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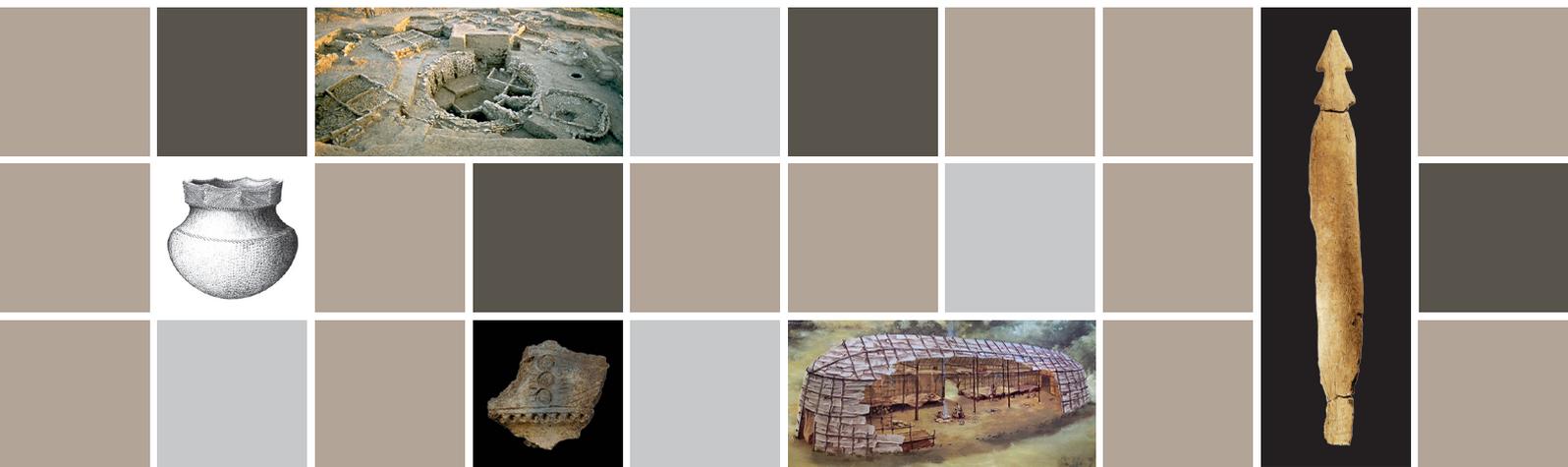
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HOUSEHOLD ARCHAEOLOGY

A Transatlantic Comparative Approach



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NEOLITHIC HOUSES: Mediterranean Examples

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NEOLITHIC HOUSES: Mediterranean Examples

Jean GUILAINE

Abstract

In this article I present several different forms of Neolithic and Chalcolithic houses that are found within the Mediterranean basin. In Cyprus, the round form of house appears in the PPNA and has a long lifespan, lasting throughout the PPNB, from the Khirokitian to the Chalcolithic. In south-eastern Italy, subrectangular house plans found in the Early Neolithic sometimes make way for circular or oblong forms during the Chalcolithic such as at Trasano (Laterza culture). In the Midi region of France, houses constructed with stone infrastructures dating to the Final Neolithic-Chalcolithic allow archaeologists to reconstruct lifeways based on the spatial analysis of preserved floors.

In each of these culture areas we can see both continuities and discontinuities in architectural styles. On the other hand, the concept of “household” is harder to study because it requires the archaeologist to define and measure the occupancy of each domestic unit within the village, an element which remains highly speculative given the archaeological data available.

Keywords

Neolithic, Chalcolithic, Household, Mediterranean Sea, Europe, Cyprus, Italy, France.

Introduction

Throughout the three to four millennia which make up the history of the European Neolithic, various types of houses existed, across time and space. These house types utilised various construction materials: earth, stone and brick from the beginning of the Neolithic in the Near-East and the Aegean; wood and wattle and daub in much of Mediterranean and temperate Europe. The design and morphology of these buildings vary across regions, but also over time, within a given cultural sphere. This diversity is a reflection of these societies, their organisation, the way in which they thought about the world and expressed it, their relationship with their environment, their production methods, etc. We also know that the house is a place of socialisation of the individual and a space of integration which reveals the ways of life, the internal relations and even the ideology of its occupants.

In this article, a number of Mediterranean examples of Neolithic houses will be presented. These case studies cover a wide geographic area and are drawn from sites on which I myself have worked: Cyprus in the eastern Mediterranean, Southern Italy in the central Mediterranean, and the South of France for the western Mediterranean (figure 1). Chronologically, these examples will focus on the two extremes of the Neolithic: in Cyprus we will explore structures from the Pre-Pottery Neolithic (9th-7th millennia cal BC); in Southern Italy and France the case studies discussed will focus on houses from the final phase of the Western Neolithic (4th and 3rd millennia cal BC),

whose societies had begun practising copper metalworking. Furthermore, in comparison with the first agricultural communities, these peoples had more advanced techniques at their disposal: yokes for draught animals, the ard, wheeled vehicles, etc. The term Chalcolithic is sometimes used to describe this final stage of the Neolithic.

I will endeavour, however, to avoid being hindered by these choices, and will set each example in a wider geo-cultural and chronological context, in order to broaden the comparative framework.

Beyond the architectural diversity which constitutes the basis of my paper, I will examine several points:

1. the houses' internal structures (where identifiable), and the domestic activities associated with the interior (in particular for the South of France);
2. the nature of abrupt changes in construction, in the context of regional evolutions, which may reveal cultural changes;
3. social perspectives which I will attempt to outline – with caution – in particular based on data from burial contexts. Here I will explore the issue of the human component of “households”, which is at the heart of these conference proceedings.



Figure 1 - Location of the three culture areas mentioned in the paper (CAD: F.Tessier).

1 - The first Neolithic houses in Cyprus

It is impossible to discuss Cyprus, located barely 80 km from the Syrian and Turkish coasts, without placing it in the context of the neighbouring continent because the Neolithic history of the island can only be understood through constant reference to developments in the Levant and Anatolia. Cyprus, from 10000 cal BC onwards, was in permanent contact with the mainland, and advances towards a Neolithic way of life (i.e. an agricultural society) which appeared in the Levant were more or less immediately adopted on the island. What of the houses? Let us first recall their development in the Levant:

