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11. Weaving house life and death into places: a blueprint for a hypermedia narrative

Ruth Tringham

Introduction

In creating the presentation on fire for the conference *(un)settling the Neolithic*, I was impressed by two things. First, I could not believe that fire and its manipulation had been so greatly under-theorized and under-problematized. Second, I was overwhelmed both by the intricacy of the ways in which fire must have entered deeply into the lives of the Neolithic people of south-east Europe, and by the challenge that faces archaeologists trying to comprehend and express this intricacy. It is the latter phenomenon that has encouraged me to create this paper as a hypermedia expression, presented here as a blueprint or storyboard, rather than as a straight linear narrative.

When I first wrote about the prevalence of burned houses in the south-east European Neolithic, I assumed that everyone who had excavated, interpreted and

published these houses had been as impressed as I by the fact that they were all burned. Mirjana Stevanović and I did not think that we were the first to problematize the destruction of the majority of these houses by burning (Stevanović 1996, 2002; Stevanović and Tringham 1998; Tringham 1991; 1994; Tringham *et al*. 1992; Tringham and Stevanović 1990). We were not quite the first, but almost. I had drawn attention to the phenomenon of burned houses in 1971 (Tringham 1971, 179) and, in passing, suggested an explanation. As with most authors, however, it was the ground-plan of the houses and construction methods that drew my attention, rather than the cause of their destruction. Alan McPherron and Chris Christopher (McPherron and Christopher 1988, 477–8) had discussed possible reasons for house burning and, more recently, John Chapman and Mirjana Stevanović have devoted articles to them (Chapman 1999; Stevanović 2002). The earliest discussion about burned houses referred to the houses of the Tripolye culture in Moldavia and the Ukraine (Krichevski 1940; Passek 1949; Paul 1967). Even scholars, such as Marija Gimbutas with her Kurgan invasions, who could have benefited from the idea of burning as a sign of destruction by invading agents, veered away from arson in favour of other forms of evidence (Gimbutas 1973; 1991).

Mirjana Stevanović has called the Neolithic and Eneolithic of south-east Europe 'the age of clay' (Stevanović 1996). It is clay modified by fire, however, that creates the really spectacular face of Neolithic south-east Europe and that has earned the name burned-house horizon.

Fire is such a hugely creative force, inspiring our imaginations and emotions to express metaphors that have relevance for almost every aspect of our lives (Rossotti 1993). In 1938, the French philosopher and polymath Gaston Bachelard (who later wrote the *Poetics of space* so loved by phenomenologists) wrote a small book, *La psychanalyse de feu* (Bachelard 1964). *La psychanalyse de feu* builds on and critiques Frazer's *Myths of the origin of fire* (Frazer 1911–1915) and describes fire as powerful, transformative, renewing, purifying, magic, and fearful. Fire is the force that gives the entropic energy (the irreversible movement forward) to buildings now and in prehistory (Fernandez-Galiano 2000). How is it possible that we have never thought to use the evidence of its manifestation as a stimulus for interpreting Neolithic south-eastern Europe (Gheorgiu 2002, 5)?

Places of fire in south-east Europe

If I have to start somewhere in this complex web of observations and interpretations, a good place would be the empirical evidence of fire in the settlements of Neolithic south-east Europe. Fire in the unsettled landscape would also be a possibility, but not for this story. How better to start than with the places where fire is born. Craig Cessford and Julie Near have eloquently suggested that fires have life-histories (Cessford and Near in press). A fire, of whatever scale, is created, nurtured; it grows. It is maintained and it will die unless its life is prolonged by re-kindling with more food (fuel). On the other hand, removal of food or oxygen (by using sand, earth or water) can put out a fire while it is raging in the middle of its life. To live, fire needs ignition (a spark, an accelerant), energy (air and wind), and combustibles or fuel (food) (Rossotti 1993). Energy and fuel frequently occur with or without human action. But what about the initial spark? What is *its* source? Lightning cannot be responsible for all fires. Is spontaneous combustion possible (Bachelard 1964; Rossotti 1993, 21–32)? Once alight, how long can a fire last without the addition of more fuel/food? Rossotti describes how the finite duration of fire was used to tell the time in historical contexts (Rossotti 1993, 154); Bachelard notes how far the idea of a fire being fed has entered into our subconscious (Bachelard 1964, 64). The birth of fire is difficult; it is significant enough to comprehend and practise that, once achieved, in many places the aim is not to let the fire go out, but to keep it alive.

In our society, we take for granted these questions of a fire's birth and lifespan, but in other societies they were mysteries that required explanation. Bachelard and Frazer (amongst others) drew attention to the dominating sexual themes that run through the explanations recorded in historical, ethnographic and folklore literature (Bachelard 1964; Frazer 1911–1915). Even now we have all experienced the sniggers from students as we tell of creating fire by rubbing two sticks together.[1]

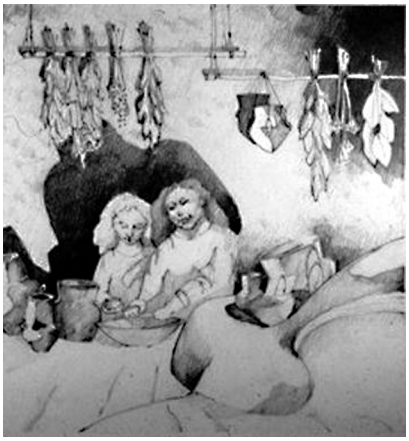
This minor tangent puts into context the creation of fire in various places in a south-east European Neolithic household. Places of fire are often given a neutral term such as 'fire installation' or 'thermal structure', since the terms 'oven', 'kiln', 'hearth', or 'fireplace' have various cultural connotations and technological requirements. In a 'hearth', the fire was not closed over, the temperature was not controlled, and its illuminations, its colours and its movements were clearly visible. Such hearths have been identified within and outside of Neolithic south-

east Europe houses, as at Divostin (Bogdanović 1988, 85) where three houses had open hearths, each placed either against the corner of a room or against one wall.

