
Chapter 10

The Nuraghe's life in the Iron Age

Carlo Tronchetti

It is not the intention of this chapter to discuss the function of *Nuraghi* in the Bronze Age, a topic that has been well covered by others (Depalmas 2009a, b, c). Coverage will be restricted to the Iron age, that is from 900 BC onwards. Excavations, mainly those carried out in the past ten/fifteen years, and the research that has emerged from them, have pointed out clearly that Sardinian society was going through a critical stage during this span of time (Perra 2012; Usai 2012a). The abandonment of many *Nuraghi*, and the change in function of some others, displayed a shift in territorial organization, most probably, that is almost certainly, in response to social and economic changes (Tronchetti 2014).

The changed use of *Nuraghi* in the Iron Age

New *Nuraghi* were not built in the Iron Age and their original function was no longer relevant. The defensive role became redundant. In some cases, the large perimeter revetments, constructed from larger stones were overthrown. The ruins were superimposed by new smaller dwelling places, sometimes of rectangular shape; sometimes new huts had their walls of small stones placed on the remains of the massive defensive walls. However, the *Nuraghe*, even if of changed function, retained its role as a focus of aggregation, continuing to play an important role in the life of the community.

Where we can observe continuity of use, in most cases, the main structure of the *Nuraghe* became a place of worship. Unfortunately, many excavations occurred in the first decades of the twentieth century AD, and many data were lost. Thus we can only base our observations clearly on the finds of more recent excavations, and from this evidence we are able to link some pottery shapes to cult practice. By inference, we can reasonably also identify some old excavated *Nuraghi* as places of worship.

The best data nevertheless come from the recent excavations and publications of some *Nuraghi*, villages and sanctuaries (Fig. 10.1). We find some common elements in *Nuraghi*, sanctuaries, and in the *capanne delle riunioni* (meeting-huts), namely large huts distinguished by long benches along the walls. In almost all these buildings and in most sites we notice the presence of a stone model of a *Nuraghe*. In *Nuraghe* Su Mulinu (Villanovafranca) (Ugas 1989–90), there is a big and elaborate stone altar, with a large basin and a high model of a nuragic tower. The upper part is shaped in the form of the enclosure of the *Nuraghe* terrace. The cult place, or small shrine, in Sorradile, Su Monte, has a very similar altar (Santoni & Bacco 2008) (Fig. 10.2a). The excavators dated both altars to the Iron Age, to be precise, to the eighth century BC.

It is no surprise to see such an increase of places of worship places at this time. A recent study of nuragic sanctuaries by Nicola Ialongo (Ialongo 2010) has clearly and convincingly proved that the *floruit* of the most important, as well as the smaller, sanctuaries began in the early Iron age. These sanctuaries were always linked to the cult of water, shown by the pit-temples in their precinct. The altars from Villanovafranca and Sorradile are actually large water basins with a model of a nuragic tower, once again demonstrating the presence of a cult of water.

A big hut in the sanctuary of S. Anastasia in Sardara has a stone altar of nuragic tower shape (Fig. 10.2b), another model comes from the district of San Sperate near Cagliari (Fig. 10.3b), and the sanctuary of Serra Niedda has several models of stone and one of bronze. The late sanctuary of Santa Vittoria di Serri has another stone model. The meeting huts of *Nuraghe* Palmavera (Alghero) and Su Nuraxi di Barumini (Fig. 10.2b) have stone models. Many others were found in other sites, but the precise context is rarely recorded. Paulilongo, San Sperate has two amazing models: the

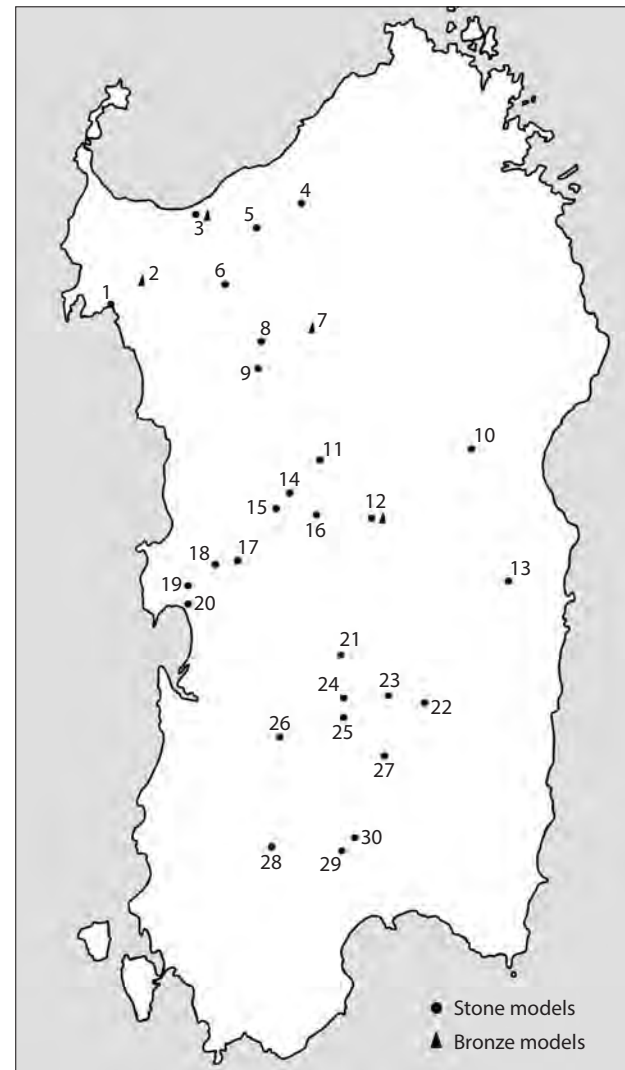


Figure 10.1. Discovery sites of Nuraghe models (except for the masts of small ships and the pottery ones): 1) Alghero, Palmavera; 2) Olmedo, Camposanto; 3) Sorso, Serra Niedda; 4) Perfugas, Predio Canopoli; 5) Nulvi, Irru; 6) Florinas, Punta 'e Onossi – Giorrè; 7) Ittireddu, Località ignota; 8) Torralba, Santu Antine; 9) Cheremule, Località ignota; 10) Oliena, Lanaitho – Sa Sedda 'e sos Carros; 11) Noragugume, Sa Tanca 'e Mesu; 12) Teti, Abini; 13) Villagrande Strisaili, S'Arcu 'e is Forros – Sa Carcaredda; 14) Norbello, Orconale; 15) Abbasanta, Losa; 16) Sorradile, Su Monte; 17) Bauladu, Santa Barbara; 18) S. Vero Milis, Pauli Crechi – Serra 'e is Araus; 19) Nurachi, Sa Manenzia; 20) Cabras, Mont'e Prama – Cann'e Vadosu – Fondo Camedda; 21) Genoni, Santu Antine; 22) Orroli, Arrubiu; 23) Serri, Santa Vittoria; 24) Barumini, Su Nuraxi; 25) Villanovafranca, Su Mulinu – Tuppèdili; 26) Sardara, S. Anastasia; 27) Suelli, Piscu; 28) Vallermosa, Matzanni; 29) San Sperate, Sa Bia 'e Decimu – Paulilongo; 30) Monastir, Monte Zara.

first model is said to come from *Nuraghe Cann'e Vadosu* (Cabras), but is actually from Mont'e Prama (Fig. 10.3a); the second model came from Serra 'e is Araus (San Vero Milis). Both are notable for the link between the architecture and the human figure. The figures on the last two are clearly linked to ritual action: in the first, we recognize a worshipper raising his arms; in the second a man is leading an unidentifiable animal to sacrifice. Furthermore, we have a few bronze models, showing a high tower presiding over a wall with four smaller towers (Fig. 10.3d). Finally small models are recognized in bronze 'buttons' and in the mast of some bronze small ships (*navicelle*) (Fig. 10.3c).

Recently, Campus and Leonelli (2012) edited a book on *Nuraghe* models, where it is possible to find the full bibliographical references to all the models discussed. However, whereas the catalogue is comprehensive, they make the claim that most activity ended with the Final Bronze Age. For them, Iron age Sardinia is a land without creativity. This is most emphatically shown by their chronological table which shows a gap between 900 and 720 BC, when Phoenician culture is presented as predominant and the only force on the island. This view contrasts with the archaeological data from the most recent excavations and studies, and with the well-grounded chronological data obtained from the contexts with Sardinian objects found outside Sardinia. The book is really useful as a data source but must be read with this fundamental correction.

The *Nuraghe* as a symbol of memory

Read in its proper chronological context, the *Nuraghe* was now a symbol of memory, a territorial focal point and an object of worship, both as a cultic object and an altar. Following the suggestion of Alessandro Usai, the *Nuraghe*, regarded as a cult place, is also the place where the properties of the community were collected under divine protection. In the Sardinian Iron age, we can reasonably argue that some large families, let us call them aristocratic families, because of their military power and pre-eminence in the religious hierarchy, played a strong political role in the late nuragic communities.