- from ca. 12 000 to 10 000 cal BC, during an Epipalaeolithic phase known as the Natufian, we see the first attempts at sedentarisation in villages with circular, single-celled or semi-circular houses, sometimes dug into hillsides, and with superstructures probably made from perishable materials. Houses found at Mallaha, Israel, were on average 5-7 m in diameter (Valla, 2000).
- Between 10 000 and 8 500 BC, circular or sub-circular houses continued to evolve during the Epipalaeolithic Khiamian period (10 000-9 500 cal BC) and during the Pre-Pottery Neolithic A (PPNA: 9 500-8 500 BC). These houses were sometimes large (from 6 m to 8 m in diameter). They were often built as large pits, the sides of which would be reinforced with stone walls. Interesting observations were made during the recent excavations by F. Abbès in Bal'as, Syria, on the PPNA site of Wadi Tumbaq (figure 2) Abbès notes differences between houses dug shallowly, in which artefacts related to various daily activities (millstones, stone tools, animal bone) were found, and other structures, dug deeper into the ground (1.20 m) which appear to have housed specialised activities, perhaps for use by groups (e.g. a workshop for bead manufacture), or as storage spaces, divided into various recesses (Abbès, 2014). A house found at Mureybet was separated by radial dividing walls and the resulting spaces have been interpreted as silos or granaries. At Jerf-el-Ahmar, a dichotomy also exists between individual houses and buildings for group use. On this site, various types of construction are known to have existed towards the end of the PPNA. Houses have been identified which were sometimes divided into several rooms, constructed at ground level, and which were already rectangular in shape. By contrast, the structures referred to as "community buildings" were larger, circular, and – following a more traditional method – were still dug into the ground to a depth of up to 2.5 m (Stordeur, 2000, 2014) (figure 3). It is during this period that a number of large 'public' buildings were constructed, such as the Tower of Jericho (Palestine) or the monuments of probable ritual vocation at Göbekli Tepe (Turkey), made famous by their megalithic pillars decorated with sculpted animals (Schmidt, 2006) (figure 4).
- from 8 500 to 7 000 cal BC, during the Pre-Pottery Neolithic B (PPNB), buildings were often rectangular in form, and in some cases contained a base which supported a wooden floor (e.g. Cayönü, Turkey). Ritual buildings also adopted these quadrangular forms (e.g. Göbekli Tepe).

In Cyprus, after a few sporadic visits starting around 10 000 cal BC, PPNA groups settled on the island around 9 000 cal BC (figure 5). They cultivated wheat, but also continued to hunt the wild boar introduced onto the island from the mainland a few centuries earlier. These new settlers reproduced continental house types on the island, that is dwellings dug into the ground (e.g. Asprokremnos in Agia Varvara), and sometimes on hillsides (e.g. Klimonas in Ayios Tychonas) with, in this case, a central hearth and possible internal dividing walls. At Klimonas, we also excavated a large community building measuring 10 m in diameter which was dug into the bedrock to a preserved depth of 1 m. This structure contained an earthen wall built in a foundation trench and which was placed against the side of the house pit (figure 6).

We are left with the impression that the individual houses at Klimonas were organised around this central building, which must have had a community function. We believe that this model – a central public building and surrounding houses – is not a Cypriot invention but rather a concept imported by the settlers from the mainland where it has been observed at Jerf-el-Ahmar and Göbekli Tepe.

In the second half of the 9th millennium, on the nearby site of Shillourokambos, the scarce architectural remains consist of postholes, which formed circular huts made from wood and wattle and daub. Two large enclosures have also been dated to this period (8 500-8 000 cal BC).

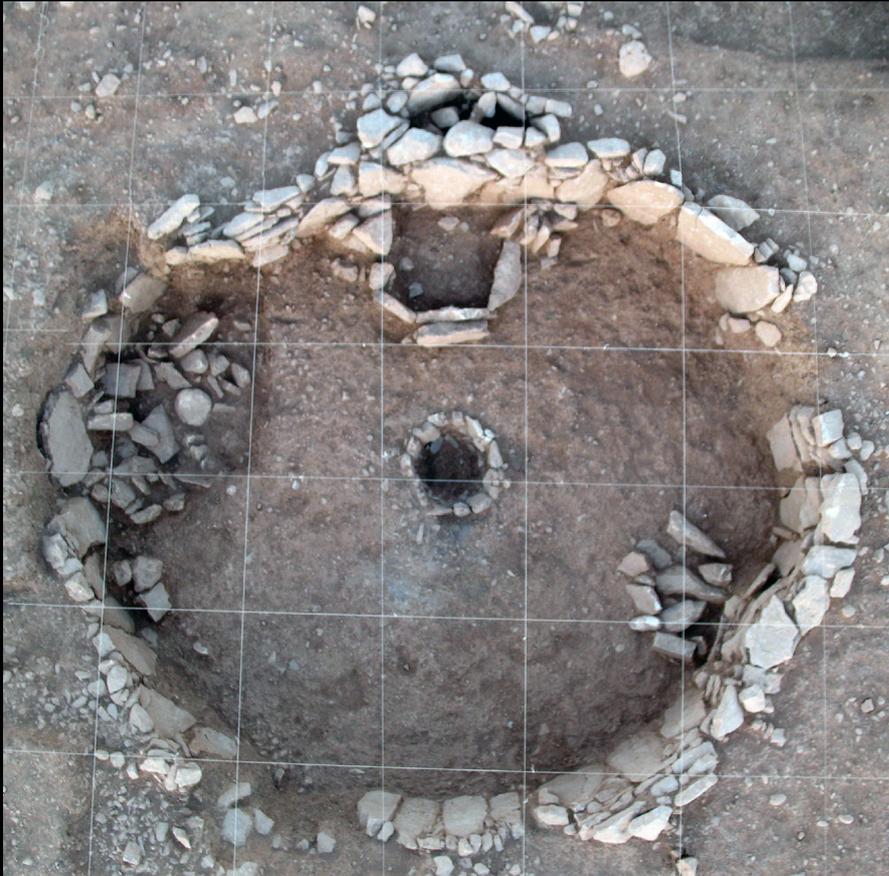


Figure 2 - Wadi Tumbaq 3 (Syria) PPNA Building (excavation and photograph: F. Abbès).



Figure 3 - Jerf el Ahmar (Syria). Preceramic Neolithic. Various forms of houses (level II / W) surrounding a communal building dug into the ground. Transitional 10th / 9th millenia (excavations and photograph: D. Stordeur).



Figure 4 - Göbekli Tepe (Turkey). PPNA circular enclosure with T-stela decorated with carved animals. Enceinte C (photograph: DAI / K. Schmidt).



Figure 5 - Location of the main preceramic Neolithic sites in Cyprus (PPNA and PPNB) (CAD: F. Tessier).



Figure 6 - Klimonas (Cyprus). Large communal building dating to the late PPNA (ca. 8800-8700 cal BC) (excavations: J.-D. Vigne, F. Briois, J. Guilaine).

These were initially circular, but were later enlarged. They were probably used to pen animals as part of early livestock farming (goats and oxen had only recently been brought to the island from the Near-East – Guilaine *et al.*, 2011). These structures may indicate that such activity was carried out by two different “households” living in the same locality.

On the same site at Shillourokambos, a millennium later (ca. 7500-7200 cal BC), we excavated the remains of a village, or rather a hamlet, which comprised small circular features, each of which was only 2-3 m in diameter. This raises the question of their function, given that the interior surface area was very restricted (figure 7). These can be interpreted as individual “rooms”, a group of which may have constituted a true house or household. They were built of earth, sometimes with an outer ring of stones, but for the most part were simply made of a type of rammed earth comprised of cob, i.e. successive layers of clay and straw mortar. The width of the walls varies between 20 cm and 80 cm but is most often between 60 cm and 80 cm. This thickness, which contrasts with the small interior space, does not rule out the possibility that the internal half of the wall was built to a lower height in order to function as a bench (de Chazelles, forthcoming) (figure 8). It is also worth noting that there are no hearths in these buildings. The hearths – small pits containing



Figure 7 - Shillourokambos (Cyprus). One of the circular constructions dating to the late PPNB (ca. 7500-7400 cal BC) (excavations: J. Guilaine, F. Briois, J.-D. Vigne).