The term 'oven' describes a single heating chamber, created by a wall and roof that form a wattle-and-daub dome. In the south-east European Neolithic, the chamber could rise to 50cm above the floor of the firebed. The firebed itself (i.e. the floor of the chamber) was carefully prepared of refractory materials, layers of clay, cobbles, or ceramic sherds, and it contains evidence of multiple renewals. The ovens were round, oval, horseshoe-shaped, and frequently exceeded a metre in diameter. They occur in all the Neolithic and Eneolithic settlements of south-

east Europe, both in- and outside houses. Like open hearths, the ovens were set against corners or side walls of a room. At Divostin, some houses had an oven or hearth in each room (Bogdanović 1988, 79–82). It is assumed, by evidence of their low firing temperatures (>350ºC) that these ovens were used in the preparation of food (e.g. baking breads) where the oven would be heated to the required temperature, the fuel removed and replaced by the material to be baked. Ovens of this design continue to be used in many parts of the world (Boily-Blanchette 1979). They are distinct from open hearths in that their flame is not the most obvious or visible aspect, although it would have been possible to keep the small mouth at the base of the dome open. With their frequent elaboration and lively 'mouths', it is not surprising that in European folklore ovens take on a significance far beyond their meaning as 'thermal structures'.

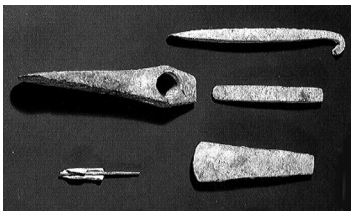
This discussion of birth-places of fire in Neolithic south-east European houses could lead us in several directions; here we have to make choices in a linear format. Discussion could lead in the direction of the oven or hearth as the centre of communication and central life



in a house. There is much to be said on this subject, of the oven as a central location for the preparation of food, for the telling of stories and therefore, indirectly as a guardian of social memory, as well as the source of light and heat to rival the sun (Ashley 2004). There is nothing to contradict the likelihood that as they looked into fireplaces or the bright mouths of ovens, the residents of Neolithic houses saw fires that were as full of contradictions in their Neolithic minds as they are for you reading this article. Fire is gentle, life-giving and comforting when controlled. But it is also cunning; it can easily become unruly and it is always alive. When it touches you, or you touch it, its physical experience can be very painful. Yet in that very pain, Bachelard (like Frazer) describes fire as exciting, as alive, as sexual and highly sensual (Bachelard 1964). For the purposes of this article, however, I move in another direction, towards the death as well as the life of buildings.

Fire transformations and pyrotechnology in Neolithic south-east Europe

The transformative properties of fire (and the harnessing of these transformations through the control of air intake, fuel quality, and fire chamber construction) form a bridge to the death of buildings. Pyrotechnology harnesses the transformative properties of fire to create materials which could not otherwise be obtained in nature. Fire transformation includes liquification, vitrification, carbonization, drying, softening, hardening, and colour changing (Rossotti 1993, 85–97). Many of these transformations could have been achieved in the ovens used for food-preparation. For example, we have suggested that in the Vinča culture settlement of Selevac ceramics could have been fired and copper ore smelted without the need for closed kilns (Glumac and Tringham 1990; Kaiser 1990). It is also clear, however, that some ceramics and copper artifacts from the early Eneolithic of south-east Europe required the production of temperatures of at least 1000ºC; this almost certainly was achieved by the



use of kilns possessing a controlled air flow (Bailey 2000, 227–8; Ellis 1984, 157; Evans 1978). Linda Ellis has pointed out that since kilns would have been located on the edges of settlements, and because the archaeologists have been so focused on architecture, few remains of kilns have been found. Nevertheless Ellis demonstrates the presence of high temperature kilns at several sites from this period in Moldova and north-east Romania (Cucuteni A, AB, B and Tripolye B and C; Ellis 1984, 130–58).

Neither are the transformations that fire achieves always controllable, nor are they even intended by the humans who give them birth. One of the archaeologist's tasks is to reconstruct the intentions of prehistoric fire-makers. For example, to what extent was scorching and carbonization a negative transformation for the prehistoric ceramicist? To transcend our own understanding of the perfect product of fire, to imagine the significance (for the fire-makers and their families) of the process of fire transformation is to open great possibilities for archaeologists. In a similar manner, Heather Lechtmann has written about the ritual performance that imbued every task in the metallurgical process in Andean Incan culture (Lechtmann 1984). Throughout European history, the interwoven threads of experimentation, pyrotechnology and the sister discipline of alchemy were similarly imbued with symbolic expression and ritual performance (Bachelard 1964, 59–82; Rossotti 1993, 255–60). There is no need to deny the south-east European ceramicists and metallurgists a similar level of attempts to understand and control the transformational process of fire. But this is where I leave this direction of the discussion and follow another one that leads towards buildings.

The ultimate fire transformation: ash is not just ash

Apart from ceramics, four products of fire transformation are ubiquitous on settlements of Neolithic south-east Europe: ash, burned soil (carbonized, scorched),

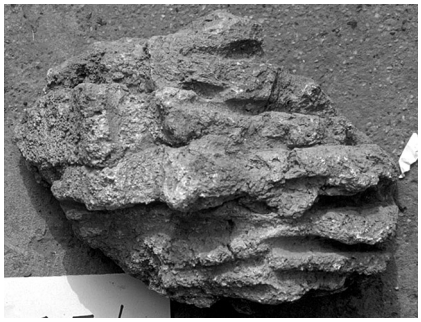
carbonized wood (charcoal), and burned building clay. These materials are vastly under-theorized and greatly taken for granted by the archaeologists who excavate them. By making them the focus of research they could provide a wealth of information for understanding the fire process, the symbolic significance that fire had in different social contexts, and the intentions of the fire-makers (Chapman 2000a).

