This chapter has three main goals: to help bridge a communication gap between the traditionally archaeological domain and the bioarchaeological one in Sardinian prehistory, providing data that have not fully entered archaeological literature on Bronze Age burials; secondly, to draw a tentative outline of what this knowledge means for our understanding of the complexity of the funerary phenomenon in Bronze Age Sardinia; and lastly, to illustrate how several problems and questions arise from adding the cave burial component to the increasing data on ritual landscapes and social transitions so far related only to stone architecture, and how these can be used to inform future research with more theoretically oriented approaches.

Giants’ tombs have traditionally been identified, in descriptive reconstructions of nuragic Sardinia’s cultural landscapes, as the canonical burial place where the constructors of the Nuraghi lay their deceased members. In fact, in Lilliu’s first synthesis *La civiltà nuragica* (1982), connecting human remains to nuragic diagnostic items did not lead to the possibility that caves could also be used for burial; this was conversely evaluated as a deviant special trait of Gallura, the northeastern region of Sardinia, which he often describes as economically poorer and culturally backwards in comparison with mainstream nuragic developments. In his sequence of periods, giants’ tombs appear in the Early Bronze Age as competing solutions next to cave burials and less refined megalithic monuments (*allées couvertes*).

In Lilliu (1982; 2003), the progression through phases I, II and III (roughly parallel to Early-Middle, Middle-Recent, Recent-Final Bronze Ages in today’s standard chronology, where Recent is used as a synonym of Late) corresponds to the golden age of architectural development, which is characterized by an earlier tomb type with upright stones and central stela (Bagella 2001a), and by a later type with more or less regular and refined rows of masonry parallel to the Nuraghi, and sacred wells and springs. It seems, from such a narrative, that nuragic human groups were fundamentally buried in these monuments. Strangely, the paradox of hardly a few hundred such tombs then known in opposition to over 6,000 Nuraghi was not highlighted sufficiently. Conversely, the use of caves is mentioned concerning only one burial cave, Tani (or Su Cungiareddu ‘e Serafini, Carbonia), where human remains were found in very unusual conditions associated with diagnostic material culture (discussed below: Ferrarese Cerutti & Fonzo 1995), and a few extraordinary ritual sites, inducing the reader to picture a lived landscape where caves were not a normal feature in the mature nuragic age from the end of the Middle Bronze Age (MBA).

As will be seen, despite the awareness of occasional finds of nuragic items in caves, this picture, which still permeates the reconstruction of the average nuragic community both among scholars and the general public, is inaccurate; evidence today is instead overwhelming in showing a continuous, or possibly intensified, use of caves during the later Bronze Age (RBA). Lilliu between the 1950s and 1970s was indeed constructing the ‘nuragic civilization’, which as such is to some degree the product of a remarkable cultural operation that had a crucial role in shaping present-day Sardinian identity, as critiqued and unveiled by recent work (Sirigu 2012; Sirigu 2006); possibly this effort, along with his classicist early education, is at the root of Lilliu’s tendency to overlook features perceived as ‘primitive’ – as a familiarity with caves so well documented for Neolithic times – and to stress instead grand architecture, which would endow Sardinia with a dignity comparable with the classic ‘civilizations’ of historic antiquity. Even after Lilliu, most scholars, when attempting to synthesize data into general scenarios of nuragic social evolution, have given burial caves
little attention, because of the scarce evidence in this respect. Webster for instance, notes that ‘many of the natural caves previously used as seasonal shepherd camps and burial sites have scant evidence of Middle Bronze Age visits. Cave use also declined with the spread of Nuraghi and megalithic tombs during the MBA into the extreme southwestern part of the island, in the Iglesiente-Sulcitano regions’ (Webster 1996, 91). As an exception, he does not overlook the presence of caves, but precisely in the southwestern region, thus fitting the pattern of a southwards replacement of caves by megalithic graves; such caves, furthermore, mostly pertain to the pre-nuragic Bonnanaro B/Sa Turrica phase today commonly labelled as MBA1 (Ferrarese Ceruti 1981b). The following MBA2 and MBA3 phases were not represented by any finds of materials, with the exception of the cave at Tanì mentioned above. He does, however, suggest, based on the average number of individuals retrieved at giants’ tombs, perceived as a burial for lower-status groups (Webster 1996, 143–5).