In the site of Mont'e Prama (Cabras) in central west Sardinia, we have amazing remains that support this ideological hypothesis, involving the *Nuraghe*. Here there is an Iron age necropolis, with pit tombs. The tombs of the later phase (second half of the eighth century BC) are monumentalized with large limestone cover slabs, accompanied by big limestone statues, portraying archers, warriors and boxers covering their head with a shield, most likely people acting out sacred games (Fig. 10.5). Together with the 28 reconstructed statues there are 16 limestone models

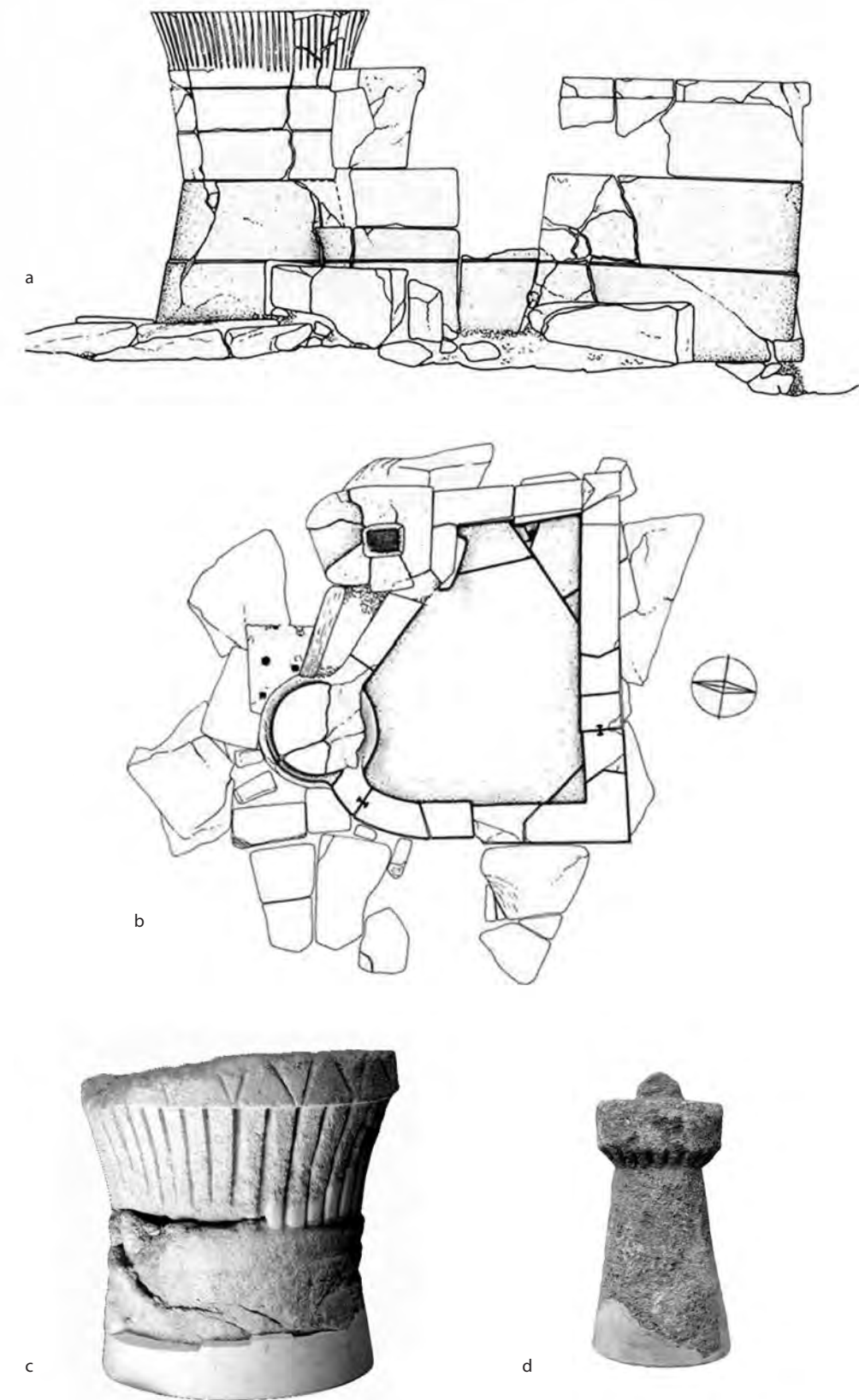


Figure 10.2. Nuraghe models: a) Sorradile, Su Monte; b) Sardara, S. Anastasia; c) Sorso, Serra Niedda; d) Barumini.



Figure 10.3. Nuraghe models: a) Cabras, Cann'e Vadosu; b) San Sperate, Sa Bia 'e Decimu; c) Vetulonia; d) Furtei.

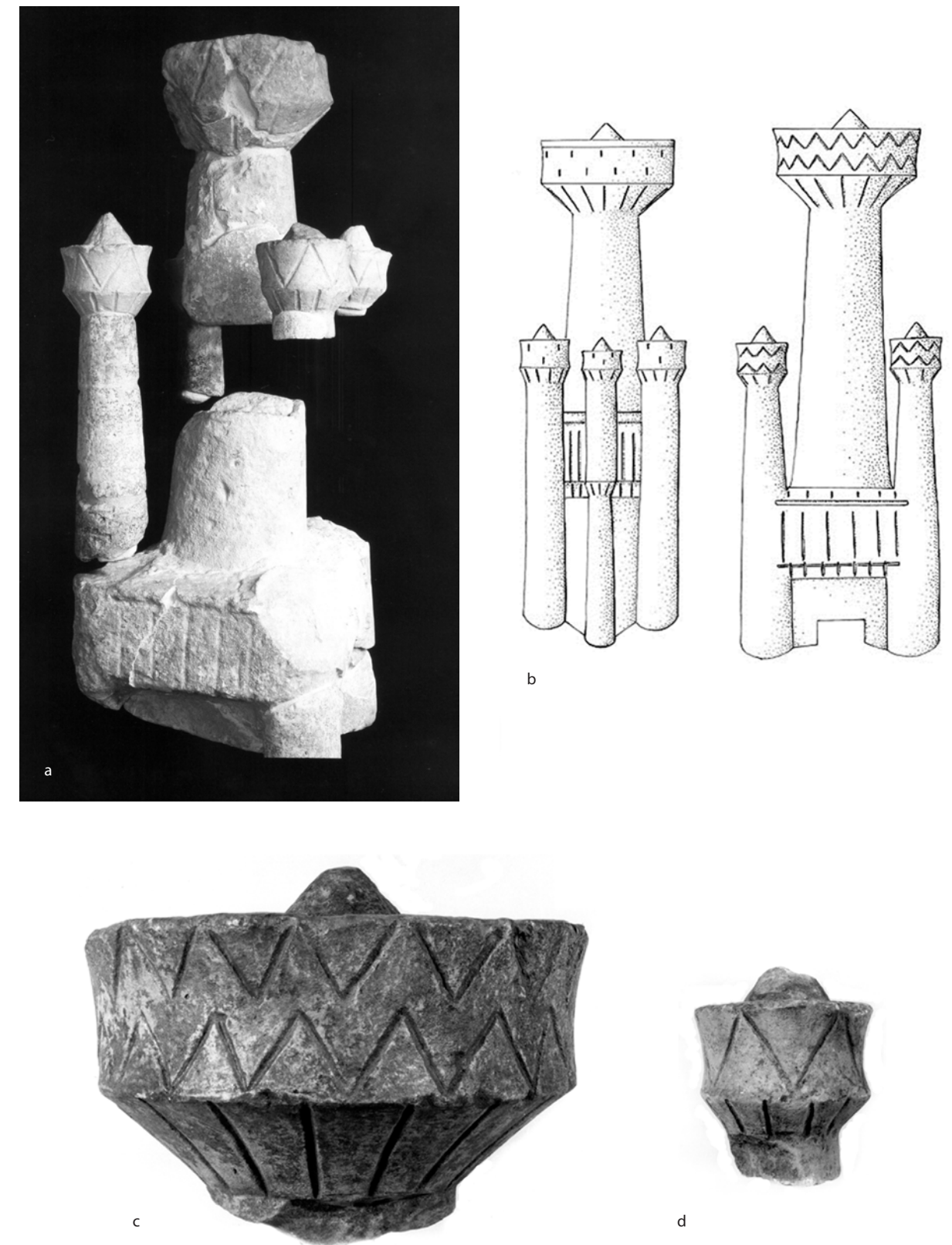


Figure 10.4. Nuraghe models from Mont'e Prama, Cabras.



Figure 10.5. Reconstruction of the necropolis of Cabras, Mont'e Prama, with statues and models of nuraghe.

of *Nuraghi*, mostly of a high tower surrounded by a containing wall with four smaller towers (Tronchetti 2012a) (Fig. 10.4).

Such an outstanding display illustrates this new ideology. The family (anthropological analysis proves that most of the deceased were members of one family group) displayed to the community their core values: military, religious, and consequently political, by means of the models of *Nuraghe* that combined all these values. In the necropolis, some more ancient betyls have also been found, stylistically linked to the memory of Late Bronze Age Giant's tombs; another reference to the mythical ancestors who ruled the country and built extraordinary superhuman monuments like the *Nuraghi*. The *Nuraghi* had been transformed into materialized memories, articulated through the plethora of models that represent them (Tronchetti 2012b).