For example, ash is deposited in pits often as a clear horizontal layer and at regular intervals. What kind of ash? What significance did this type of deposition have? Marakwet families gave such symbolic significance to ash of different origins that Henrietta Moore devoted a

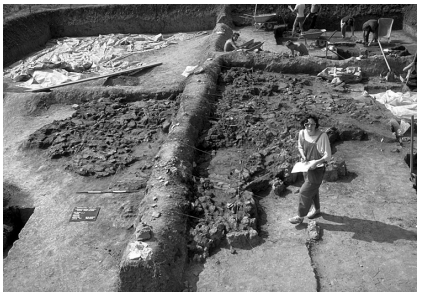
chapter in her book *Space, text and gender* to discussing the different locations of ash deposition and the ritual practices associated with each (Moore 1986, chapter 6, 111–18). Bachelard describes many places where ash is deposited in fields and other locations where ash is mixed with cattle's fodder to improve fertility. Keeping with his (and Frazer's) theme of sexual excitement and the power of fire, Bachelard argues that regardless of whether or not an animal is being fed or which fields are being fertilized, there is (above any utility), a more intimate dream: the dream of fertility in its most sexual form. 'The ashes of the bonfire make fertile both animals and fields, *because* they make women fertile. It is the experience of the flame of love which forms the basis of the objective induction' (Bachelard 1964, 32–33).

House fires: the burned house horizon

Burned clay rubble from buildings is an ubiquitous phenomenon of Neolithic and Eneolithic settlements in south-east Europe. Here we come face to face with questions of intention (or not) of starting the fire; these are the same questions that fire investigators ask in our own society. At sites where post-Neolithic ploughing has not spread the rubble, it is concentrated in an area that

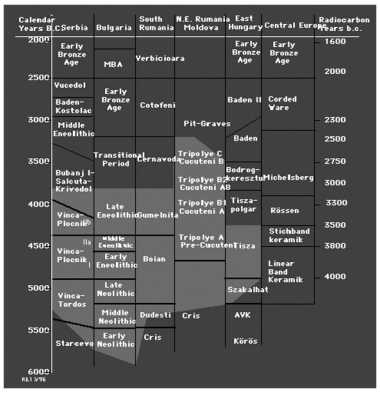


corresponds to the area of a building. The localization is such that the area between rubble concentrations is frequently devoid of rubble; it is easy, for example at Divostin, to pick up buildings in sub-surface magnetometer surveys (Mužijević and Ralph 1988). This characteristic leads to the conclusion that building walls collapsed inwards during the conflagration and formed a rubble heap on top of floors (Shaffer 1993; Stevanović 1997; 2002; Stevanović and Tringham 1998). With this in mind, at Gomolava and Opovo in Serbia, Mirjana



Stevanović and I devised a strategy for excavating and mapping the rubble layer, by layer, until we had revealed the underlying floor (Tringham *et al*. 1992).

Although I have referred to the ubiquity of burned building rubble in south-east European Neolithic settlements as the burned house horizon (Tringham 1984; 1990, 609), it is clear from Stevanović's, Chapman's and my own analyses, that 'the burned house horizon' is neither a chronologically nor regionally homogenous phenomenon (Chapman 1999; Stevanović 1996, 2002; Stevanović and Tringham 1998). For example early Neolithic houses have more artifacts deposited in them,



and it is in these early Neolithic phases that burned human remains are most likely to occur (Chapman 1999). Human remains occur again in the late Eneolithic (Gumelniţa/Karanovo VI). The presence or absence of human remains in the rubble of burned houses is clearly of great significance.

Modern fire investigation

Every modern house fire is subject to a fire investigation. In order to determine whether it was set deliberately or accidentally, fire investigators 1) create fire maps to record the presence and distribution of hot spots that indicate a fire's point of origin, 2) examine accelerants that were used to start the fire and the fuel that was added to keep it going, and 3) consider what objects were burned within the house and what were not (e.g. family photos are often removed before fire-setting) (Kirk 1969; Rossotti 1993, 213–16; Scott 1974, 33–40).

Archaeological fire investigation

The only way to create archaeological fire maps is to map the burned rubble of floor and wall collapse and to determine the temperature of the fire (Stevanović 1996; 1997; 2002). Mirjana Stevanović created fire maps using the data she collected at Opovo in Serbia and she documented firing temperatures of 800ºC to 1200ºC (i.e. vitrification of the daub).

Accelerants are unlikely to have been present in the Neolithic households. Apart from the lucky finds of preserved wood charcoal, carbonized grains or vitrified textile, the presence of combustibles must be reconstructed from the expected elements of a Neolithic

building: wood frame (found as a negative impression in daub), roofing material (reeds or thatch), and house contents (including textiles, grain, straw, herbs, hay, matting). Experiments in Serbia, Denmark, and France, however, suggest that it is not easy to keep a wattle-and-daub building burning and to produce the rubble firing results that we see in Neolithic houses (Bankoff and Winter 1979; Hansen 1962). So far no modern experiment has reproduced the results of a burned south-east European Neolithic house.