Figure 8 - Shillourokambos (Cyprus). Reconstruction of the Late PPNB village ca. 7500-7400 cal BC (drawing: A. Jesionka).

burnt stones – were found in a part of the site dedicated to burning. Similarly, a nearby area was, over time, probably used to crush cereal grains on round “tables” made from a screed of pebbles covered with packed earth. These various observations suggest that such specialised activity areas (burning, milling tables) were used collectively by the residents who came, when necessary, to work there. However, food waste consisting of animal bones was sometimes found in piles near these structures. It may seem surprising that such food waste – far from hygienic – should have accumulated here. This may be evidence for the collective nature of meat consumption, as has been suggested at Jerf-el-Ahmar (Stordeur, 2014). The presence of several wells and of a single large cistern also appears to indicate public use (figure 9). All of these elements seem to support the idea of community-based economic activity.



Figure 9 - Shillourokambos (Cyprus). Mouth of a big water tank of the PPNB village dating to the 8th millennium cal BC (excavations: J. Guilaine, F. Briois, J.-D. Vigne).

Towards the end of the 8th millennium cal BC, the site of Kalavassos-Tenta, built on a small hill, was delimited by a protective wall. Its maximum surface area was less than 3 000 m² (Todd, 1987: 31). The site comprises circular houses built from stone or mud bricks (figure 10). Most of these had small surface areas, between 2.54 m² and 13.20 m², with the average being around 6.50 m². Internal pillars may have supported a wooden floor (thereby increasing the living space) or may have helped support the roof. A large public building, somewhat in the style of the example at Klimonas, was maintained throughout the site’s occupation. This “above ground” structure initially consisted of a building 9 m in diameter, with brick walls and a floor replastered several times and coloured red using ochre. Later, it was enlarged to a diameter of 12.3 m. Carefully constructed in stone, it was partly divided into peripheral compartments. No evidence for any particular activity was identified. This exceptional building must have had a special function (Todd, 1987).



Figure 10 - Kalavassos-Tenta (Cyprus). Circular houses in mud, brick and stones from the late PPNB (excavations: I. Todd).

As at Shillourokambos, the burials placed outside the houses (and a few at Tenta inside the buildings) typically contained no grave goods. A single example at Shillourokambos contained two polished stone axes, a flint blade point, and a ball of ochre. Close by, a small picrolite pebble and a collection of shells was deposited. Next to this, a cat had been placed facing its “master”; this is the earliest evidence of a probable domestic status for this animal species (Vigne *et al.*, 2004).

In the 7th millennium, the Cypriot Pre-Pottery Neolithic continued its evolution, which is best illustrated by the site of Khirokitia, located on a natural spur and on the slope down to the Maroni River. The site was protected by a rampart which was later moved and its alignment modified. Covering approximately 1.5 ha, it is the latest and largest Pre-Pottery settlement in Cyprus. Khirokitia also contained circular structures with walls of stone – and in rare cases brick – which were 40-50 cm thick (figure 11). These walls, sometimes double or even triple or multiple, formed various concentric rings, reaching a maximum thickness of 1.2 m to 1.7 m (Le Brun, 1984: 25, 1989, 1994). This thickening of the walls over time appears to be unique to the site. Several structures were grouped around a common area or courtyard, which contained a workshop for milling activities. The roofs were flat, most likely made from reed wattling coated in earth (figure 12). The hypothesis of domed roofs, previously put forward by P. Dikaios, has today been discarded (Dikaios, 1953). The interiors contained benches, platforms, partition walls and places for burning: burnt zones and hearths in pits or on a constructed platform, in the centre or against the wall. Used over a long period of time, these buildings demonstrated a stratigraphic sequence of plastered floors. This permanence of several buildings through time demonstrates a form of continuity of occupation of the site concentrated around key houses (Le Brun, 2002). In these long-term structures, the deceased provide evidence for family lineages or genealogies. Burials of men, women and children were placed underneath the floors of the houses. Some of these, rich in grave goods, may indicate status differences. It is interesting to note that the richest graves were those of women. These contained stone vases, necklaces of tusk shells, picrolite and carnelian, while the male graves contained fewer objects (Le Brun, 2002).



Figure 11 - Khirokitia (Cyprus). Circular houses. Aceramic Neolithic (7th millenium cal BC) (photograph: J. Guilaine).



Figure 12 - Khirokitia (Cyprus). Reconstruction of the Neolithic huts by Cyprus' Department of Antiquities (photograph: J. Guilaine).

- What stands out about the evolution of the Pre-Pottery Neolithic in Cyprus, which spans the entire Near-Eastern sequence from the PPNA to the very end of the PPNB, from 9 000-6 000 cal BC?
- initially, a settlement model – e.g. Klimonas – directly imported from the continent, comprising circular houses built around a large public structure which probably played an economic or social role within the community. The existence of a similar communal building at Tenta more than a millennium later may indicate that these people’s production and consumption practices had retained a communal nature.
 - A similar impression is given by the large enclosures at Shillourokambos in the late 9th millennium and, later on the same site (from 7 500 cal BC), the small “huts” and communal areas for domestic activities. It seems unlikely that economic production was being carried out by independent families.
 - Throughout the development of the Pre-Pottery Neolithic, it remains difficult to distinguish between nuclear and extended families, especially as the small size of the constructed spaces (at Khirokitia, the average surface area of the buildings is 4.55 m²) implies that several structures functioned together, with some serving as outbuildings. The nuclear family model appears well supported at Khirokitia during the 7th millennium, as the practice of burial under the floors of the houses was intended to preserve a few individuals, strongly linked with each family unit, within that space. We can also envisage status differences as having led to certain burials being richly decorated, women and children being among those privileged. However, the presence of tombs with no grave goods within the same houses means that hereditary social status was unlikely (Le Brun, 2002). The management of certain problems within a settlement such as Khirokitia must have necessitated the existence of an authority, even if this was collegial and temporary.
 - Cyprus’ Pre-Pottery Neolithic appears to have evolved in the context of a society that was rather egalitarian, where cooperation must have been important and where a group of several families could manage an area made up of various circular buildings. The island’s refusal to adopt the rectangular house form which appears on the mainland around 8 500 BC, and the consistent loyalty shown to a more or less fixed circular model, speaks volumes. The continental PPNB house, by becoming rectangular, enabled an internal division into specific units (including storage), through the addition of rooms or extensions. This is considered to be a reflection of nuclear families who freed themselves from the communal way of life to become economically independent. Cyprus therefore appears as somewhat conservative during this long Pre-Pottery period. Could it be the case that this society’s incapacity to transform was at the root of its rapid disappearance? The Khirokitia culture died out around 6 000 cal BC, and for the following millennium, we know virtually nothing of the island’s history. A revival took place in the 5th millennium, with a quick and dense colonisation of agricultural land by the Neolithic Sotira culture. In particular, this also saw the introduction of pottery to Cyprus.