Conclusion

The *Nuraghe* models are located in peculiar buildings in the nuragic villages, that is in the so-called meeting huts: larger circular structures than the normal huts, with a bench along the walls and a model of *Nuraghe* in the centre or a niche, always in a prominent position. This is a clear reference to the symbolic social and political value of the *Nuraghe* within the community.

The models of *Nuraghe* also find their place within the sanctuaries, where they are sometimes connected to tanks containing water, used in rituals. The water cult is found from the Late and Final Bronze Age in the well temples; in the Iron Age it is located in both the huts with benches and a basin, evidently linked to private and even public cult practices as shown by the structure found at Sa Sedda and sos Carros (Salis 2013).

The presence of numerous models of *Nuraghe* in the monumental necropolis of Mont'e Prama is extremely important for understanding the meaning attributed to the models. Members of undoubtedly elite family groups symbolized in their values are buried in the tombs: political, in the ostentation of the weapons that qualify them as defenders of the community; religious in the attitude of 'boxers' engaged in ritual games.

The *Nuraghe* models combine both features, and, with the statues, compose a complex in which the construction of memory takes place, inserting the dead in a chain that links them to the ancestors, real or mythical.

The model of *Nuraghe*, therefore, referred to a still easily perceived past, a symbol of 'built memory', whose function was to affirm and strengthen the cohesion of the social body around the elites who guided it (Perra 2017).

The life of the *Nuraghi* in the Iron Age was different from the life in the Bronze Age, but not one of declining value or force. The *Nuraghe* remained the very ideological, and often materialized, centre of the community, combining religious and political values, and the memory of the past times, deeply linking the current generation to the old mythical ancestors and the descent groups that connected one to the other.

Chapter 11

Monumentality and commemoration at a Late Neolithic henge site in Scotland

Rebecca K. Younger

It seems that archaeologists sometimes implicitly assume monuments are memorials. The word 'monument', as Richard Bradley notes (1993, 2), comes from the Latin *monere*, 'to remind'. Interpretations of the Neolithic and Early Bronze Age in Britain have traditionally been dominated by an interest in monuments, sometimes to the detriment of other aspects of Neolithic life, as some have pointed out, because of the high visibility of monuments in the archaeological record (Garrow 2006, 3; Pollard 1999, 90). Large earthwork or stone monuments can also remain highly visible parts of today's landscape, and therefore we understand them to be enduring parts of the landscape, testament to the past; and there seems to be a tacit acceptance amongst archaeologists that monuments therefore have an abstract mnemonic quality because of their existence as 'old things' in the landscape. The perceived longevity of monuments means they are often understood to be places in the landscape which make tangible reference to the past (e.g. Tilley 1994). Since this is how we understand monuments, there is a tendency to assume that this is what they were intended for and how they were understood in the past.

We cannot be certain that this was the case however, and therefore in this chapter, it is suggested that a slightly different approach to understanding the memorial aspects of monuments might be fruitful. Rather than assuming monuments to have been intended as permanent reminders of the past, here it is suggested that greater consideration should be given to the particular ways in which people used monuments to remember – for example, the use of monuments as places of commemoration. This is discussed in relation to henge monuments, earthwork monuments of the Neolithic and Early Bronze Age in Britain, but the concepts of commemoration explored in the chapter will have relevance to other times and places. First, however, it will be useful to outline some of the pitfalls

of assuming prehistoric monuments to be memorials as we understand them in a contemporary context.

Monuments, memory and archaeology

Considering monuments to be mnemonic, because we think of them as permanent references to the past implies that understandings of memory, the past and the meaning of monuments have always been similar to our own contemporary Western perspective. It also assumes that monuments are static entities, unchanging representations of the past in the landscape. This is not the case however, and a growing body of research into monuments has demonstrated that they were commonly 'reused': remodelled and rebuilt at different times, used for different purposes and interpreted in different ways throughout their histories (Bradley 2002; Driscoll 1998; Hingley 1996; Holtorf 1998). Monuments were not always preserved unchanged – or necessarily seen as things of 'the past', but were reused in the present. In fact, the very concept of 'the past' might have been different to our own. The perception and concept of time is not a constant between different cultures (Gell 1992), and a person living during the Neolithic or Early Bronze Age would have conceptualized their past very differently from us. The same distinctions between history and myth may not have existed (Gosden and Lock 1998), and so the ways in which existing monuments were interpreted would have been different. Indeed, it is possible that they might not have been interpreted as humanly made constructions, and the distinction between culture and nature, if a distinction was made, would likely have been drawn along very different lines to our own (see Tilley 1996, and Bradley 1998a). People may therefore have interpreted and remembered the past differently from our own concept of memory.

Traditional concepts of memory used in archaeology also tend to treat memory in abstract terms.

Seeing monuments as memorials implies that they possess a mnemonic quality which would function in the same way regardless of human interaction with, and interpretation of, the monument. Alasdair Whittle has pointed out that, while memory has been something of a fashionable topic in archaeology in recent years, human agency has not always had a major role in these debates (Whittle 2010, 35), meaning that the significance of the active *creation* of memory in the past has sometimes been overlooked.

Perhaps this is partly because of the fact that many discussions of memory and monuments in archaeology have focused on the monument after it is finished, and sometimes only after it has gone out of use. Despite it being considered that the purpose of monuments is memorial, this is often linked with later reuses of the monument rather than its original use – what Bradley (1993) terms the ‘afterlife’ of monuments. Dušan Borić has suggested that archaeologists have used ‘memory’ as an ‘umbrella term’ for thinking about ‘the past in the past’ (Borić 2010, 3). If we are to consider how and whether monuments functioned as memorials, it is necessary to think about their construction and use, rather than only thinking about the finished monument as a memorial. Bradley has suggested that the ‘project’ of constructing monuments may have been more significant than the finished monument (Bradley 1993, 1998b). While sites such as henges might have been memorials because they were places where the past was monumentalized, the ways in which people deliberately altered existing monuments could also be significant. Memory cannot be seen as an inherent or self-evident quality of a monument, but something that has to be created. Ruth Van Dyke and Susan Alcock describe the creation of memory, and particularly of social memory, as an ‘active and ongoing process’, constructed as people choose what to remember or forget (Van Dyke and Alcock 2003, 3). The act of forgetting may be as significant as remembering, and suggests a deliberate interest in reinterpreting the past. If we are to consider any of these aspects of memory, we need to move beyond a traditional concept of monuments being static memorials to the past, and to think instead about how monuments might have been used to engage actively with, and renegotiate, alternative concepts of the past. One way of doing so might be to consider the construction and use of monuments as a commemorative practice.

Henge monuments in Scotland

The construction and use of henge monuments might be one such example of a commemorative practice, and of monuments which might have been used to

engage with the past. Henges are circular earthwork monuments, usually comprising an external bank and internal ditch, with one or two narrow breaks in the earthworks forming ‘entrances’ into the interior space defined by the earthworks. Henges are found throughout much of the British Mainland and Orkney, and are traditionally dated to the Late Neolithic – Early Bronze Age, c. 3000–2000 BC (Harding 2003). Over 80 henges are known in Scotland, many of which have been discovered as cropmarks through aerial survey (Barclay 2005, 84).

Although generally defined in the terms outlined above, henges form a somewhat heterogeneous monument type, and vary in size, date and form. The henge category includes sites which range from small ‘mini-henges’ or ‘hengiforms’, as small as 5–6 m in diameter, to large ‘henge enclosures’ such as Avebury and Durrington Walls in the south of England (Harding 2003). In Scotland, the largest henges are about 100 m in diameter, although most are smaller, about 30 m in diameter (Barclay 2005, 84). Recent research by Richard Bradley has also extended the chronology of henge monuments in some regions, dating the construction of some mini-henges in the northeast of Scotland into the mid-second millennium BC (c. 1600–1400 BC) (Bradley 2011). Henges have traditionally been associated with Grooved Ware pottery, a style of Late Neolithic decorated pottery which, like henges, supposedly originated in Orkney around 3000 BC (Harding 2003). Henges have therefore often in the past been characterized as archetypal Late Neolithic monuments – a ‘hallmark of their age’, as Harding and Lee (1987, 66) described them. Henges are usually interpreted as ritual or ceremonial monuments.

When excavated, henges are usually found to be multi-phase monuments. Although the term ‘henge’ describes the bank and ditch, henge sites are often associated with a range of other features, including timber or stone settings, and burials. In the past, this has led to attempts to classify henges on the basis of morphology and internal features (e.g. Burl 1969; Catherall 1971; Wainwright 1969; Clare 1986, 1987). The interest in understanding the architecture of henges has been such that at times, other aspects such as the use and purposes of henges, or their relation to the landscape, have been overlooked, as Aaron Watson (2004) has argued. The interest in defining and classifying henges – and other monuments – has also perhaps meant that we overlook the extent to which such monuments have been reused and reworked over time. The henge earthworks are often only one phase in the use of a site, and not necessarily the first or last monument to be constructed in a particular location (Barclay 2005, 92–3; Thomas 2001, 132–3). The other

monuments and features found at henge sites are often found to pre- or post-date the henge earthworks, sometimes by hundreds of years. Pre-henge activity is often characterized by deposition (e.g. of pottery), pit-digging, burial, or the construction of timber circles. Where timber circles are found in association with henges for example, the timber monument is always found to pre-date the henge earthworks (Gibson 2005). Post-henge activity often involves burial, sometimes in large cists, or cairns. Similar trajectories of use have been demonstrated at several excavated henge sites, such as North Mains in Perth and Kinross (Barclay 1983), and Cairnpapple, West Lothian (Piggott 1948; Barclay 1999). Some 27 henge sites have been excavated in Scotland, and all of these have been found to be multi-phase sites, where the henge earthworks were neither the first nor last element to be constructed on site. Henge sites were often used (perhaps sporadically) over millennia.