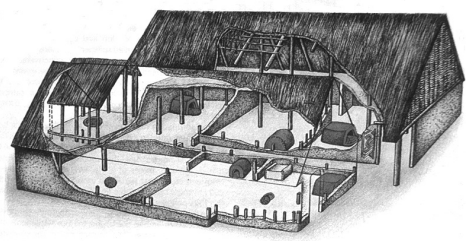
Investigating what is burned and what is not burned inside the house requires looking at the artifacts that are found in different parts of the rubble: amongst the collapsed walls, on a lower floor, on an upper floor. Are these artifacts whole or broken fragments of incomplete or whole vessels (Chapman 2000a)? Have they been placed in association or seemingly randomly? Are there burned bodies (animal or human) in the rubble? If so, are they complete, articulated or fragmentary?

First matrix for an archaeological fire investigation

John Chapman (1999) has set out the arguments for and against different explanations for the burned house horizon. The matrix in Table 11.1 is a simplified way of looking at those variables in terms of three sets of options.

Evidence for single or multiple events comes from detailed stratigraphy and the presence/absence of burning between houses. Where this question has been investigated, the conclusion has been that the fires were predominantly single events (Stevanović 2002; Tringham *et al.* 1992).

Evidence for the stage of houses' life-histories or even use-lives has rarely been analyzed in south-east European archaeology (Tringham 1994). Our work at Gomolava and Opovo was one of the first (Brukner 1988; Stevanović



Intentionality in the fire	Accidental	Deliberate	
Scale of the fire	Single event	Village-wide event	
Stage of life-history of houses	Beginning life	Mid-life	End-life

Table 11.1

and Tringham 1998; Tringham, *et al.* 1992), as was Douglass Bailey's analysis of Ovcharovo in Bulgaria (Bailey 1990). In mud-brick architecture, for example at Çatalhöyük, Turkey, it is relatively easy for archaeologists to follow different phases of a house's life-history: posts are dug out, openings are blocked, new walls put in (Hodder and Cessford 2004). By contrast, with wattle-and-daub architecture, the biography of a house is difficult to follow. Modifications during the life of the house (adding a second storey, adding to the length, adding outhouses, changing its meaning) are based in the wooden frame, and leave traces in the form of postholes, the interpretation of which is more ambiguous (Kalicz and Raczky 1987). As seen in the two matrices offered in this paper, information on the life-history of houses is a vital variable in determining the cause of the burning but it is information that is unavailable.

Expectations and implications of accidental house fires

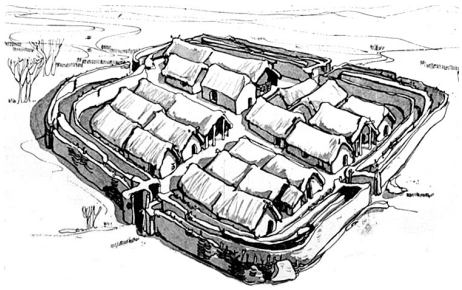
Vivid accounts of the great fires of relatively recent times (e.g. the 1666 Fire of London; Scott 1974, 14–22) inspires our expectations for accidental burning of wattle-and-daub houses. Potential causes of the Great Fire of London

include lack of space between houses, garbage piled in the streets, flammable building materials, and the presence of many flammable artifacts (e.g. furniture, curtains, wall coverings). The fire may have spread so successfully because many of the houses had been abandoned or not repaired in the wake of the Great Plague of 1665 that had decimated London's population.[2] Many similar, horrific experiences must have occurred in the early urban contexts of Europe. Rossotti and others even suggest that the vision of Hell as fireful was fuelled by these experiences, particularly those of Mediaeval times in Europe (Rossotti 1993).

An expectation gathered from accidental fires, even urban ones, and one which is appropriate to archaeological contexts, is that fires can quickly become village-wide events, especially if strong winds are blowing. Indeed, providing there is sufficient fuel, an energetic fire creates its own wind and increases its own size. Roofs made of flammable material (e.g. thatch) make ideal igniters. An important archaeological expectation is that for accidental fires, houses at various stages of use-life (including new houses) will be represented in the excavated record.

A number of archaeologists have argued that some of the houses in the burned house horizon are the result of accidental fires (Brukner 1990; Chapman 1999; McPherron and Christopher 1988, 477–8). According to them, a house was burned by an accidental fire if the following conditions were met: 1) houses were located close to each other (1–1.5m apart); 2) grain, textiles and other combustibles were stored in or furnished the houses; 3) grain was present and would have increased the possibility of spontaneous combustion.

While accidental ignition may have been responsible for some fires, there are many reasons why I downplay the importance of accidental fires in the burned house



horizon (Chapman 1999, 116): strips of unburned soil are found between burned houses; there is no evidence showing that fires were simultaneous village-wide events (indeed the opposite seems to be the case); there is no conclusive evidence that houses are at different stages of their use-lives; the vast majority of excavated burned houses do not contain animals or humans caught in the fire; and, finally, results of experiments have shown that when a fire is allowed to run its course (i.e. fuel is not added) it is very difficult to burn wattle-and-daub structures as thoroughly as we find them archaeologically. This is especially the case considering the thickness of the daub on inner and outer wall surfaces (Bankoff and Winter 1979; Stevanović 2002, 56–57).

The second matrix: expectations and implications of deliberate house fires

In order to determine why a house has been burned, a fire investigation must determine the motive for burning and what the house burners would have gained. Another important question is whether or not the burners' intentions were achieved by what actually happened or whether the fire 'got out of control'. Although the act of burning the house is not necessarily a criminal act, in an archaeological fire investigation there is still motive and motivation to be considered. The intended result of burning may not have been gain in our terms of profit or greed, but may have been something much less direct, such as social reproduction. The matrix in Table 11.2 expresses some of the motives and their archaeological expectations suggested by investigators of the burned Neolithic houses of south-east Europe.