2 - Trasano, a Chalcolithic house in Italy

The examples which I will now discuss for the central and western Mediterranean are drawn from a completely different chrono-cultural context (figure 13). They are from the late 4th millennium and throughout the 3rd millennium cal BC. They concern the societies at the end of the Neolithic, sometimes known as the “Chalcolithic” due to the manufacture and circulation of copper objects alongside flint tools. The economic context is one of agricultural and pastoral communities, a production system established in Western Europe for most of the previous three millennia, but which had recently seen the advent of new technical improvements: the invention of the ard

(ancestor of the plough) or the use of wheeled vehicles, for example. Finally, in relation to burial practices, these societies are characterised by their use of communal graves, for example megaliths, hypogea (caves dug into the bedrock), and natural caves used as tombs. It is worth remembering that during the same period across the Mediterranean, Egypt had become a state, Mesopotamia was populated by city-states, and the Aegean and Anatolian region had reached the proto-urban phase.

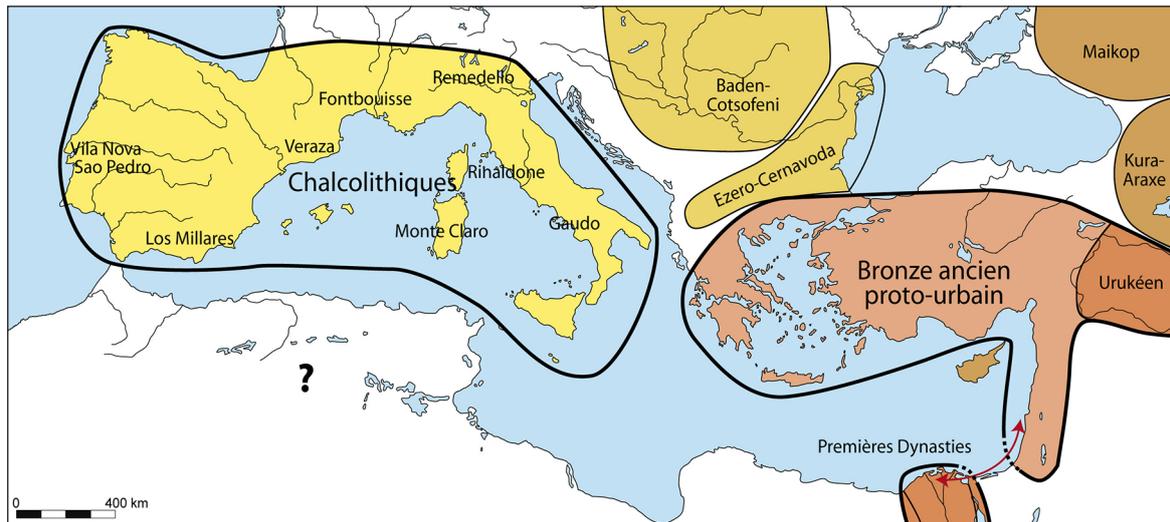


Figure 13 - Map of the Mediterranean ca. 3000 cal BC. A gap divides the Eastern basin which has reached an urban or proto-urban stage, and the Western basin which is still at a Final Neolithic (or Chalcolithic) stage (map: J. Guilaïne).

The central Mediterranean example chosen is a Chalcolithic village in southeastern Italy on which I conducted research in the 1980s.

Firstly, I will summarise the prior architectural history of this region. In the Early Neolithic, houses consisted of wooden posts and wattle and daub walls (e.g. Rendina, Favella, Torre Sabea) (Cipolloni Sampo, 1977-1982; Guilaïne, Cremonesi, 2003). Occasionally, walls were made of stone (e.g. Balsignano, Radina, 2002). These structures were rectangular (Rippa Teta) or sub-rectangular (Rendina). The ritual burning of some houses upon the death of an important figure or the separation of the family, which took place in the Balkans during the Neolithic, was also practised here (e.g. Favella, Tiné, 2009) (figure 14). During the Middle and Late Neolithic, a course of stones often made up the first foundations of the buildings (e.g. Monte Aquilone, Passo di Corvo). The most unusual trait of the Neolithic in southeastern Italy is the enclosing of these small settlements, sometimes comprising a single farmstead, behind a modest-sized ditch. However, a number of these ditched enclosures covered up to several hectares such as at Murgia Timone and Tirlecchia. In the Middle Neolithic, the largest of these ditches, found at Passo di Corvo, surrounded an area of approximately 40 ha (Tiné, 1983). Inside, each house and its outbuildings were marked by an open C-shaped ditch, whose function is yet unclear (water drainage? protection? symbolic marking?). At the Middle Neolithic site of Catignano, longhouses with rounded ends have been found (Tozzi, Zamangi, 2003).

This tradition of rectangular or long houses with rounded ends died out in the south of Italy ca. 3500 cal BC. At this time, circular or oval houses began to appear. An example of this from Maccarese, near Rome, shows that some of these houses contained internal dividing walls (Manfedini, 2002).