Given the multi-phase nature of henge sites as places which are reused, henges are interesting sites for considering memory. They were sites which were returned to repeatedly over many generations, but were not preserved unchanged. Most henge sites were significantly remodelled at some point in their ‘life’, and change and innovation were evidently important at henges, as well as memory and tradition. Henge sites were places where the project of monumentality was reimagined in new ways at different times. Change was played out over centuries and while the same site was returned to repeatedly over generations, these were also places where innovation was the norm. So while henges may have been ‘memorial’ in that they did refer to the past, they were not places where the past was memorialized in unchanging, static form (Younger 2016).

Can this understanding of henges as places which changed over time be reconciled with our concept of monuments as memorials? Henge sites were different things at different times. This is somewhat at odds with a traditional understanding of monuments being permanent, unchanging memorials. It is this relationship between memory and change, and what insights it might lend us into memory in the past, which will be discussed in the remainder of this chapter.

Commemoration

The use of monuments such as henges over generations may be more than simply a memorial to the past, but this does not mean that memory was unimportant at these places. Our contemporary concepts of memory as an abstract quality of monuments which endure unchanged in the landscape might be faulty when

applied to the past, and indeed do little to explain why monuments would be used again and rebuilt long after their initial construction. (Re)using such places, redolent of the past, was, however, clearly important to people in the past, even if they were not used in accordance with our contemporary ideas of memorialization. Perhaps such practices can be better understood as commemorative rather than memorial.

The use of the term ‘commemoration’ is not intended simply as an alternative word for memory, but rather refers to a distinct practice, and to a specific kind of remembering. While archaeologists may tend to think about memory in abstract, a focus on commemoration may allow greater consideration of past human experiences of remembering, and of the role played by monument construction (and not only finished monuments) in the active interpretation and negotiation of memory. The definition of commemoration adopted in this chapter is based on philosopher Edward Casey’s (1987) phenomenological account of remembering. The significant aspects of the practice of commemoration as described by Casey include that it is communal, relying on collective engagement with the past (Casey 1987, 235–6). Commemoration can therefore be a way of remembering events in the distant past, rather than memories based on personal experience (Casey 1987, 216–18). Commemoration might also be ritualized, and might be tied to a particular place (Casey 1987, 218–19, 221, 245–6). These features of commemoration make it relevant for thinking about the use of monuments such as henges – ‘ritual’ monuments, probably built and used by large groups of people, and used over a long time period, beyond the span of an individual’s memory.

Commemoration is also useful for thinking about the memorial aspect of monuments because Casey argues that by referring to the past, in a particular location, commemoration makes the past ‘present’ in a certain place (Casey 1987, 218–19). Commemoration does not only refer to the past however, but also to the future, being a way of actively preserving and ‘passing on’ the past to future generations (Casey 1987, 256). While commemoration might revolve around a particular place or monument, the monument itself is not the agent of memory. Rather, the key aspect of commemoration as a way of referring to the past, ‘presencing’ the past and passing it on, is that it is enacted by people. Commemoration also allows for the active (re)negotiation of the past; it is not the existence of finished monuments, but the *construction* and *use* of monuments, which are important in making them places of memory.

It is particularly this emphasis on the construction and use of monuments which is helpful in understanding henges as commemorative places. The repeated

construction of monuments in the same location – a location which had a long history of use and of monument construction, as is the case at most henge sites – would require people to engage with their past. In building monuments which by their location refer to the past, but would endure into the future, henge sites might have been places where the past could be actively reinterpreted. People’s understanding of, and relationship to, the past could be renegotiated by building a new monument on the site of an existing structure. By doing so, they make a statement in the present, but also for the future. Henge sites, as places of commemoration, may therefore have been places where time and ‘history’ could be reinterpreted in ways which were not necessarily possible in everyday life.

In bringing together references to the past, present and future in one location, henge sites may even have been places where time could be considered to ‘flow’ in a different way. This is an idea which will be explored further below. A traditional concept of memory would not necessarily help to explain the significance of why henge sites were repeatedly changed and reused. If it is understood as a process of commemoration however, then it is possible to reinterpret this tradition of rebuilding monuments on the same site as an effort to actively engage with, and renegotiate, the past. The rest of this chapter will discuss how this commemorative process might have played out at one particular site, Forteviot in Perth and Kinross.

Forteviot

Forteviot is the site of a remarkable complex of monuments, revealed as crop marks during aerial survey in the 1970s (St Joseph 1976, 1978). The crop marks represent a group of ritual monuments dating from the Late Neolithic to the early medieval period, roughly the third millennium BC to the first millennium AD (Fig. 11.1). The main group of monuments is situated on a terrace above a tributary of the River Earn, to the south of the modern village of Forteviot. The Gask Ridge lies to the north of the site, and the terrace is overlooked by the Ochill Hills to the south. This chapter will focus on the prehistoric monument complex.

The prehistoric monument complex at Forteviot comprises an enormous palisaded enclosure. This large timber enclosure has been radiocarbon dated to 2926–2467 cal. BC (95 per cent confidence) (Noble & Brophy 2011, 793), and encloses an area of about 6 hectares (Gibson 2002, 18). The palisaded enclosure surrounds several other monuments, not all of which are contemporary. These include a henge; a small ‘hengiform’ monument; and timber circles. The palisaded enclosure had a narrow entrance avenue, and

was made of timber posts, probably oak (Noble & Brophy 2011, 791–3). Outside the timber enclosure were more monuments, including another two henges, and a circular enclosure with a double palisade, with an internal triple cist burial (Fig. 11.1) (Noble & Brophy 2011). The Strathearn Environs and Royal Forteviot project (SERF), led by Glasgow and Aberdeen universities and largely funded by Historic Scotland, carried out excavations at Forteviot from 2006–10. The discussion in this chapter focuses on Henge 1 (Fig. 11.2), inside the palisaded enclosure, which was excavated over two seasons in 2008–9. Like other henges excavated in Scotland, Henge 1 at Forteviot had a long and complex ‘life history’, and although the same site was repeatedly returned to, it was used in innovative ways, and changed greatly over the time it was used.

Amongst the earliest activity on the site of Forteviot Henge 1 was a Late Neolithic cremation cemetery, dating to 3090–2638 cal. BC (95 per cent confidence) (Noble & Brophy 2011, 790). 9 cremation deposits were discovered (some representing more than one individual), within the area which would later be enclosed by the henge earthworks (Noble & Brophy 2011, 790). The cremation cemetery may have been marked by a standing stone or stone setting, although this was later destroyed (Noble & Brophy 2011, 790). The site of the cremation cemetery was transformed, possibly soon after the cemetery went out of use, and the emphasis of the site changed from deposition to enclosure. The first element of this was the huge palisaded enclosure. The posts of the enclosure may have been as tall as 6 m above the ground (Noble & Brophy 2011, 793). Constructed during the same period as the palisaded enclosure, a smaller timber circle was built inside it, enclosing the immediate area around the cremation cemetery. Although smaller than the palisade, the timber circle was still a substantial construction, also made of large oak posts, forming a circle roughly 45 m in diameter (Noble & Brophy 2011, 795).

After the construction of the timber enclosures, the cremation cemetery was enclosed by a henge. The ditch of the henge was built inside, and concentric to, the timber circle, while the outer bank may have incorporated the earlier timbers. The lowest fills of the henge ditch have been radiocarbon dated to 2468–1938 cal. BC (95 per cent confidence) (Noble & Brophy 2011, 795), giving an approximate date for the construction of the henge earthworks. Although these earthworks were substantial – the ditch was as much as 10 m wide in places – the area enclosed was relatively small, approximately 22 m in diameter, with only one entrance (Brophy & Noble 2012, 26). Around 2199–1977 cal. BC, the way in which the site was used changed again. A stone cist with a dagger burial was