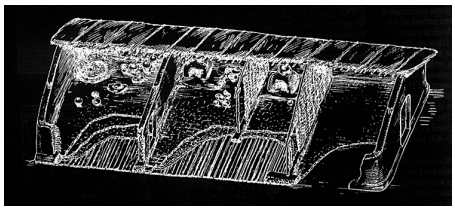
I have always found the explanation of aggression by neighbours or long-distance marauders to be overrated as the motivation behind the burned houses (Chapman 1999,

115–16; Keeley 1996). The means of resolving conflicts by negotiation may certainly have included raised voices, emotional gesticulations, threats, fancy weapon flashing, and even physical (if ritualized) personal combat. In the same ways, the palisades and embankments around villages in the east Balkans in this period were probably a means of demarcating 'us' versus 'you'. I do not favour the idea that neighbours or 'others' would burn houses and steal movables in order to satisfy immediate desires that could have been satisfied through long and fruitful negotiation. Moreover, the evidence in the south-east European Neolithic does not support the explanation of aggression for the same reason that it does not support village-wide accidental fires. But I cannot say that houses were never burned down by jealous neighbours in Neolithic south-east Europe; it just was not a common event.

When the thick floors of Tripolye culture houses were first excavated in the Ukraine, it seemed to the archaeologists that the wooden planks plastered in clay had been burned before wall construction in an attempt to strengthen the structure and insulate the floor against damp and other natural agents (Krichevski 1940). There is no evidence from later excavations of Tripolye houses that this method of construction was in use (Chernysh

Explanation	*Scale of Fire*	*Stage of life-history*	*Associated artifacts*
Aggression	Village	All stages	Many burned
Weatherproofing	Single	Beginning	Many unburned
Recycling rubble	Single	End	None
Fumigation	Single	Mid- and End	None or Many burned
Symbolic End of House	Single	Mid- and End	None or Many burned
Enchainment and fragmentation	Single	Mid- and End	Many burned

Table 11.2

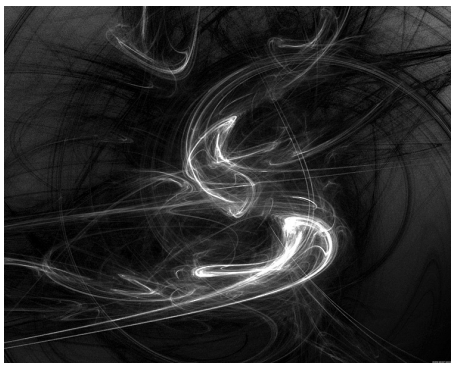


1954). From excavation drawings and photos it appears that burned rubble originated from wall collapse as well as from floor construction. Furthermore, artifacts were burned along with the floors and this does not fit in with Krichevski's reconstruction (Chapman 1999, 116–17).

While excavating burned daub that contained large fragments of recycled burned clay in Neolithic south Italy, Gary Shaffer used archaeomagnetic and experimental studies to argue that buildings were burned at the end of

their use-lives in order to recycle the clay for later building construction (Shaffer 1993). As there is no evidence in Neolithic south-east Europe for such recycling, this practice may have been specific to south Italy. However, fragments of ceramics, bone, flint (frequently burned), and sometimes very small fragments of old burned rubble were mixed with the new daub. The idea of recycling parts of houses into later buildings is attractive in terms of the continuity of place, and has been successfully studied in the recent excavations at Çatalhöyük (Hodder and Cessford 2004) and by Douglass Bailey at the Ovcharovo tell (Bailey 1990).

The concept of recycling burned clay fragments in later buildings resonates with the idea that fire is the source of rebirth and renewal which has been expressed in a multitude of past and present mythology (Rossotti 1993, 239–54). Related to this role is fire's role as a purifying and healing agent. A popular explanation for the single event of burning a house in Neolithic south-



east Europe comes from Native American practice of burning a house to purify it after the death of a resident (Brugge 1978; Heizer 1978, 209, 216, 296, 367, 392, 502). A less drastic but related practice is to smoke or fumigate a building to rid it of insects, pests, disease, and witches. Smoke and its symbolic power to purify and act as a visible medium of communication to the supernatural have been under-theorized in the context of the explanation of house-burning, and I am grateful to Sonya Atalay (*pers. comm.*) for pointing this out to me.

These explanations for the burned houses lead me to consider the contradictory emotions with which we view fire and its results. On the one hand, we know that burning cleans, heals and revitalizes. This applies not only to burning houses but also to landscapes through the firing of brush and of forests (Head 2000). On the other hand, in Western society we regard the products of fire as dirty: the soot, the charred wood of our burned houses, the ash. We could turn these emotions around (and perhaps in prehistory people might have done) so that what appears to be dirty is in fact clean (i.e. purified).

The archaeological expectations for purification and rebirth explanations are identical to the two motives discussed below (cremating, euthanising houses), and there is little that archaeologists can do to prove that either of these explanations are more plausible than the one just discussed. On the other hand, they take us into more interesting realms of social and political practice where we must consider motivation beyond purification and rebirth.

Transforming (killing) houses

There is a consensus in the study of Neolithic and Eneolithic Europe that the majority of burned houses were intentionally set alight. Without information on the life-history of the buildings, the problem remains that a vital variable in determining the motive behind the burning is still missing. Mirjana Stevanović and I have

favoured a motive that sees house burning as a ritual performance marking the end of a house (or household) in social memory and coinciding with the death of a significant person (who is not burned or buried in the house) (Stevanović 2002; Stevanović and Tringham 1998; Tringham 2000; Tringham and Stevanović 1990, 114–17). John Chapman's explanation builds on this idea,

focusing on intentional planning and preparation of the burning event and the careful placing of artifacts (especially broken fragments of objects) in the building before burning (Chapman 1999; Chapman 2000b). For John Chapman (and many arson investigators) the particular artifacts deposited and the structured way in which they are deposited are significant aspects in the interpretation of a house-burning, perhaps even more important than the burned remains of the building itself.