Perra (1997a, 2009), in his reconstruction of social dynamics in the nuragic age, while featuring prominently the megalithic tombs as arenas for collective ritual and opposition to aspiring elites, does not mention caves, as does not Blake (2001; 2002), who restates what Lilliu perceived decades earlier: that apart from a small number of burials in natural granite crevices called tafoni and the sporadic reuse of earlier burial sites (in particular, rock-cut tombs), the giants’ tombs are the only known nuragic form of burial ‘apart from a small number of burials in natural caves, as does not Blake (2001; 2002), who restates what Lilliu perceived decades earlier: that apart from a small number of burials in natural granite crevices called tafoni and the sporadic reuse of earlier burial sites (in particular, rock-cut tombs), the giants’ tombs are the only known nuragic form of burial’ (Blake 2002, 121). However, several questions that she sets forth can receive light from considering caves as burials, as is argued here; the most evident is the mentioned problem of the overall ratio of chambered tombs vs Nuraghi (Blake 2002, 121). Webster 1996, 104), which cannot be explained assuming that groups from several Nuraghi buried in the same tomb.

A brief description of the contexts will help explain why caves have been so far overlooked by archaeologists when drawing general pictures of landscape and spatial organization. The cave Dana di lu Maccioni/Dana del Maccioni (Maxia & Fenu 1962) was located near the coast just south of the city of Alghero, northwestern Sardinia; it was destroyed during road construction in 1954, when human bones and material remains were recovered. These remains, however, did not include anything diagnostic, except scarce and coarse pottery, assigned to the Ozieri tradition (Contu in Germanà 1995, 54). Based on this scanty evidence, the context was attributed to the Late Neolithic, and so were the data generated from studying the abundant human remains, until...
radiocarbon dating (Cosseddu et al. 1994) showed that the chronology ranges from the twelfth to the eighth centuries cal. bc (95.4 per cent probability), centred around the FBA3-EIA. In the absence of any stratigraphy, such AMS radiocarbon determinations do not necessarily apply to the whole skeletal assemblage, but they do mark a date for at least one instance of human bone assemblage from the cave Stampu Erdi (Su Cungiareddu). Another date comes from bones collected in the 1930s from several caves in the same area (su Cannisoni, which includes what is now identified as Is Bituleris cave, and Gastea), unfortunately with a notable gap between the fourteenth and twelfth centuries cal. bc and only one later FBA date.

The cave near the hamlet of Tanì, southwestern Sardinia, is also located near a Nuraghe, which is also the reason why its burial use was already attributed to the nuragic period, despite the lack of any cultural marker (Maxia 1964). It consists of a long natural corridor, found in the 1960s covered with human bones, quantified visually in over 50 individuals, which were collected without any contextual record, since the main purpose was acquiring specimens for anthropometric research. The easy access enabled frequent looting, despite recent attempts by the local municipality to close the entrance with a metal gate, until in 2014 at least the visible specimens were salvaged by volunteers supervised by the Soprintendenza. One AMS determination, carried out in the 1990s on human bones, recorded usage between the thirteenth and tenth centuries cal. bc (95.4 per cent probability), centred around the FBA1-EIA time span. After several years, in the context of an ancient DNA project involving several collections across the island, eight more dates were obtained (Marcus et al. 2020), all from different individuals, and with a much smaller error. These extend the probability that some of the individuals were slightly earlier (late fourteenth century cal. bc), whereas virtually none of them extends beyond the twelfth century cal. bc (except for one, with 0.6 per cent probability), suggesting that the older determination had a wider range simply due to greater error and a less pronounced slope in the calibration curve. Most recorded burials at Tanì can thus be placed in the RBA-FBA phase, dating to the thirteenth to twelfth centuries cal. bc. Interestingly, although peripheral to the topic at hand, one additional date witnesses burial use in the fourth to third centuries cal. bc at the end of what is the Punic phase on the coast.