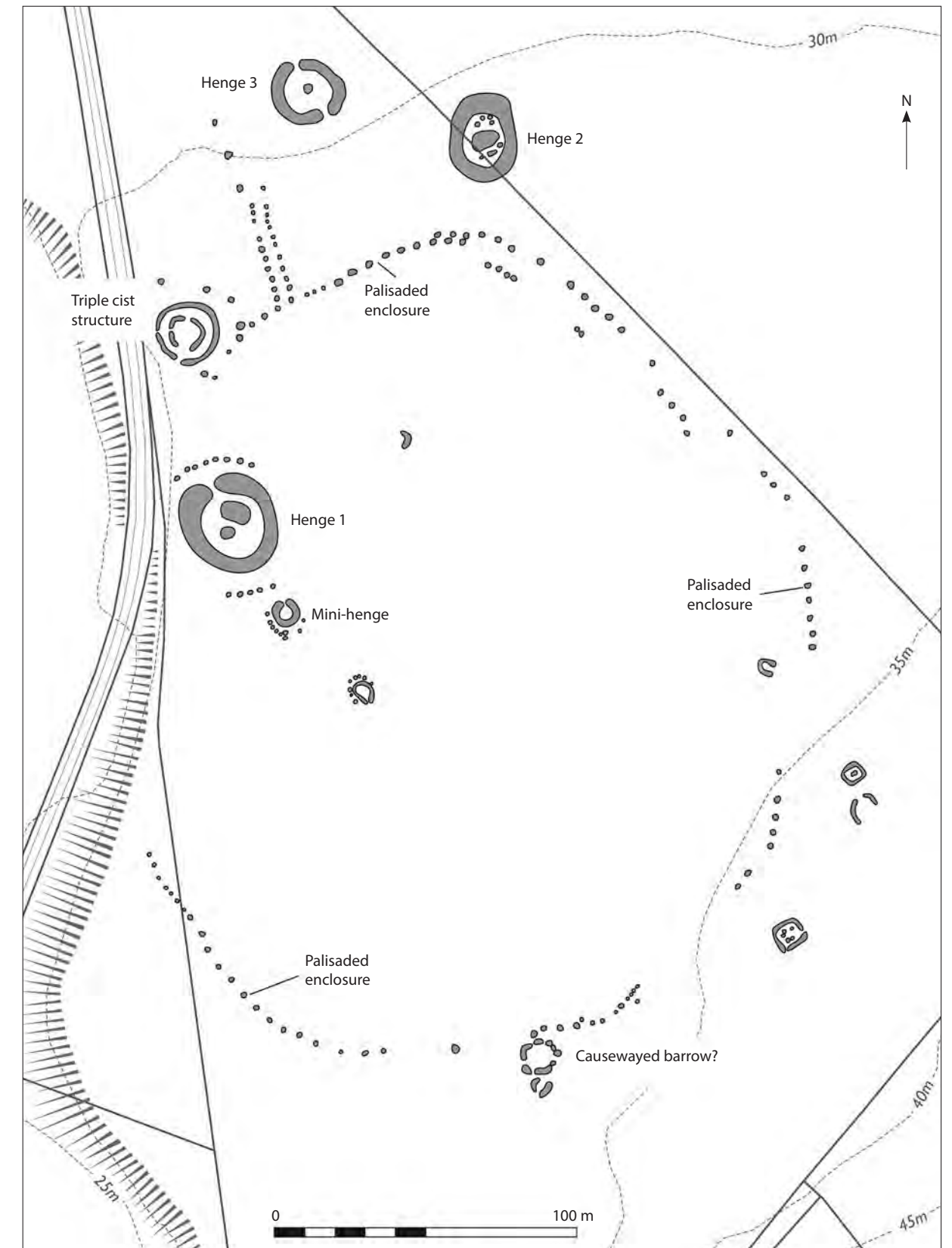


Figure 11.1. Transcription of cropmarks of prehistoric monument complex at Forteviot. SERF project.

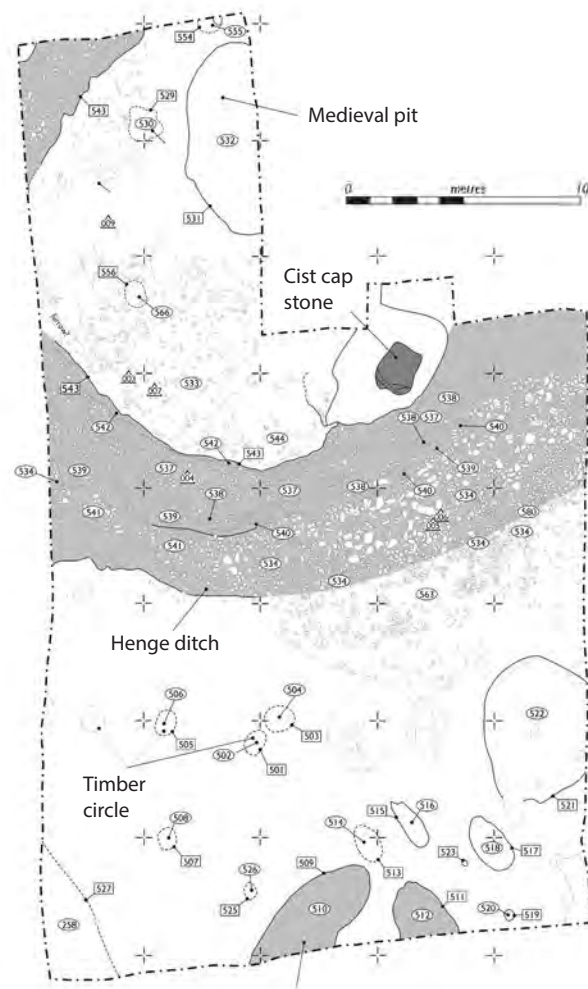


Figure 11.2. Plan of Forteviot Henge 1. SERF project.

constructed in the southeast of Henge 1, overlying the henge ditch. By the time the cist was built, the henge ditch had partially silted up. Gordon Noble and Kenneth Brophy have suggested that the cist was probably sealed under a cairn, as the stony upper fill of the henge ditch may represent cairn material, perhaps ruined at a later date (Noble & Brophy 2011, 798). Henge 1 continued to be reworked during later prehistory and the early medieval period, during which time parts of the earthwork may have been levelled. The site may have been used for metal- and glass-working, before a large pit was dug in the centre during the early medieval period (Brophy & Noble 2012, 26).

Heterotopias and imagined landscapes

Henge 1 at Forteviot, like other henges, was far from being a 'permanent', unchanging monument. It was a place which underwent a long process of change from the third millennium BC onwards – a process

which spanned a millennium or more. It was a place where the 'project' of monumentality (Bradley 1993, 1998b) was reimagined, and played out in different ways at different times. A diversity of activities and architectures manifested in this one location suggest that the tension of continuity and change, of tradition and innovation, and of permanence and transience, were significant aspects of the ways the site was used and understood throughout prehistory.

Change was visibly important at Forteviot over centuries. Forteviot was transformed from an open cemetery site, to a place enclosed by a succession of massive timber and earth structures. Movement and visibility were reduced, or rather increasingly controlled, over time. Brophy and Noble have suggested that parts of the Forteviot complex may have been blocked or mounded over at some times, sealing off parts of the site, and making access in and out of these parts of the site difficult (Brophy & Noble 2012, 32). References to the past were thus made physically manifest in the way each successive monument used the space occupied by its predecessors, but were not necessarily easily accessible; and each new kind of monument also changed and transformed the site. Perhaps it was this transience and innovation which made the site commemorative; it would be as much in the construction of a monument, as in visiting a complete monument, that people might engage with their past. It was therefore the act of *transforming* a place, rather than lithifying memory in a physical monumental form, which is commemorative. Transforming the site would have involved engaging with the past, renegotiating it, and making links between the present place and the past; a new generation reimagining their past by building a new monument.

The reasons for, and outcomes of, this commemoration might also have changed over time. At Forteviot, as at other henge sites, the enclosure of space becomes an increasingly prominent aspect of how these sites are defined over time. Henges have a distinctive architecture with an external bank and internal ditch. Warner (2000) has suggested that Iron Age hengiform monuments in Ireland, which share this arrangement, may have been intended to contain, and defend against, places which were considered magical, dangerous or 'otherworldly'. Gordon Barclay (2005, 89ff.) has suggested that henges might therefore also have been intended to contain a threat. Similarly, this has led Alex Gibson to put forward the idea that henges might have functioned as 'ghost traps', and that, by enclosing sites of earlier activity, henges were intended not only to enclose, but also to *contain* (Gibson 2008).

Whether henge earthworks could have kept such dangerous forces at bay or not, they would have

served as an unambiguous demarcation of the space inside. In this sense, the aspect of commemoration or memory is also important. As Julian Thomas (2010, 11) writes, 'The digging of henge ditches did not so much erase their contents as establish a distance between them and the lived landscape'. Commemorating these places by building new monuments was therefore a way to remember, and to control and contain, a powerful place. This might not have been so much a desire to establish a physical distance, rather henges might have been intended to separate things from the present-day: to create a temporal distance between the lived-in world, and the things enclosed by the henge. As places which built on and referred to the past, which reused already 'ancient' sites, these monuments were places which referred to timescales other than those of the day-to-day rhythms and routines of life. They keyed into timescales beyond the quotidian and even seasonal, to recall the activities of other generations and even of times beyond individual memory. Henges were places where *other time(scale)s* were referred to: 'temporal heterotopias'. Just as Michel Foucault describes heterotopias as places which are liminal and removed from the everyday world (Foucault 1986), so henge sites might have been places which were *temporally* liminal, outside the normal flow of time. This could be understood as an outcome of their use as commemorative places, since commemoration, in making simultaneous reference

to the past, present and future, could have made these very potent places. They were powerful places, and removed from the everyday, because time and the past could be revisited and transformed. The desire to enclose and separate these sites may have been a way of controlling this power of reinterpreting the past, and of adding an aspect of mystery to it. Controlling access transforms henge sites into 'imagined landscapes' (Fig. 11.3). This is a phrase used by Laura McAtackney (2007) to describe Long Kesh/Maze prison in Northern Ireland. Although often depicted in murals, and an important part of people's consciousness, relatively few people actually had access to the prison or first-hand experience of it. This 'imagined quality', as McAtackney describes it, was an important part of the experience and perception of the prison (McAtackney 2007, 44–5). Perhaps the long-term use of a site for enclosure (by timber circles and by henges) was a way of transforming a site into an 'imagined landscape': a place where the past was contained, only to be controlled and accessed by certain people. The monument itself was highly visible and prominent in people's consciousness; the 'imagined' interior, not personally experienced or understood, kept out of sight (but certainly not out of mind) for the uninitiated.