In his model for the symbolic burial of fractal things, John Chapman refers to the many cases where broken fragments (normally part of domestic refuse) have been placed deliberately in houses to be burnt, and points out that the quantity of these exceeds what would normally be expected for a dwelling (Chapman 1999). Chapman suggests that the objects might represent a mortuary-set laid out as an idealized representation of the household or community. The fragments themselves (deposited by different members of the household) would *enchain* the other fragments into a whole inventory. Problematizing the fragments in this way is an extremely important point. Traditionally, excavation of the burned houses has focused on the complete (or, at least, crushed) artifacts (ceramic vessels, stone tools, bone tools, clay weights, clay balls, a few figurines) rather than on the fragments, since the location of complete objects provides information on activities of the living, rather than meaning for the dead and his/her descendants and community (Kalicz and Raczky 1987; Madas 1988; Todorova *et al.* 1983).

Two aspects of the fractal-house model have potential for more detailed investigation. First, to what extent is the pairing of burning events a more common occurrence than is commonly admitted? An example of pairing comes from Gomolava where houses H4 and H7 (that contained very few fragments of any artifacts) were located adjacent to houses H3 and H8 (that were rich in movable fragments and immovable furniture). In both cases the 'deaths' of the pairs of buildings were very close in time (Brukner 1988). Another example comes from the settlement of Opovo. Here House 2 (Feature 4) (when compared to the adjacent House 1 – Feature 2 – which was rich in both movable fragments as well as immovable furniture) appears to have been stripped of its immovable furniture as well as most of its movable artifacts (Tringham *et al.* 1985).

The second aspect of the fractal-house model which has the potential for more detailed investigation comes with the question, where are the bodies? Where are the fractal individuals? As mentioned above, the burned house horizon is not uniform with respect to the inclusion of human bodies. Even though human remains have been found in the burned houses of the early Neolithic (Karanovo 1) and late Eneolithic (Karanovo VI), the cases are few. Moreover, in late Neolithic and early Eneolithic burned houses, no human remains have been found. Separate cemeteries are found near settlements (Bailey 2000, 193; Chapman 2000b, chapter 5) but these cases are rare in the early Eneolithic. In the early Eneolithic settlement of Opovo we found burned fragments of human bones in secondarily deposited rubble that had most likely eroded from the rubble topping of a pit (Feature 31) (Tringham *et al.* 1992). In fact it appears that, after the early Neolithic, inhumations within settlements and the destruction of houses by fire may have been mutually exclusive activities.

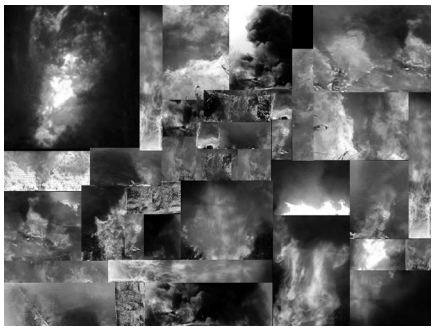
Domicide, domithanasia and the continuity of place

Thinking about the relationship of body and house burning has led me in various directions (especially the major contrast I faced in excavating early Neolithic Çatalhöyük). One result was to consider both deliberate house burning and human burial within houses as strategies for ensuring the continuity of place and the construction of social memory (Tringham 2000). The life-history of a house can be ended in a number of ways, depending on what the building is made of and depending on what is planned for the future of that place (Brand 1994). A wattle-and-daub house can be abandoned and allowed to rot, it can be dismantled and some of its parts recycled, or it can be destroyed (killed) by burning. A frequent question has been, why use fire to kill the house (and the fractal objects)? It leaves a permanent mess on the landscape and, as experiments have shown (Stevanović 2002), it is hard work to actually achieve. An obvious answer is that, although the fire performance itself was ephemeral, its effect and reminder of the village on the landscape was permanent: the mess on the landscape was a desired result. Burning the houses (and the artifacts and fragments inside them) in a high temperature fire (and/or one that lasted several hours) ensured that they would be frozen as a permanent

reminder that a house had once lived here. Even now, modern farmers are well aware of these memorials in their fields as they blunt their ploughs against them.

The motivation to use fire to kill a house would have been much more than the establishment of a physical memorial on the landscape. In his book *Domicide*, Douglas Porteous has written that killing a house is an act that binds people together, nurtures memories, and contributes to the continuity of place (Porteous and Smith 2001). We can imagine that the buildings (perhaps 30–50 years old) are what Stuart Brand describes as fractal, buildings in which people are happiest where change occurs at every scale from weeks to decades. 'An organic process of growth and repair must create a gradual sequence of changes...distributed...across every level of scale. Such buildings are fractal in time' (Alexander 1979, xiii; Brand 1994, 208). In other words, many personal histories, household memories, emotions and passions were invested in these houses. In such a context, the use of fire would have doubled the drama of killing a house.

In a fire, all senses are brought to life. The colours and sounds of a building on fire (very different from a forest fire) create the drama. The gases that are burned create flames of red, yellow, white and black: changing, ephemeral, not repeated in nature (except with some tropical flowers and birds and the sun and volcanoes). At night-time the performance would have been especially spectacular, though this might have hidden the effects of combustibles that (rich in organic materials such as textiles) burn with colours that reach the deepest black. The roaring sound of the wind generated in a fire can be terrifying. I imagine much movement at the periphery as mice and other small creatures escape the flames. The smoke (that can be tangibly opaque) attacks the sense of smell and brings tears to the eyes. And then there is the heat! Only fire (or its by-product), the sun and another living body can provide our bodies with heat. Fire stimulates our sense of touch more effectively than



anything else. Yet fire is the one thing that cannot be touched (unless you are a witch or a fire-walker)! A double drama is created by killing a house and by doing it with fire. Bachelard, Frazer, and many others have repeatedly reminded us of the passion, fear, and sexual excitement of fire, all of which must have added drama to the ritual performance of burning a house (Bachelard 1964; Rossotti 1993; Scott 1974).