No contextual information is known for the human bone assemblage from the cave Stampu Erdi (Maxia 1963), near Seulo, central Sardinia. It yielded an AMS date (Sannen 1996) between the seventeenth and the thirteenth centuries cal. bc (95.4 per cent probability), or more narrowly between the sixteenth and fourteenth centuries cal. bc (68.2 per cent probability), corresponding mainly to the MBA2-MBA3 range. Another date comes from bones collected in the 1930s from several caves in the same area (su Cannisoni, which includes what is now identified as Is Bituleris cave, and Gastea), unfortunately without any distinction between caves: from this date, the range is from the twentieth to the seventeenth centuries cal. bc (95.4 per cent probability).

Fifteen radiocarbon dates from the Seulo Cave Project area (Skeates et al. 2013) have recently extended and strengthened the record of cave burial utilization, which stretches from the EBA1 through the MBA2-3, with a notable gap between the fourteenth and twelfth centuries cal. bc and only one later FBA date. Capo Pecora cave (Arbus), near the southwestern coast, close to the municipal border with Fluminimaggiore, yielded skeletal remains that were associated with some pottery interpreted as nuragic (Maxia et al. 1973), although some materials apparently date back to earlier phases. The attribution was confirmed by AMS dating, which provided a range between the fourteenth and tenth centuries cal. bc (95.4 per cent probability), centred in the MBA-FBA3 phases, to be extended back to the EBA2.
the MBA3-RBA (Lai 2009). Two additional dates carried out by Ancient DNA analyses (see above for S’Orcu’e Tueri; Olivier et al. 2017), on different individuals and with a much smaller error, partially confirmed but narrowed this attribution to the thirteenth to eleventh centuries cal. BC, recording depositions in the cave in the RBA-FBA3.

Finally, an unpublished nuragic date from human bones comes from Grotta del Martinaio (Orosei), on the island of Carlo Maxia in the mid-1950s. No osteological examination of these remains, located at the Museo Sardo di Antropologia ed Etnografia, at the University of Cagliari, Monserrato, has been reported. The chronological range would translate into between tenth and ninth centuries cal. BC (95.4 per cent probability), virtually corresponding to the EIA.

It is out of the scope of this chapter to review the large amount of evidence for the chronology of the megalithic monuments known as giants’ tombs; based on stratigraphy, associations, and scholarship dating back at least one century, they are generally attributed to the nuragic peak of architectural complexity, which was also a time of demographic growth. It is worth highlighting that the first giants’ tombs possibly pre-date the Nuraghi themselves. Melis (2007b) examines in detail the associations of ceramic types and architectural styles: whereas no giants’ tomb is found to yield cultural materials unambiguously older than MBA1-MBA2 (see also Ferrarese Ceruti 2009), there are a few cases of possible association with some MBA2-MBA1 ceramic materials. Conversely, there would be no Nuraghi demonstrably datable before the MBA2 (Ferrarese Ceruti 1997a; Ferrarese Ceruti 2009). In one case, there is a possible relationship between a Nuragic rock-cut tomb and a giant’s tomb associated with MBA1 pottery damaged a Neolithic reused rock-carved tomb that contained MBA2 potsherds (Melis 2007b). With these premises underlining the chronology of megalithic tombs, it is clear that use of coves, including earlier rock-cut tombs, fully overlaps with them.