Conclusion

At Forteviot, and perhaps also at other henges and other monuments, commemoration involved revisiting the past and engaging with ancient places; but it also involved reimagining these places, controlling and containing them, and building new monuments. Engaging with the past at henge sites was perhaps a more dynamic kind of remembering than we might readily associate with monuments as 'memorials'. Commemorating the past through the project of building monuments was perhaps also a volatile, powerful act. It involved carefully considered strategies, ways by which people marked and drew attention to the traces or sites of earlier events or monuments; or concealed and controlled access to places associated with their past. Monuments might be memorials to the past, but the past is not stable or monolithic; and neither are monuments, as people return to them and rebuild them over centuries.

Perhaps the significance of monuments such as henges lies not in the fact that they were timeless memorials to the past; but rather in their use as places of commemoration; places where deliberate effort was made not to conserve the past, but to recreate it and remember it in different ways. Such monuments were places where this reinterpretation, and

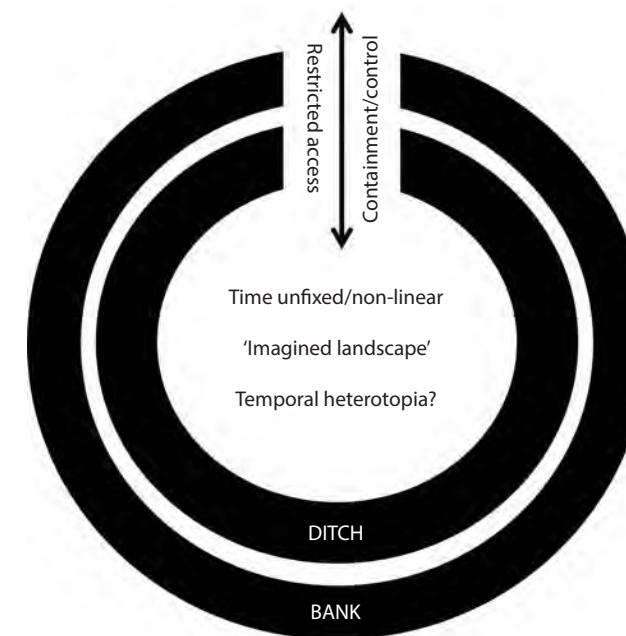


Figure 11.3. Schematic diagram showing henge monuments as temporal heterotopias.

the transformative renegotiation of memory, was contained and controlled. Memory, however, is not only rooted in place and architecture, but in lived experience, mediated through the body and the senses. Rebuilding monuments would be an important way of creating memories because the construction process would itself be memorable. Lesley McFadyen (2006) has vividly described how some Neolithic building practices would be very visceral, creating relationships both between people, and between people and materials. McFadyen (2006, 132) suggests that these relationships were memorable, and a means by which people 'actively chang[ed] their worlds'. The commemorative process of monument construction makes henges landscapes of imagination, but also landscapes of the reimagination of the past. Commemoration can be seen as a creative strategy by which certain people

or versions of events are remembered, while others are forgotten; the creation of monuments is one facet of this, and a means by which we can consider the mutability and contingency of interpretations of the past, in Neolithic Scotland and beyond.

Acknowledgements

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Part II **Landscape time**

Chapter 12

Walking across the land of the *Nuraghi*: politics of memory and movement in central-western Sardinia during the Bronze Age

Giandaniele Castangia

The *Nuraghi* of Sardinia (Fig. 12.1) (Usai this volume; Depalmas this volume) have represented a long-term landscape marker and a symbolic and mnemonic reference point for Sardinian communities. To date, archaeological research on *Nuraghi* has privileged matters of relative chronology based on pottery seriation and monument typological classifications; there is a significant gap in our knowledge of what they mean from the lack of a cultural-historical perspective.

The original use of the monuments is still a matter of debate among archaeologists, although the ‘military’ interpretation that saw them as some sort of medieval castles, very popular during the twentieth century, has recently given way to a myriad of different hypotheses – temple, poly-functional building, astronomically related structure, and so on (Usai 1995; Depalmas 2006). Moreover, archaeological research still struggles to give a specific territorial meaning to the phenomenon *Nuraghe* (Vanzetti *et al.* 2013), whose development should instead be related to the *interpretation* of a new ideology that started somewhere in Sardinia around the seventeenth century BC and eventually became a symbol to be used within traditional and ancient territorial structures in order to invigorate them.

Nuraghi were – and are – active agents in the *relationship* between human communities and their landscape. The way space is socially structured in landscapes through and by agents as the *Nuraghi* implicates the study of the relations between these elements, and the ways in which they interact with each other. In particular, I believe that a monument ‘acts’ through *visual perception* and *movement*.

As a matter of fact, beyond every cultural difference and bias, the relationship between human communities and monuments may be universally defined as *mediated throughout (visual) perception* and *experienced by movement*. Therefore, the meaning of

monuments lies in the primary investigation of these relationships, and of the way they changed through time – as part of an historical process, in which many actors are involved: people, other things, natural features or processes and so on. In these processes, the construction of memory and place play their part.

To investigate the role of *Nuraghi* as active agents in the landscape of Sinis, I have used GIS technology to analyse both visual perception and movement, simulating past situations in relation to *Nuraghi*, to reconstruct the prehistoric landscape and the role of monuments in it. In this analysis, my two questions were: 1) ‘what is visible from *Nuraghi*, in terms of monuments and territory?’; and 2) ‘were *Nuraghi* located specifically close to artificial or natural routes which were already established in the landscape?’

In the following paragraphs, I shall illustrate first the archaeological monumental sample, then describe the GIS analysis and present the results.

Bronze Age evidence in the Sinis region

The Sinis region is a flat coastal area (Fig. 12.2), a wide peninsula of 220 sq. km, located in central-western Sardinia. It represents a geographical and historical macro-unit, a closed landscape context with an internal homogeneity. It is enclosed by clear natural boundaries: the Sardinian Sea to the north, west and south, a series of salt lakes and lagoons to the east, and the dune desert of Is Arenas to the northeast. It is mainly flat, and is very rich in humid environments and salt lakes, from which salt has been extracted since at least the Roman period.

Some 98 *Nuraghi* have been identified in this territory (Fig. 12.3): 24 simple (single-towered), 41 complex (multi-towered and/or connected with courtyards), 28 unfinished monuments (called *nuracheddus*, which means ‘little *Nuraghi*’ because of their small size) and



Figure 12.1. Nuraghe Losa of Abbasanta, one the best-preserved and excavated towers.



Figure 12.2. Sinis landscape, Sardinia.

five destroyed examples (Sebis 1998; Tore & Stiglitz 1987; Usai 2014). The monuments belong to two main territorial clusters, a northern one around the lake of Sa 'e Proccus and a southern one located between the lake of Mar'e Pontis and the sea. All of them have been built using local stone – sandstone and limestone in the northern area, sandstone on the coast, basalt and some sandstone in the southern area). No *Nuraghe* has been excavated so far.

Sixty Bronze/Early Iron Age settlements have been recorded in the region (Sebis 1998; Usai 2014). Two of them have been partially excavated – Su Murru Mannu and Conc'Ailloni – and the rest are known from surface collections of pottery and a typical lithic industry. Their occupation began during the Middle Bronze Age (seventeenth to fifteenth centuries BC), yet the number of settlements increased between the end of the Bronze Age and the beginning of the Iron Age (tenth to ninth centuries BC): 47 settlements were occupied before the Iron Age. Some 32 settlements are associated with a nuragic tower, 28 of them are not.

Three 'giants' tombs – the typical nuragic monumental burials – have been identified in Sinis, and they can be dated to the Middle/Recent Bronze Age phases (seventeenth to thirteenth centuries BC). Furthermore, some bones from Neolithic rock-cut tombs (Is Aruttas) have recently been dated to the Recent Bronze Age (Lai *et al.* 2013), which means that, in funerary contexts, old tombs may have been reutilized. In Sinis, sandstone outcrops have always been associated with burials since the Neolithic, and this tradition was still alive during the Bronze Age, for only one of the three giants' tombs was built using basalt (tomb of Matta Tramontis). The *Nuraghi* are usually located at some distance from these funerary areas: the nearest one – unfinished – is 265 m away from the nearest tomb (*Nuraghe Riu Urchi*), but in the other cases the distance is more than 300 m.