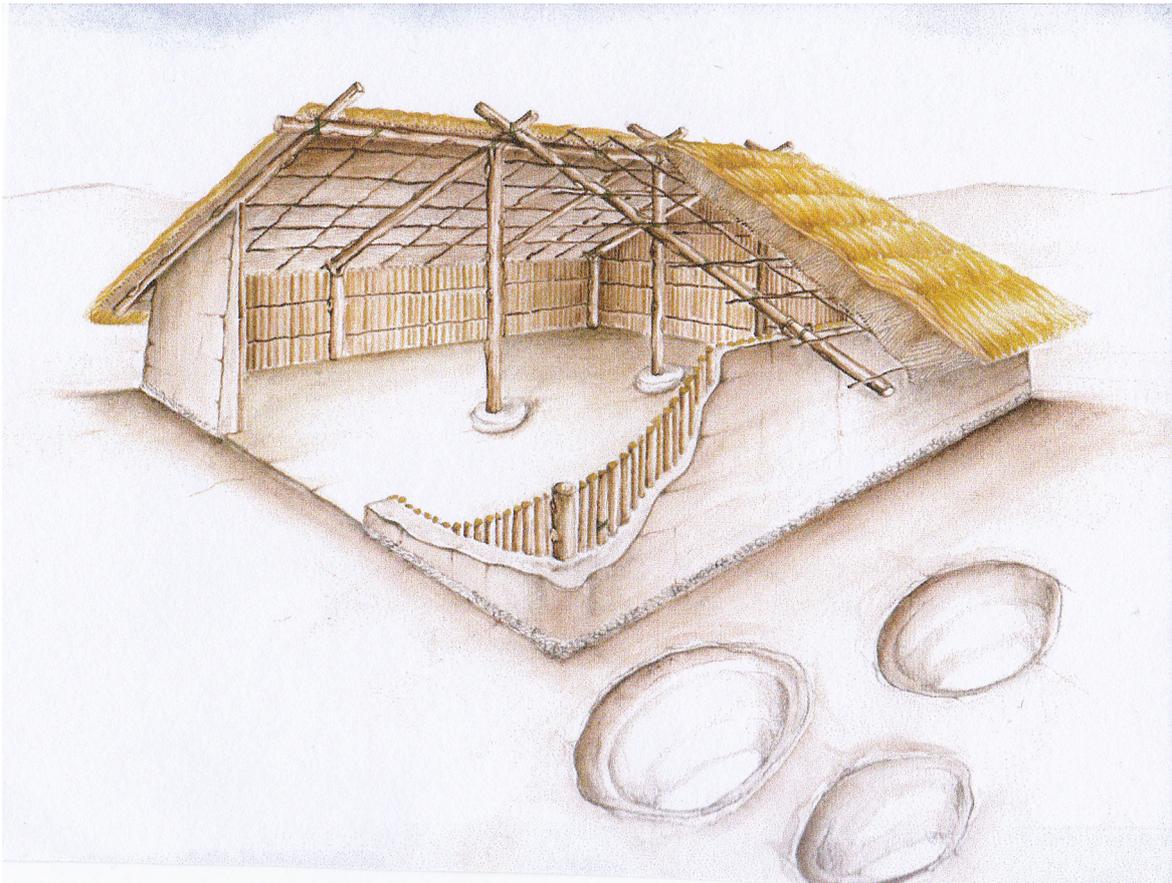


Figure 14 - Favella (Calabria, Southern Italy). Attempt of reconstruction of houses from the Early Neolithic. 6th millenium cal BC (after Tiné 2009).

At Trasano, the site that I excavated with G. Cremonesi near Matera from 1986 to 1991, an area of approximately 3 000m² was explored, though this involved opening large “windows” across an area measuring 180 × 80m (about 1.5 ha). It is likely that the buildings continued outside of the study area, or in the non-excavated zones within it.

The fifteen or so Chalcolithic houses found on the site are circular or oval in shape. They are identified on the ground by post-holes dug into the bedrock. Two central posts typically supported the roof, but there are unique examples with one, four and five posts (figure 15). The average dimensions of these oval buildings were 7-8 m in length and 5-6 m in width. The round houses varied between 4.5 m and 7 m in diameter. One unusual example is Building 26, which measures 12 m in diameter. In Zone C of the site, the remains of several successive houses were found. The walls were made of posts interlaced with wattling and clay daub. The roofs probably consisted of thatch or grass tied in bundles on rods to make a batten. These battens were in turn supported by rafters resting on the ridge beam on one side, and on the outer posts on the other (Guilaine *et al.*, 2014) (figures 16-17).

In the latter stages of the site’s occupation the buildings adopted a longer form with rounded ends. The distribution of the round or oval houses was relatively dispersed. The densely packed houses seen on Cypriot sites have not been observed here. These houses may have been contemporary with palisaded animal enclosures, even though these enclosures are mainly confined to the eastern part of the site.



Figure 15 - Trasano (Basilicata, Southern Italy). Chalcolithic circular house with two support posts (Laterza culture). 3rd millennium cal BC (excavations: J. Guilaine, G. Cremonesi).

Unfortunately, at Trasano as at Maccarese, the original floor levels were not preserved, a common problem for the European Neolithic, due to later cultivation and the resulting erosion. It is therefore impossible to reconstruct the spatial distribution of the activities that took place in the interior of the houses. A more general approach to the site allows us to make a few observations:

- the relative dispersal of the houses appears to argue for the economic independence of their occupants, all the more so because each house may have had its own animal enclosure (or enclosures). This was the case for House 33 (Zone G: 33/34). The hypothesis of nuclear families may therefore be proposed here;
- this example does not shed light on possible social differences. The burial practices of the Laterza culture (to which this site belongs) consisted predominantly of collective tombs in hypogea, often rich in grave goods such as pottery, jewellery, and weapons (Biancofiore, 1967, 1971). The necropolis which gave the culture its name contained family tombs, within which it is difficult to distinguish differences in the status of individuals. We cannot, however, rule out the possibility that certain figures occupied a higher social position, as in the case of the male buried in a stone slab tomb at Tursi, in the same town of Matera. The grave goods buried with this individual include decorated vases, a quiver with eight arrows (and probably the bow, though it was not preserved), a necklace of 280 soapstone beads, a copper dagger, and a sandstone sceptre ending in a ring (Cremonesi, 1976). A child was buried with this figure, and it is likely that this was a dependent that was sacrificed.

Two other observations may be added to the Trasano example:

- Firstly, circular houses, often with stone foundations, remain in use in the South of Italy, Sicily and on Aeolian Islands (e.g. Castello de Lipari, Capo Graziano on Filicudi and Milazzo on Panarea) in the early Bronze Age until the arrival of the first Aegean settlers who introduced rectangular houses built with stones of a standard size (e.g. Thapsos);

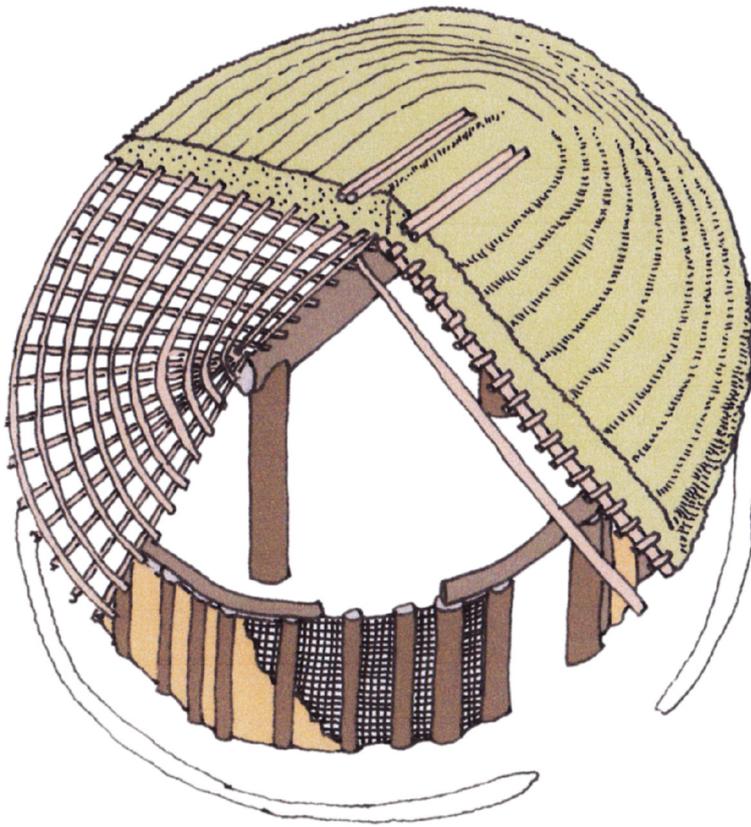


Figure 16 - Trasano (Basilicata, Southern Italy). Reconstruction of houses from the Chalcolithic. 3rd millenium cal BC (drawing: P. Pérez).