Short outline of Bronze Age burial site types by phase

The evidence above confirms therefore a trend of continuous use of caves as burial grounds starting at least from the third millennium BC. During the Copper Age Monte Claro phase, the use of caves for burial is already attested, as shown by material culture. Artifactual caves (rock-cut tombs dating to Neolithic times) were also used extensively, as shown by Ferrarese Ceruti’s work on Su Crucifissu Mannu, tomb 16, which he documented except for a single, non-carved surface (Ferrarese Ceruti 1974), but countless instances are known (Ferrarese Ceruti 1981a; Ferrarese Ceruti 1981b; Moravetti 2009), and especially evident in the Sardinian north-west (Placido 2001), since there is no evidence of a burial phase to Perra (1997a) there are no reliable stratigraphic contexts linking MBA2 material culture and architectural features. It definitely appears that during this phase radiocarbon evidence for burial use of natural caves perhaps starts dwindling, since only one date, except for the Seulso caves (Skeates et al. 2013, 104–5), falls outside the MBA2 phase (1690–1500 BC). It can be hypothesised (Sanna 2006). MBA2 pottery seems present, but rare, also at the necropolis of Sa Figu (Meli 2010), and the only two radiocarbon dates from reused Neolithic rock-cut tombs come from southwestern sites (Sa Serra Masi, room 1, Martella et al. 2014; Montessu, t10, A-64836, Lai 2009), therefore located in what probably was the last region to be reached by the new above-ground templates. This apparently corresponds to the time when normative codes regarding mortuary rituals virtually excluded grave goods, limiting severely both the presence of artefacts with the dead (as commemorations or offerings), and proportionally also the archaeologist’s ability to infer use from material remains. Additional phenomena could be suggested: if the MBA2 preceded a sharp demographic increase (Webster 1996), we will expect to find less evidence of human remains dating to this period; the collapse or degradation of previous structures (as S. Irixu, Ugas 1990a; Bingia ‘e Monti, Perra & Lai 2020, Perra in L'Archéologie 2019, 266–7). Possibly, in the northeast, some experiments in manufacturing above-ground built structures, so-called allées couvertes, were setting the foundations for the later standardized megalithic tombs, although we are referring to the following: although the normative use of natural caves might have reached its peak at this time, before caves were used again more intensely. Only further AMS dates in the future will help us understand if this is a real gap in natural caves’ burial usage, or only a random artefact of insufficient research coverage. While Nuraghi proliferated all over the island (Perra 2009), the MBA3 phase, the first that can no doubt be defined ‘nuragic’ from a monumental standpoint, showed continuity in the trends concerning the use of caves and sites as funerary contexts and the diffusion of giants’ tombs reached the south of the island. Overall evidence for burial use of caves is scarce; one of three radiocarbon dates from Is Aruttas (Table 14.1) is the most recent. The remaining phase, that of the MBA3C Gantu’o tombs could become in this phase the normative grave for newly established settlements, coupled with the Nuragic Long Tombs (Sanna 2006). The Seulu cave cluster record seems to corroborate, with a gap in dates between the fourteenth and twentieth centuries BC options and a very limited body of data. In this phase, the MBA3C phase (characterized by San Cosimo/metopale pottery) marks the success of the giants’ tomb model in central-northern Sardinia. It is unclear to which degree at this point the giants’ tomb was associated with monumental volumes (Perra 1997a,b) since there is no evidence of a burial phase to Perra (1997a), there are no reliable stratigraphic contexts linking MBA2 material culture and architectural features. It definitely appears that during this phase radiocarbon evidence for burial use of natural caves perhaps starts dwindling, since only one date, except for the Seulso caves (Skeates et al. 2013, 104–5), falls outside the MBA2 phase (1690–1500 BC). It can be hypothesised (Sanna 2006). MBA2 pottery seems present, but rare, also at the necropolis of Sa Figu (Meli 2010), and the only two radiocarbon dates from reused Neolithic rock-cut tombs come from southwestern sites (Sa Serra Masi, room 1, Martella et al. 2014; Montessu, t10, A-64836, Lai 2009), therefore located in what probably was the last region to be reached by the new above-ground templates. 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types? What was their charge of memory and iden-
tity of the community, their role as social settings for single, collective agents and/or as secondary agents themselves (as discussed in Robb 2010; Dobres & Robb 2005). Finally, can we associate various aspects of Sardinian ritual dynamics with varying uses of different types, if any? 