However many times a person might witness it, a house killed by fire would have been a memorable and a shocking event, celebrated along with the stories of the life of the house (Porteous and Smith 2001). I have used two words that both can involve killing houses with fire. Domicide, introduced by the geographer Douglas Porteous, is the deliberate, planned destruction of a home that causes suffering to the dweller (Porteous 1995). Porteous and Smith eloquently and poetically describe the effect of a global issue that is currently carried out at many different scales, from the destruction of a single home because it lies in the path of a new library or shopping mall, to the destruction of villages to make room for a tourist development, to the destruction of whole cities in order to develop an urban plan. Domicide is not a new phenomenon,[3] but one that is associated with urban contexts and the legitimization of power.

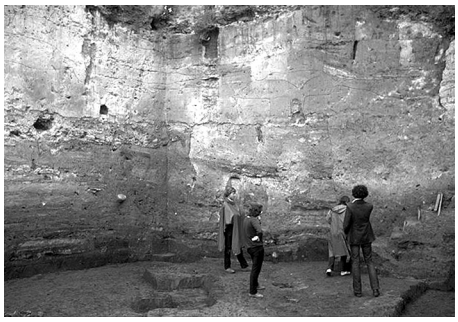
I have coined the related term domithanasia: the killing of a house by the residents or their friends or agents, because it is time for the fractal house to die. Modern domithanasia by fire is a voluntary act of the owners in order to destroy an unwanted/old house[4] (I am not sure where arson for insurance fraud fits into this pattern). I am suggesting that the ritual burning of a Neolithic house in the middle or end of its life-history is a good example of domithanasia.

Although the shock and outrage resulting from domicide is very different from that experienced in domithanasia, they hold in common important results for social memory and community that are accentuated by the process and medium of fire. As Porteous and Smith describe, domicide may result in the destruction of a place of attachment and refuge, the loss of security, partial loss of identity, a radical de-centering from place, family and community; there may be a loss of historical connection, a weakening of roots, and partial erasure of the sources of memory, dreams, nostalgia, and ideals (Porteous and

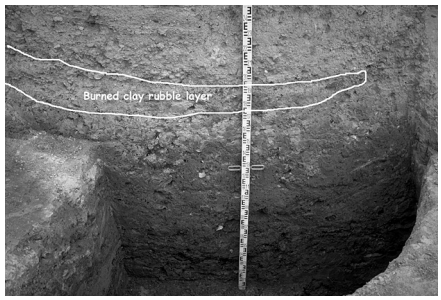
Smith 2001). If the home has multiple complex meanings that are interwoven, then so do domicide and domithanasia.

After the fire

By far the most obvious and permanent by-product of house-fires is the rubble itself. The Neolithic tells of south-east Europe are built up of their debris either through partial vertical superimposition or intentional creation of a mound. The piles of debris can be 35cm or more, frequently as a mass of vitrified clay as hard as concrete. Unburned garbage (i.e. ceramic fragments, animal bones) was frequently deposited in a burned house after the fire. This rubble was left to be weathered by exposure, or it might have been buried or flattened. Some of the rubble, however, remained protruding from the ground and would have been visible to later inhabitants, both immediate descendants and people from more distant times (Tringham 2000). This rubble can never be entirely destroyed or hidden, and its presence is still visible today in thinner vegetation, spindly crops, broken ploughs, and poppies.



Ash and other by-products (charcoal; carbonized, scorched and burned artifacts) created a permanent reminder on the surface (or just below it) of the buildings and people whose cumulative biographies fill a place with memories. Rubble from burned houses was deposited in pits as the uppermost layer, often long after it had lain on the surface and had weathered, perhaps even re-used in pits that were several 'houses' later than the original fire. But in some cases, as in the well found next to House 4 at Opovo, rubble was used immediately after the burning event to fill a two-metre hole (Tringham 1994). Building clay that had been transformed by fire did more than provide a good material with which to make a solid closure of a garbage pit. I imagine that its transformation in the fire would have given it greater symbolic significance for closure and cleansing of a different kind.



So what is it that creates the material of continuity? The artifacts inside the house? The building clay? The wood? The memory of the fire event? All of these? I introduce the concepts of domicide and domithanasia, not to suggest that the burned houses of Neolithic south-east Europe are the result of domicide (unless we favour the motive of aggression), but because many of the emotions that accompany the killing of a house by bulldozer or by fire may have been present at the dramatic event of burning a house in which one has dwelled. People who lose their houses to accidental house fires frequently require counselling and therapy afterwards. I am trying to build a picture in which the burning of a house was not only dramatic and sensual because of the fire element, but was also traumatic. If the purpose of the conflagration was to ensure a continuous place (as I would argue), to create social memory, to strengthen identity of community, and incorporate social reproduction, then – in lieu of counselling – I suggest that the performances that we see evidence of before, during, and after the fire were to make sure that this happened.

Notes

1 Bachelard provides this example from Australia of how fire is stolen, controlled and given birth to by women: '…the men had no fire and did not know how to make it, but the women did. While the men were away hunting in the bush, the women cooked their food and ate it by themselves. Just as they were finishing their meal, they saw the men returning away in the distance. As they did not wish the men to know about the fire, they hastily gathered up the ashes, which were still alight, and thrust them up their vulvas, so that the men should not see them.