Figure 17 - Trasano (Basilicata, Southern Italy). Chalcolithic oval house with two support posts (Laterza culture). 3rd millenium cal BC (excavations: J. Guilaïne, G. Cremonesi).

- secondly, these southern Italian circular or oval houses from the Late Neolithic were not adopted elsewhere on the peninsula. In the same period in northern Italy, other (rectangular) house types flourished, some of which took on the form of large buildings like those recently found at Via Guidorossi in Parma, and which recall some contemporary buildings from the French Atlantic region (figure 18). The large structures in Parma, which were rectangular or had one rounded end, were divided into three parts. The largest of these were 50 m (Building IX) and 37 m (Building II) in length (figures 19-20). The hearth in the latter was located at the very back of the building (Bernabò Brea *et al.*, 2013).

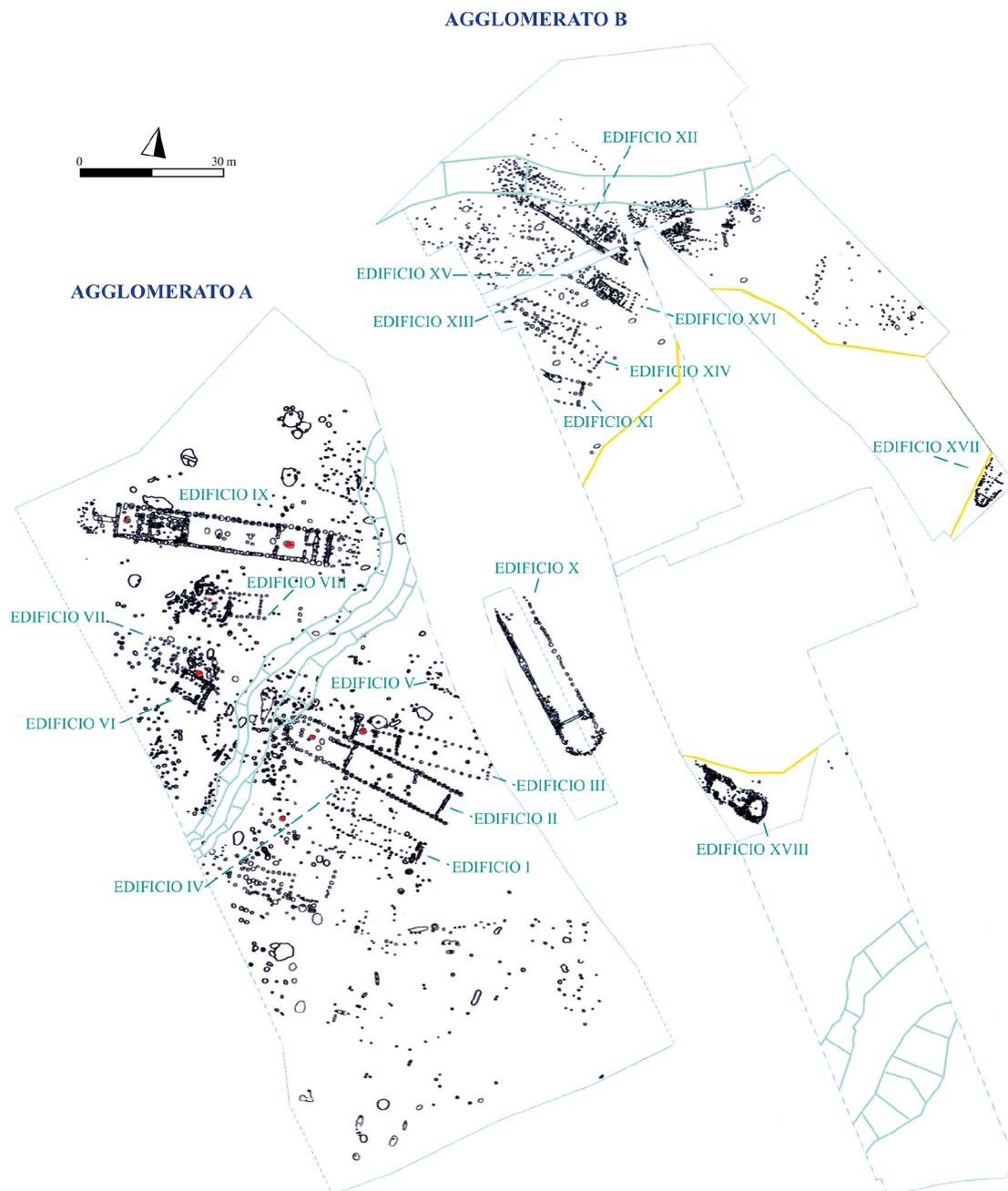


Figure 18 - Parma (Northern Italy). Plan of the excavation of via Guidorossi. End 4th /3rd millenium (after Bernabò Brea *et al.*, 2013).