Considering that natural caves fulfilled the role of burial grounds of choice for about 500 years with some interruptions in the central-western areas of the island and especially to the limestone poor in large natural caves compared to other areas of the island and especially to the limestone plateau between the Barbagie and Oligstra. We can then reflect on what fundamentally was meant to change at the entrance of the burial cave, possibly reflect- ing a ritual preference parallel to what observed in megalithic tombs (Ferrarese Ceruti & Fonzo 1995). Whereas the tendency for preferential accumulation of sherds on the right side of the forecourt, despite some exceptions, has been firmly established, other traces of ritual have been described but are not well understood (Bagella 2001b): the possibility of rebural rituals could be at the root of small cists and pits occasionally found on the pavement of the main chamber (Mainardi 2013). Here, we call for some reconsideration. Based on extant evi-
dence, embalming could have been performed out of human remains from the tomb. The argument that Minimum Number of Individuals recorded would be incompatible with fully inclusive collective burials (Blake 2002; 2012) might need to be ruled out, and comprehensive consideration in the future should include the cave record. 

Another avenue of research not frequently touched upon is the investigation of traces of ritual activity in the forecourts of giant’s tombs – and similarly in the areas before entering burial caves. For instance, in one case to be verified in situ, pot- ioneering agents themselves (as discussed in Robb 2010; Dobres & Robb 2005). Finally, can we associate various aspects of Sardinian ritual dynamics with varying uses of different types, if any? 

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the MBA-FBA (Atzeni et al. 2012). In addition to these, the presence of locations of betyls and various kinds of architectural details (Bagella 2001b) are all features that besides being worth investigating per se beyond typology, would also provide a key for testing the hypothesis that similar activities were performed in functionally parallel locations of burial caves.

