and proper artifactual locations. Whether or not material patterning within the building is to some extent attributable to ritual behavior, it plausibly reflects the contours of Neolithic space use.

No consensus has yet been reached on the intentionality of Building 52's burning. It is possible that further excavation of adjacent buildings and areas will reveal broader patterns that clarify matters. In the meantime, we acknowledge the ambiguity and keep it in mind as we explore the building's implications for Neolithic life. Archaeology is not a discipline typified by entirely conclusive data; Building 52 is, like so many discoveries, a phenomenally rich data set open to multiple interpretations.

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