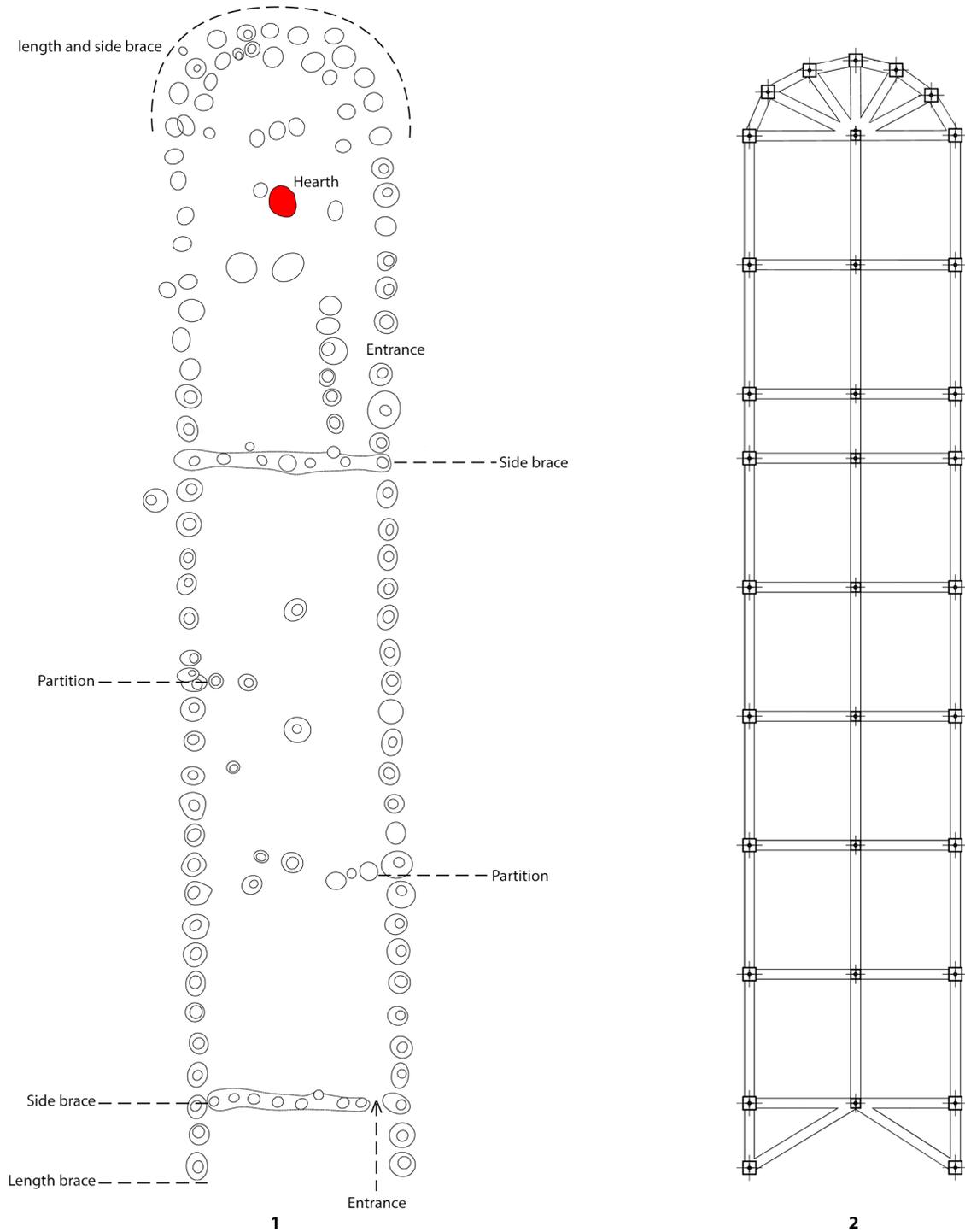


Figure 19 - Parma (Northern Italy). Plan of long building II from via Guidorossi. End 4th / 3rd millenium (after Bernabò Brea *et al.*, 2013).



Figure 20 - Parma (Northern Italy). One of the large buildings (building IX) from via Guidorossi in (photograph: M. Bernabò Brea).

3 - The stone houses of Languedoc's Chalcolithic

The third example I present is from a region in France located in the eastern part of the Languedoc, north of the city of Montpellier. It is an area of limestone plateaus which covers the northeast of the Hérault, the north of the Gard and the southwest of the Ardèche departments. In this region, the abundance of limestone made it the material of choice for the construction of buildings.

However, stone was rarely used as a construction material in the Midi before the 3rd millennium BC. We know rather little about southern houses from earlier periods. During the Early Neolithic, the evidence suggests that dwellings were circular and made of wood and wattle and daub (e.g. Peiro Seignado, Baume de Ronze) or oval in shape (e.g. Lalo). During the Middle Neolithic, houses were long with rounded ends. Those found recently at Vernègues, in Cazan (Bouches-du-Rhône), also of wood and clay, reached 20 m in length and 7-8 m in width (Moreau *et al.*, 2014). Late Neolithic buildings of a similar scale, or even larger, have been found on the site of Le Mourral in Trèbes (Aude), a site surrounded by a ditch and palisade.

By contrast, in the eastern Languedoc during the 3rd millennium BC the local rock source was exploited for construction by the people of the Fontbouisse culture (2,900-2,300 cal BC) in the area known as the “garrigues of the Petits Causses”. While in the low coastal plains houses were built using wood and earth, in inland areas stone was the principal construction material along with wood. The so-called “Fontbouisses” horizon is characterised in terms of its material culture by large earthenware jars sometimes with relief band decoration used to store foodstuffs or water, cooking pots, bowls, a fine pottery often with a fluted decoration, stone tools including flint arrowheads, points, daggers, scrapers and components of sickles (often made from Salinelles flint), and the practice of copper metalworking for the production of axe-heads, dagger blades, awls and jewellery (Gutherz, 1975).

The economy was based on the cultivation of cereals (wheat and barley), the gathering of acorns, and the raising of cattle, pigs and in particular goats and sheep.

The “classic” Fontbouisse house was a thick-walled construction, sub-rectangular in shape, but with no right-angles, that is, the ends were rounded. The walls were made using small limestone slabs, with a double facing, filled in with smaller loose stones. The narrowest of these walls were between 50 cm and 70 cm wide, but for the most part they were much thicker, over 1 m wide. Some reached head height. The upper part of the houses was made of wooden beams resting on central posts which supported a ridge beam. The double-pitched roof was comprised of rafters, bundles of thatch and branches, clay daub and some flat stones (Gascó, 1976; Coularou *et al.*, 2011). These stones were typically placed at the junction of roof and wall to facilitate rainwater drainage, in order to prevent water from seeping into the wall. At the site of Les Vautes (Saint-Gély-du-Fesc, Hérault), it was possible to study in detail the various materials involved in the construction of the roof, which were, from bottom to top: rafters, branches, straw thatch and clay, and a flagstone cladding (de Chazelles, 2003).

Regarding floor plan size, various sizes of house existed. Some were only 5-6 m long, with 20 m² of living space. Then there are larger models based around a standard house type between 7 m and 8.5 m in length, giving a living space of between 20 m² and 30 m².

The largest constructions reached an internal surface area of 40-50 m², with a few exceptional examples, such as some of the buildings at Cambous that were 22-24 m long and had a living space of over 100 m². The function of these structures is not fully understood. In light of their size and volume, they have sometimes been interpreted as having had a social (meeting place or “men’s house”) or economic (sheepfold) function, or perhaps they housed a leading family (figures 21-22).

The doorways were always narrow. In some cases the houses were associated with caves or sinkholes which served as storage areas or burial places.

The sites of the Fontbouisse culture are particularly numerous and show a density of occupation of 20 to 25 villages per 100 km² (Gascó, 1976). We do not know, however, if these settlements were contemporary or spread out over time. Each one was subject to reconstructions throughout its lifespan, including extensions, reductions in size, and modifications to the layout. Isolated “farmsteads” in the forest may have existed, but the typical model is one of a hamlet or small village comprising fewer than a dozen houses which were often attached to one another with common walls. An unusual example is the site of Cambous, which is made up of about fifty houses divided into separate “neighbourhoods”, each with 8-10 small structures and typically a single large building (Canet, Roudil, 1978). The majority of these villages were open, in that there was no system of protection or demarcation.



Figure 21 - Southern France. General view of a sector of the site of Cambous (Viols-le-Fort, Hérault). Fontbousse culture. 3rd millenium cal BC (photograph: A. Colomer / J. Coularou).



Figure 22 - Southern France. General view of several adjacent houses at the Cambous site (Viols-le-Fort, Hérault). Fontbousse culture. 3rd millenium cal BC. The longest building is 22m long (photograph: A. Colomer / J. Coularou).

Nevertheless, a small number of enclosed sites have been identified which are often located in raised areas and were protected by an outer wall containing turrets – circular structures often built at corners in the walls. These defences sometimes fully enclosed a site (as at Le Lébous, Boussargues) or closed off a natural spur (e.g. Le Rocher du Causse) (Colomer *et al.*, 1990; Coularou *et al.*, 2008) (figures 23-24). Curiously, these round features were perfectly standardised. Their walls, 1 m wide, enclose a space that is 2.5 m in diameter. The corbelled roofs were made from carefully chosen flat stones. Some of these turrets were free-standing, while others were attached to the houses within the walls. They were initially interpreted as defensive elements, much like the bastions found on fortified sites in the Aegean and on the Iberian Peninsula. However, their incorporation into the house spaces seems instead to indicate that they were small domestic structures, possibly for storage. Their original function has not yet been established.