Conclusion

In the interaction among different elements of a nuragic constructed landscape and their role in politics and power relations, architectural elements have been extensively discussed. Nuraghi, especially the complex ones, whether or not they were symbols or symptoms of class differentiation (Perri 2009) show some features that could have factually limited social participation and selectively granted access: a door-way, a narrow staircase to reach upper floors, and a courtyard that provides additional inside space but doubles access limitation. Whereas the general role of giants’ tombs’ forecourt as collective, open gathering areas has already been suggested, how should we read ‘deviant’ situations where such forecourt is absent, or unmarked? How should we interpret the variables related to multiple tombs? Since the ritual focus definitely shifted, in the FBA, to water cult-related sites, both natural (springs, wells) and artificial (round temples, megaron temples), it is here suggested that giants’ tombs and water-related sites may have filled a similar niche in the meaning system and cosmological patterns. What role did caves play in these changing relationships among agents and locations? Some spatial patterning actually appears to be common to many types of structure: the recurring presence of offerings residues on the right side of giants’ tombs’ forecourt seems to match the niche consistently placed to the right in the entrance corridor at a large number of Nuraghi; this also matches the floor paved area immediately to the right upon entering many stone houses in several nuragic villages (for example: Bruncu Maduli, Gesturi; San Salvatore, Tortolì; and can be compared with the massive amounts of pottery remains on the right side at the monumental spring of Mitza Pidighi: Usai 1988). The whole meaning system behind the many signs of ritual patterns listed above, with a possible Nuraghi-tomb dualism related to cosmic opposites (male-female, light-dark, sky-earth, sun-moon, high-low, meteoric water-underground water…), is mostly unknown; in the framework of such potential binary system, natural caves must also have played a role: was it fully parallel and equal to megalithic tombs? Or was it instead analogous and therefore some way competing with the megalithic tombs? Were these alternative options based on social standing (megalithic tombs for elites, as suggested by some: see Lilius 2003; Webster 1996; Blake 2002). In this respect, there is evidence that in some instances both types were used in the same phase (Antona 2000; Skeates et al. 2013: 109–11) – as far as such phase can be culturally identifiable; this is another point that needs further investigation, to verify if its scarce evidence represents a local trait or is the fruit of differential preservation and/or research coverage. Among the many features in common between natural caves and giants’ tombs there is a lower potential for ritual manipulation by limiting access, compared with both Nuraghi and later ‘temples’ of different kinds; this less controllable nature is particularly strong for caves. In an effort to find a collective identification with a location and egalitarian values, both, at different degrees, could have met the needs of a community attempting to contrast groups that were threatening, or attempting, as an intended or unintended outcome, to break such values. Controlling the place where the most important ritual activity is performed was surely a way to affect or control the construction and maintenance of collective memory, the intangible locus where the naturalization of power inequality must be rooted in order to become stable. At some point around the FBA, collective memory for some reason began losing its link with giants’ tombs; possibly ancestral cults were replaced by water cults, or they were bound to water cults, which changed practical expressions, or the memory of the ancestors was manipulated as to make them selectively the ancestors of only a select group. Whichever the interpretation of these phenomena, consideration of the role of natural caves in these dynamics cannot be overlooked any longer for a full understanding of social transformations in Sardinian society at the end of the Bronze Age. As a research agenda for the future, therefore, some directions are suggested: the systematic recording of the coexistence of caves and tombs as burial sites, and their use history; the investigation of the relationship between multiple tombs and/or caves and main features (such as size) of nearby settlements and/or Nuraghi; the identification of potential presence of ritual markers at burial natural caves to assess their functional analogy relative to megalithic tombs; the investigation of potsherds’ distribution with other methods of investigation (e.g. chemical analyses of soil) to detect ritual activities; extensive osteological work on the abundant skeletal materials available, with substantial AMS dating of human bones from both caves and giants’ tombs. This should help progressively unravel the unfolding of the social birth and death of nuragic Sardinia.

Acknowledgments

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The late second and first millennium BC in central and southeastern Slovenia saw the formation of dynamic landscapes, in which place, memory of place and movement were combined. This chapter seeks to explore the ways in which these were expressed in the Late Bronze Age and how this expression changed in the Early Iron Age.

The area under discussion is dominated by three major rivers, the Sava and its tributary the Krka that flow east-west and served as major arteries of communication, linking the Po plain with the Danubian region and the Balkans in prehistory, the Roman period and later, and the Kolpa which flows southwest–northeast into the Sava at Sisak, forming an artery of communication with the Gulf of Kvarner via the Mala and Velika Kapela uplands. The region is deeply divided by karstic interfluves with incised river and stream valleys of varying extent. Much of the lowland is characterized by covered karst and karst plateaux, although there are some more extensive areas of lowland river valleys, such as the Krško polje and the Šentjernejsko polje with extensive Pleistocene and Holocene sediments and glacial outwash gravel deposits (Mason 1996a, 1–8; 1999, 143–55; Dular & Tecco Hvala 2007, 44–65).

**Memory and movement in the Late Bronze Age**

The Late Bronze Age landscape was initially characterized by large extensive open settlements in the river valleys, which were typical of the BrD (Bronze Age D) and HaA (Hallstatt A) periods, but were still occupied in the HaB period, that is from 1250 BC to 800 BC (Teržan 1999, 102–4, 107). However the small defended upland settlements that are typical of the HaB period were also present at least in the BrD (Teržan 1999, 102–4, 107).