GIS analysis

I used ArcGIS v. 10.4 software to perform two analyses on the Sinis Bronze Age landscape: *cumulative viewshed analysis* and *least cost-path analysis*. As said, the aim was to investigate relations of perception and movement between *Nuraghi* and the rest of the landscape, in terms of both monuments and territory. As a raster base for the calculations, I used the official DTM available on the official web geo-repository of the Sardinian Region (www.sardegnageoportale.it), obtained from both contours and a number of official elevation points collected all around the island's territory by the regional administration, with a horizontal resolution of 10 m and a vertical resolution of 1 m.

Table 12.1. Cumulative viewshed analysis results (in number of *Nuraghi*).

Site categories	Visible from n. of <i>Nuraghi</i> (absolute mean)	Visible from n. of <i>Nuraghi</i> (percent mean)
All sites	11	16%
Cultural sites	7	10%
<i>Nuraghi</i> (no nuracheddus)	11	16%
<i>Nuraghi</i> (with nuracheddus)	11	16%
Settlements (no <i>Nuraghi</i>)	9	13%
Settlements (with <i>Nuraghi</i>)	10	14%
Prenuragic funerary	7	10%
Nuragic funerary (with EIA)	7	10%
Nuragic funerary (Bronze)	8	11%

Cumulative viewshed analysis (Wheatley 1995) reveals spatially perceptive relations: it shows the general level of inter-visibility in the whole area through an algebraic sum of two or more binary single viewshed maps. To perform the analysis, I used the VISIBILITY tool provided in the software ArcGIS v. 10.4. As observer points, I simulated the view of a person with a height of 1.6 m (value obtained considering both male and female Bronze Age average heights and calculating the average value of those – Germanà 1995) standing on the hypothetical terraces (10 m) of 70 towers (*nuracheddus* have been excluded from the calculation). It means that the observation point was set at exactly 11.6 m above ground level. The maximum radius of the observation was set at 3 km. I did not consider vegetation cover, because of the lack of data.

The output of this analysis consists of a raster layer (Fig. 12.4), from which I have extracted the visibility values for every site, *Nuraghe*, settlement and funerary spot. Finally, I calculated the percentage of *Nuraghi* from which every site per category was visible (Table 12.1).

First, these values show a great level of inter-visibility between monuments in the area. Every monument is visible from an average of 11 *Nuraghi* (16 per cent). *Nuraghi* are the most visible typology of monument from other towers (as widely expected), with every one of them visible again from an average of 11 towers (16 per cent), followed by settlements (even if not associated with a tower) and funerary monuments, especially the ones dated to Bronze Age phases. Furthermore, the graphical results of the

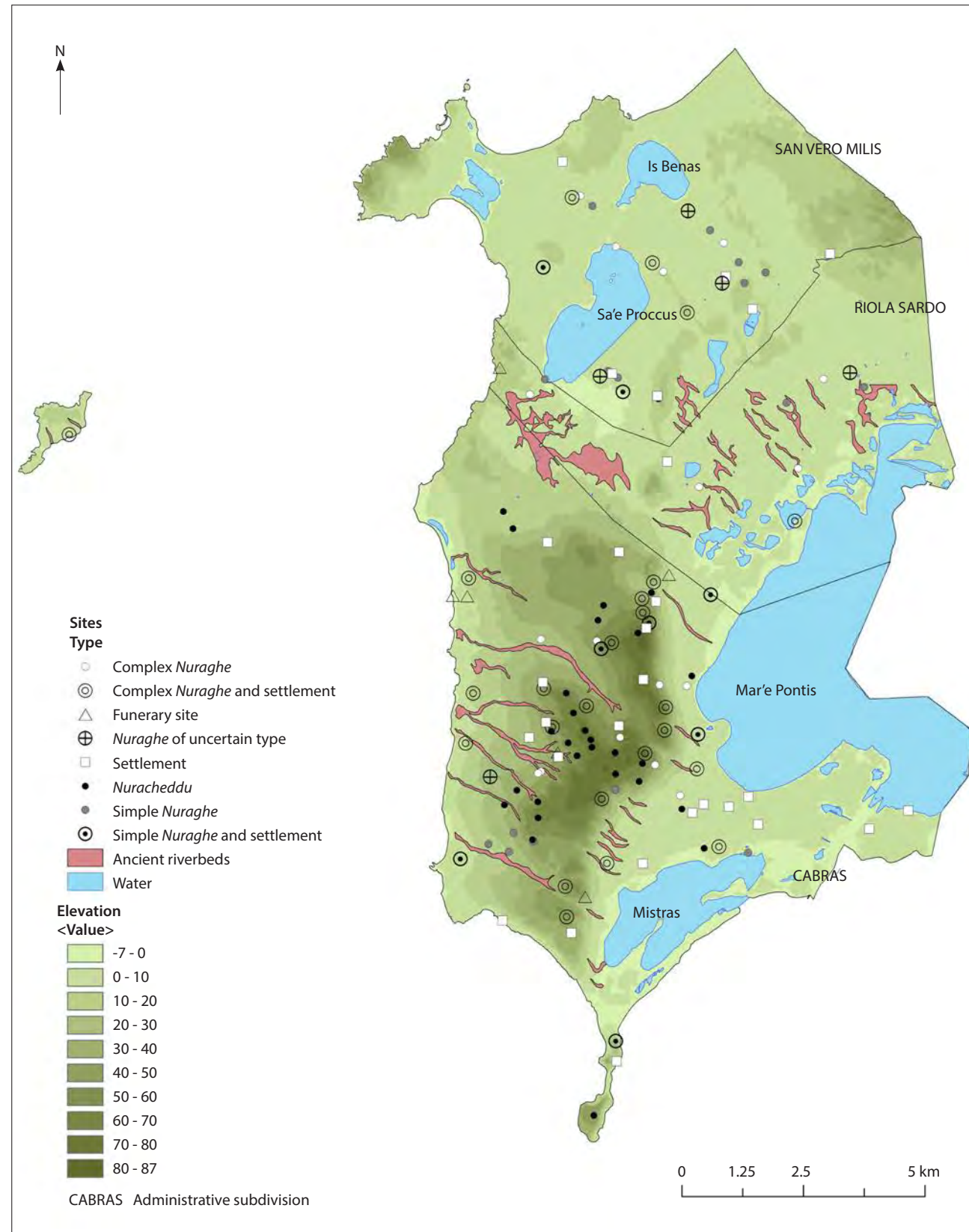


Figure 12.3. Nuragic sites in Sinis.

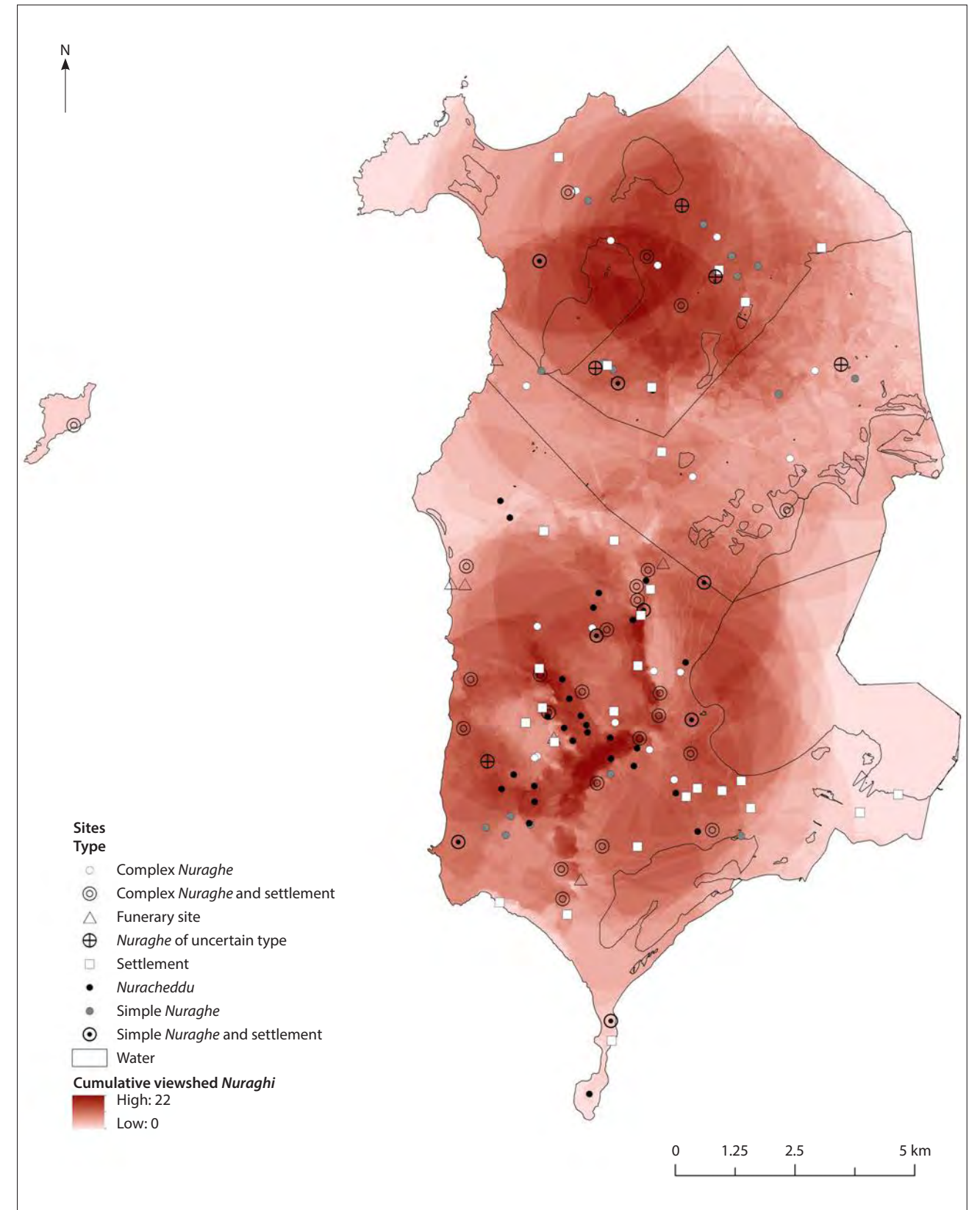


Figure 12.4. Cumulative viewshed analysis results – darker areas indicate higher inter-visibility