A number of recent excavations have shed light on the internal organisation of the Fontbousse houses. Unlike the large numbers of European sites where the floor levels have not survived, in this region, the thick walls and the collapse of the roofs enabled the preservation of domestic features. A few examples have been found of a division between an inner area, towards the back of the house, where domestic activities (burning, cooking, ovens, and storage in jars) took place, and a front area where these activities were not present (figure 25). Could this zone have been used as a sleeping area? Or a stable or pigsty? Or for storage of fodder or large foodstuffs? Or for other functions? (Guilaine, Escallon, 2003). Food storage vessels were placed against the walls or at the back of the building (e.g. Conquette 2), while other vessels, associated with cooking, were organised and placed around the fire (Bailloud, 1973). In the more complex examples from the western zone at Boussargues, one of the two circular structures was clearly used for storage (Colomer *et al.*, 1990).

Little has been written about the social organisation of the Fontbousse culture, and archaeological analysis to date has barely incorporated a social approach. The consistent patterns in the interior organisation of the houses suggest that each may have contained a nuclear family with children, and perhaps grandparents. In the western zone at Boussargues, the two attached buildings, as well as the small circular structure, clearly belonged to a single family unit. The site probably housed two families – in the western and eastern zones.

These communities were no strangers to tensions and conflict as demonstrated by the individuals found shot with arrows in Suquet cave, in Les Matelles. Such confrontations sometimes reached a rather large scale. Raids by populations from the high plateaus may have extended as far as the area of the Petits Causses in the Languedoc. Based on depictions on statue-menhirs from this region of the South of France, we know that a functional dichotomy separated the female sphere (the women, indicated by their breasts, evoke breast-feeding, reproduction and the domestic world) from the male sphere (weapons evoke notions of outdoor activities such as hunting, battle and heavy labour). With regards to social organisation itself, the frequent use of collective tombs inhibits the identification of status differences between individuals. While a few individual burials are known, these do not provide much information on this subject.

This culture disappeared quite abruptly ca. 2 400-2 300 cal BC. The number of settlement sites dropped off drastically. We do not yet know the reasons for this collapse; climate? social? However, it corresponds with a phenomenon seen elsewhere in Europe such as at the lake dwellings in the Jura region or among the fortified sites on the Iberian Peninsula. This sudden change is contemporary with the spread of the Bell-Beaker groups. In the Midi, it also took place alongside a process of greater population movement and a diminished focus on built architecture.



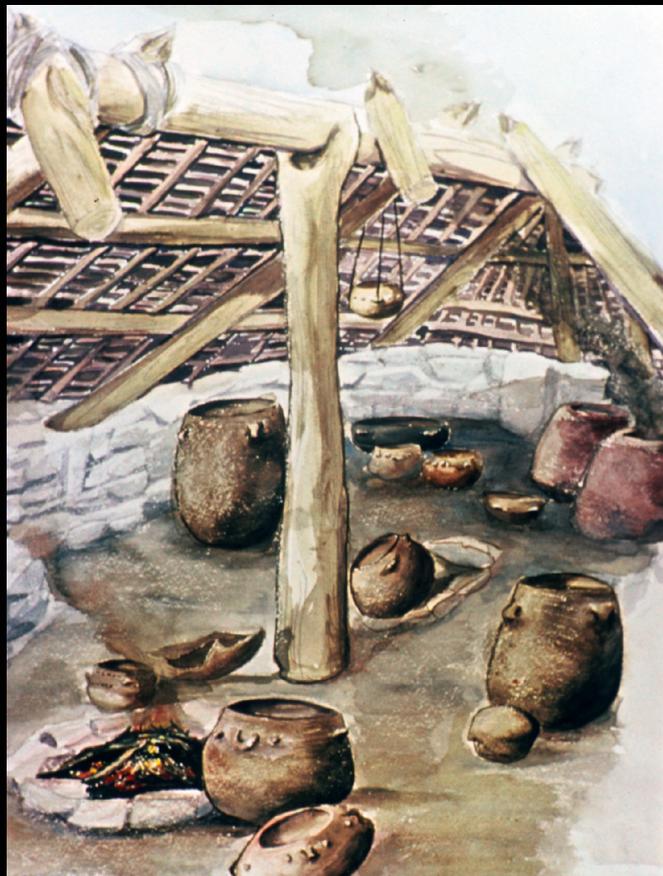
Figure 23 - Southern France. Aerial view of the Le Rocher du Causse site (Claret, Hérault). Fontbouisse culture. 3rd millenium cal BC (photograph: J. Coularou; excavations: J. Guilaine, J. Coularou, G. Escallon).



Figure 24 - Southern France. The outer perimeter wall containing the circular buildings at Le Rocher du Causse (Claret, Hérault). Fontbouisse culture. 3rd millenium cal BC (excavations and photograph: J. Guilaine, J. Coularou).



Figure 25 - Southern France. Reconstruction of the interior of a house at the site of Les Vautes (Saint-Gély-du-Fesc, Hérault). Fontbouisse culture. 3rd millenium cal BC (drawings: L. Jallot).



Conclusion

The various case studies discussed here demonstrate the great variability of house models that were used during the Neolithic in the Mediterranean region. These differences can obviously only be explained within their social, cultural and historical contexts. To summarize our conclusions:

- In Cyprus, the society was initially comprised of pioneers, migrants from the mainland at a time when people in the Levant were engaged in a process of economic transformation which turned them gradually into crop and then livestock farmers. These foreigners brought to the island a type of circular house built next to a large public building. It is interesting to note that the island was very conservative between 9,000 and 6,000 cal BC, while on the continent, innovation continued at the same pace. The round house model in Cyprus was not revised, nor was the large public (or cult?) building. "Families" were organised around clusters of small structures. Although important individuals existed, their status does not appear to have been passed on to others and there is no evidence for an elite class among this population.
- In the South of Italy and the South of France, we see the final stages of the Neolithic, three to four millennia later. In other words, it was a period when farming societies were fully settled and already had a long history behind them. In terms of an identity, both regions had in common a strong notion of the group, of family and of community, which was expressed in particular through their collective tombs (megaliths or hypogea). These large graves containing a few dozen, and sometimes several hundreds, individuals appear to be related to a veneration of the ancestors. These accumulations of bodies make it difficult to discern what was a likely underlying social hierarchy (e.g. Tursi). Regarding the houses specifically, the Italian and southern French examples demonstrate that the rather large regional diversity was expressed in the layout, shape and materials used.
- Variations existed within a particular social sphere, for example in the Fontbousse culture, between open sites and a sort of enclosed farmstead. This culture is without doubt one of the rare cases in France which permits a spatial approach to Neolithic settlement, thanks to the high level of preservation of the material culture of domestic life.

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