The Late Bronze Age lowland settlement complexes were extensive in nature and were located on river terraces beside tributary streams of the major rivers. As such they were close to major lines of communication, which were utilized in inter and intra regional exchange. The settlements were large, but extensive, although excavation has been limited on most sites in the area under discussion, e.g. to a total of 70,000 sq. m at Obrežje at the confluence of the Brenščica with the Sava (Mason 2006b, 131–2) and to a total of 20,004 sq. m at Velike njiwe on a tributary of the Sava in the Krško polje (Mason 2006c, 230–1). The full extent of these settlement complexes has not been fully defined, but they are known to have extended well outside the excavated area. They are similar to contemporary settlements in adjacent areas of Slovenia, such as Rogoža, Pobrežje and Slivnica 2 in the Drava valley and Dragomelj in the Ljubljana basin, which have excavated areas ranging between 5,000 and 30,000 sq. m (Črešnar 2010, 7, 57–71; Djurić 2003b, 273; Šermčnik Gulić 1999, 117, 122; 2005a, 53–4; 2005b, 213–14; 2005c, 240–1; Šermčnik Gulić & Kajzer Cafnik 2007, 133–5; Turk 2000, 110; 2005b, 130–2). The true extent of such settlements can only be understood by examining field survey data. Thus, surface survey at Dragomelj revealed settlement activity over an area of at least 40,000 sq. m, whilst intensive surface collection at Griblje in the Kolpa valley suggests that the core of the Late Bronze Age activity covers an area of approximately 80,000 sq. m, but evidence of activity extends over an area of approximately 40 ha along the edge of the river terrace and the hinterland behind it (Mason 2001, 24; Mason et al. 2006c, 54–5; Mason et al. 2006, 55–6; Turk 2005b, 131).

The internal structure of these settlements was characterized by post-framed residential structures loosely grouped in farmsteads and separated from each other by borrow and storage pits (Črešnar 2010, 70–1). However, paths were important elements within settlements, not only forming arteries of movement but also boundaries. Thus at Velike njiwe, a path formed a
boundary between the settlement zone and an area of storage, which in itself was separated from a watercourse by an extensive cobbled area on the river bank (Mason 2006c, 230–1).

The lowland settlements exhibited further links with marshy zones and watercourses, which are best known for the deposition of metalwork. This is particularly true of the LJubljana on the western edge of the area under discussion, but some cases of metalwork deposition are also known in the Sava, such as those from Krško and Drnovo, close to Velike njive (Dular 1985, 74). The complex of the Late Bronze Age cemetery at Dobova was located on a series of low terraces cut by the marshy valleys of tributary streams on the northern side of the Sava valley (Stare 1975, 13–14; Teržan 1999, 111). These are areas and possibly to movement – all of which have a liminal or transitional meaning (Mason 2009, 221–3).

Formal burial areas were rare in the HA B period. However, these were also linked in some cases with marshy zones or watercourses, a practice which continued and expanded in the HA B (Mason 2009, 228). The Late Bronze Age cemetery at Dobova was located on a series of low terraces cut by the marshy valleys of tributary streams on the northern side of the Sava valley (Stare 1975, 13–14; Teržan 1999, 111). These are associated with a contemporary settlement, close to the primary school in the centre of the modern settlement – a fact which increases in size, whilst new sites appeared, including

and Late Bronze Age settlement on the Pleistocene terrace of the river Sava and the Early Holocene terrace of the river Bregana. It comprised 375 cremation graves and 6 inhumation graves, which were located on Pleistocene gravel point bars on the slope and within the marshy valley of the Struga stream, a now defunct tributary of the river Sava (Mason 2006b, 131–2). The slopes running down into the marshy areas between the point bars were characterized by discrete spreads of pottery fragments, which were dominated by jar fragments. These deposits were probably connected with feasting as part of the mortuary ritual.