When the men came close up, they said 'where is the fire' but the women replied 'there is no fire' (Bachelard 1964, 36 quoting Frazer 1911, 24)

2 That said, there is also good reason to suspect that the Great Fire may not have been accidental at all.

3 An early example of domicide is Nero's ordering of the destruction of Rome in AD 64. I suspect that the Great Fire of London in 1666 was an act of domicide on a grand scale, with the aim of re-modelling London

4 'In May of 1998 we decided instead of a major remodeling of our old house that it would be better to do a complete rebuild. Instead of having the bulldozers out to do a demolishment of the old structure and paying $10,000 it would be better to donate the old house to the Seattle Fire Dept for their training exercise and be able to take the tax deduction instead'. Before it was actually burned down by vandalism (domicide) in 1894, Daniel Burnham actually contemplated burning down The Chicago World's Fair as a fitting end to its life, rather than letting it decay (domithanasia) (Larson 2004, 328).

Figures

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Page 99, top left. The birth of fire.

Page 99, top right. Reconstruction of a bread-making oven by Dr Leendert van der Plas. Opovo Archaeological Project 1985. © Ruth Tringham

Page 99, middle right. Oven remains at Opovo, 1985 (feature 13) with floor renewals. © Ruth Tringham

Page 100, top left. Reconstruction of 'inner room' in Neolithic house at Divostin. © Catherine Chang

Page 100, bottom left. Copper artefacts produced using smelting and casting technology from Grave 4 in the late Eneolithic cemetery of Varna, Bulgaria (after Fol and Lichardus 1988).

Page 100, top right. Black burnished ceramic vessel from Grave 4 in the late Eneolithic cemetery of Varna, Bulgaria. The vessel is painted with gold before firing. This technology involves reaching at least 1100ºC temperature.

Page 101, top left. Profile through House 4 at Opovo, Serbia, showing two floors and building daub from the walls that was vitrified during the house fire. © Ruth Tringham

Page 101, middle left. Profile through a 'garbage' pit (feature 52) at the Vinča culture site of Opovo, Serbia. Lenses of ash can clearly be seen as white. © Ruth Tringham

Page 101, top right. Fragment of burned wall daub from House 2 at the Vinča culture site of Opovo, Serbia, showing the impressions of horizontal wattling and a vertical timber. © Ruth Tringham

Page 101, middle right. Mirjana Stevanović next to the burned remains of House 4 at the Vinča culture site of Opovo, Serbia, during excavation 1987. © Ruth Tringham

Page 101, bottom right. The black shading shows the area covered by the burned house horizon. © Ruth Tringham

Page 102, top left. The dark shading shows the chronological limits of the burned house horizon in south-east Europe. © Ruth Tringham

Page 102, bottom left. Mirjana Stevanović mapping and recording details of burned rubble in House 4 at the Vinča culture site of Opovo, Serbia, during excavation 1987 © Ruth Tringham

Page 102, top right. A fragment of vitrified textile (linen) fortuitously preserved in the rubble between two floors in House 4 at the Vinča culture site of Opovo, Serbia and excavated in 1987. © Ruth Tringham

Page 102, bottom right. (After Raczky *et al*. 1987).

Page 103, left. Painting of the Great Fire of London 1666.

Page 103, middle right. Envisioning the accidental burning of a Neolithic house (after Leonard 1973).

Page 103, bottom right. Reconstruction of the densely packed houses at the Gumelniţa culture settlement of Polyanitsa, Bulgaria (after Todorova 1976).

Page 104. House burning during William the Conqueror's rise to power depicted in the Bayeux tapestry 1064–1066 (LeFranc 1980).

Page 105, top left. Reconstruction of a Tripolye wattle-and-daub house at Kolomiischina, Dnester river, Ukraine, showing the thick layers of daub on the floor (after Passek 1949).

Page 105, middle left. Daub found in the top layers of a pit at the Vinča culture site of Opovo, Serbia. © Ruth Tringham

Page 105, bottom left. Fractal smoke – for inspiration.

Page 105, right. Mirjana Stevanović and Ruth Tringham planning the excavation of the rubble debris of Houses 1 and 2 at the Vinča culture site of Opovo, Serbia, during excavation in 1984. © Ruth Tringham

Page 106, left. Fragments of ceramics, clay balls, animal bones and other artefacts at floor level in the rubble of House 2 at the Vinča culture site of Opovo, Serbia, during excavation 1984. © Ruth Tringham

Page 106, right. The 'mess' near 20–30cm below the surface caused by the burned rubble of Houses 1 and 2 at the Vinča culture site of Opovo, Serbia. © Ruth Tringham

Page 107, middle left. A city in Cappadocia, central Turkey, showing houses in many different stages of their life-histories. © Michael Ashley

Page 107, bottom left. Collage of fire colours, largely uninspirational in black and white. © Ruth Tringham

Page 107, right. Envisioning the fire of Rome in 64 AD.

Page 108, top left. Envisioning the burning of house 1 and its pits at the Vinča culture site of Opovo, Serbia. Used in the production of the hypermedia webs: Chimera Project and the Chimera Web. © Julian Liao and Michael Ashley

Page 108, bottom left. Profile through tell site of Vinča, Serbia, showing the thick layers of burned daub. © Ruth Tringham

Page 108 top right. The circular pit interpreted as a well (feature 30) filled with freshly burned daub at the Vinča culture site of Opovo, Serbia during excavation in 1988. © Ruth Tringham

Page 108, bottom right. Profile of the 'garbage' pit (feature 31) that is topped with a thick layer of burned daub at the Vinča culture site of Opovo, Serbia, during excavation in 1989. © Ruth Tringham

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