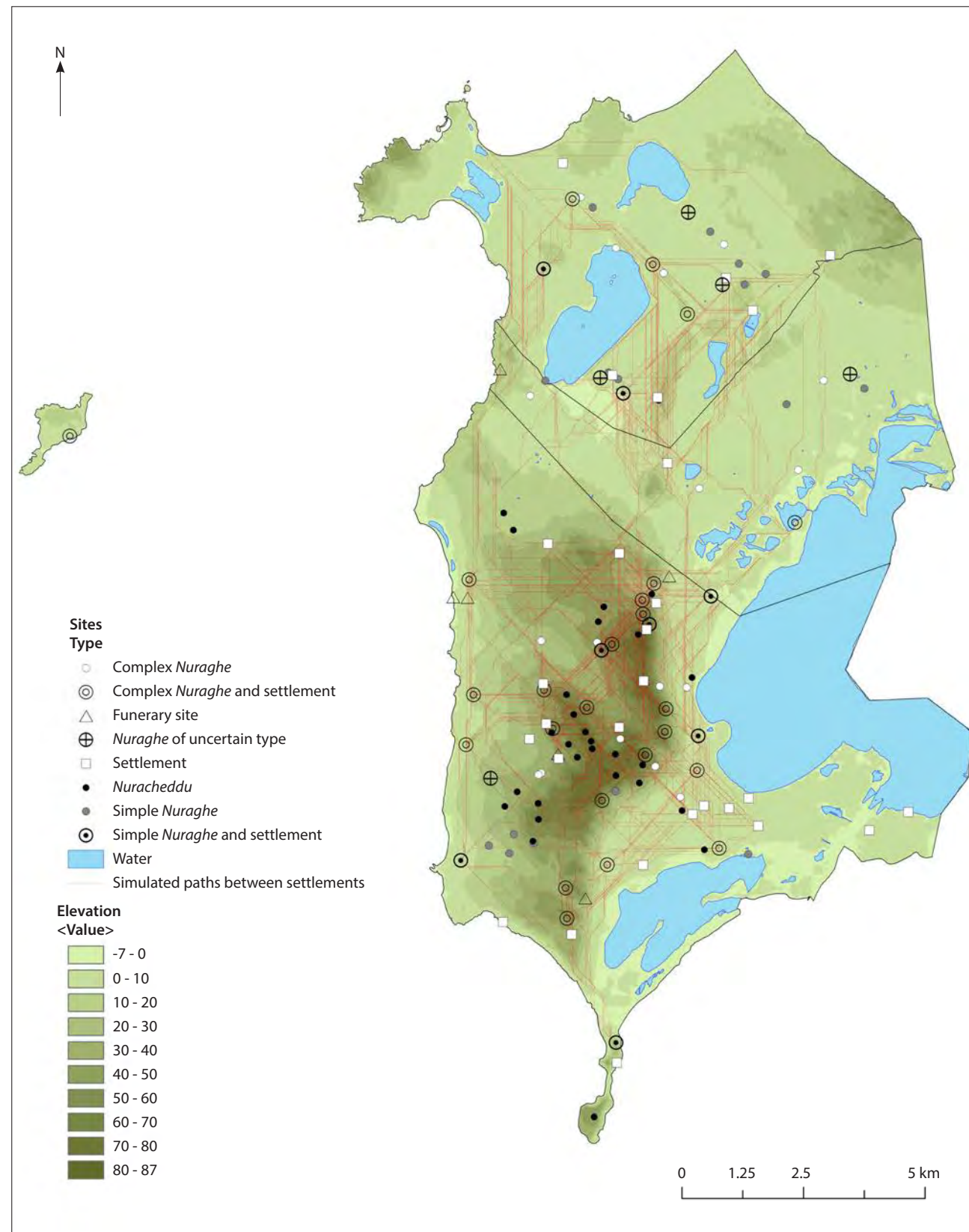


Figure 12.5. Cost-path analysis results.

simulation indicate that the higher inter-visibility areas on the ground (darker in Fig. 12.4) are located in close correspondence to the two main territorial groups of monuments, precisely looking towards the interior of the two territorial groups. Finally, they seem to highlight the main natural routes that allow movement from the lakes to the coast and back again.

The cost-path analysis reveals spatial dynamic relations: it investigates the relationship between the *Nuraghi* and the potential preferential routes that human actors created and travelled across, in the region, to carry out their daily activities, in particular those between settlements. Least-cost paths are intended to be 'generic relative least cost evaluations' (Howey 2007, 1837), so they represent the best routes in terms of efficiency, given the parameters used to create a specific cost surface – which in my case have been geology, slope and water. Holocene alluvial deposits in the region, indicating rivers and ponds nowadays disappeared, were considered as actual watercourses in the period the *Nuraghi* were built.

To perform the analysis, I used the tool COST PATH. I considered all settlements associated or not with a nuragic tower, except for those that started during the Iron Age, as sources – meaning that every one of them was considered as the destination of a number of paths starting from every other settlement. At this point, I created ten 'random *Nuraghi*' map layers, based on the average data on elevation and distance from water of the actual sample of *Nuraghi* of the area, to be used as a comparison with the actual monuments, in order to understand whether the results on the relationships between *Nuraghi* and paths can be interpreted as structured. Euclidean (linear) distance was then calculated for every monument. The following values were obtained from the data resulting from

these operations: Minimum value, Maximum value, Mean value, Standard Deviation. The final results are reported in Table 12.2.

The paths resulting from the simulation (Fig. 12.5) are closer to the actual *Nuraghi* than they are to the simulated examples: maximum distance is one third, mean distance is almost the half, and standard deviation circa one third. This indicates that *Nuraghi* had a close relationship with natural routes between settlements, some of them probably in use before the erection of the first monuments.

Concluding remarks

The analysis of relations of visual perception and movement seems to show a couple of interesting facts about *Nuraghi* in the region of Sinis: (1) visual perception from the towers was 'directed' towards specific points in landscape, which represented a symbolic connection to the land for the surrounding communities, and (2) the *Nuraghi* were also strictly related to movement across the landscape, following natural routes and paths that in some cases were there before their erection. We can also argue that the results of both the analyses illustrated and discussed in this chapter seem therefore to indicate that *Nuraghi* clearly had a strong territorial value in terms of placement, related more to close than long distances.

In particular, the analysis of visibility patterns from the terrace of *Nuraghi* seems to suggest that, from a visual point of view, they were highly connected to the landscape they were part of, in terms of settlements, monumental evidence and land, and that the focus of such visual connections was directed towards the internal space of every territorial group of towers. Visual control of internal areas, instead of boundaries, could indicate that defence – or ostentation towards the stranger – was not the first concern of these communities, which were probably more engaged instead in some sort of 'identity narrative'.

The calculation of least-cost paths between Bronze Age settlements also indicates that the *Nuraghi* were built upon a specific pattern of movement that was – at least in part – already established in the region before their erection, and follows natural routes within the landscape. The presence of towers along *traditional* routes contributed solid reference points in the Sinis landscape, where these monuments seem to occupy and highlight places that were part of a former solid social and physical network, into which a new ideology created the need for monumentality and ostentation.

This situation can be compared to some patterns recently highlighted on Rapa Nui, where several Moai that were thought to have been abandoned

Table 12.2. Cost-path analysis results (in metres).

Sample layer	Min	Max	Mean	ST Dev
Random 1	0.9	1935.7	139.7	359.4
Random 2	0.4	8563.8	268.7	1066.4
Random 3	0.5	9063.8	328.2	1141.1
Random 4	0.3	2057.0	228.8	440.3
Random 5	0.7	826.2	110.3	147.4
Random 6	0.4	1431.0	149.3	301.9
Random 7	1.5	1745.3	131.4	292.7
Random 8	1.3	8744.2	289.4	1081.5
Random 9	0.8	1813.4	148.9	279.3
Random 10	1.3	8893.8	439.4	1473.8
Random AVE	0.8	4507.4	223.4	658.4
Real <i>Nuraghi</i>	0.8	1589.8	124.1	252.6

in the middle of nowhere have been shown to be placed precisely on traditional paths and boundaries instead (Shepardson 2005). The analogy lies in the fact that, in terms of investigating the territorial value of

monuments, the relationship with paths of movement in the landscape – rarely considered in Sardinian pre-history – could reveal new relevant insights on matters of meaning and function.