The upland settlements appeared in the HA B period and were generally on prominent isolated hills and on heights on the edges of the upland interfluves. Thus they occupied sites similar to those used for the deposition of large hoards and single finds of metalwork in the preceding period, although the presence of earlier single finds on such settlements are only known in a few cases, e.g. Veliki Korinj, Crnomalj and Semenič (Dular 1985, 58; Dular & Tecco Hvala 2007, 278; Dular et al. 2002, 176, 177). These sites were much smaller than the lowland settlements of the preceding period, but there is little information on their internal layout, beyond the presence of post-framed houses on terraces. There is no evidence for substantial defences, with the exception of a timber framed rampart at Cvinger near Dolenjske Toplice (Dular & Križ 2004, 215–24, 230–2). However it is these sites, which in some cases developed into the later hillforts of the Early Iron Age, whilst the large undefended settlements were abandoned by the end of the Late Bronze Age and in many cases at the beginning of the HA B period.

Prominent heights and hill slopes below them were also favoured as cemetery locations (Mason 2008, 97). In some cases this mirrored the locations of upland settlements as at Metlika, where the Borštèk cemetery was located on a hill, close, but subordinate to the Late Bronze Age settlement in the medieval town centre (Dular & Tecco Hvala 2007, 186). Other cemeteries were now located on the approaches to some settlements, as is the case at Crnomalj (Dular & Tecco Hvala 2007, 189–90; Mason 2007, 364). Mokronog (Dular & Tecco Hvala 2007, 141, 142, 174–5) or in Novo mesto (Dular & Tecco Hvala 2007, 177–9; Križ 1995, 8–12; 1997, 21–9) (Fig. 15.2). The location of these Late Bronze Age flat cemeteries may conceivably have marked the beginnings of more formalized prescribed lines of movement towards settlements, heralding the changes of the Early Iron Age. The large flat cemeteries are linked to watercourses and in marshy zones continued in use and increased in size, whilst new sites appeared, including

Figure 15.1. The Late Bronze Age and Early Iron Age settlements and cemeteries in central Slovenia, mentioned in the text (After Dular 1993, 103, figure 1; with additions from Dular et al. 1995, 90, figure 1; Dular et al. 2000, 120, figure 1; Dular et al. 2003, 160, figure 1; Dular and Tecco Hvala 2007; drawing by Dimitrij Milkoš Vrhenjak).

Figure 15.2. The Late Bronze Age and Iron Age centre at Novo mesto (Source: Agencija za okolje RS; adapted from Križ 1997, 21; 2012, 64; drawing by Ildikó Pintér).
the large Ha B Ljubljanica cemetery, located a low gravel terrace close to the Ljubljanica, connected with both settlement on the Castle Hill and on the upper terrace to the south of the river (Mason 1996a, 55; Puš 1971; Puš 1982; Satare 1954). There is also evidence for the connection between lowland settlements with mortuary areas being marked by formal paths, e.g. at Pobrezje in the Drava valley was connected with a large cremation cemetery by a cobbled path. The use of paths in the landscape in conjunction with mortuary practice and memory in marginal wet areas can be particularly well illustrated by the Late Bronze Age phase at Dolge njive (Mason 2005, 123–5; 2006a, 6–9; Fig. 15.3). The site was located beside a palaeo-channel on the edge of the first terrace of the river Krka floodplain and was subject to seasonally flooding in the Late Bronze Age. It produced evidence of three stone platforms connected by a cobbled path or hollow way, the margins of which were further defined by boulders. Charcoal and burnt human bone were associated with the path and two of the platforms, which were subject to repeated resurfacing. These structures are interpreted as a mortuary complex, possibly linked to an as yet undiscovered cremation cemetery, or to deposition of mortuary remains in the river. The nearest known Late Bronze Age settlements in the area are those at upland settlement at Višna and the putative settlement in the northwestern part of the Vinji vrh hillfort (Dular et al. 2001, 122–4, 134–9; Mason & Merc 2010, 257–8), and the paths on the site indicate connections with either or both of these settlements. A similar group of three stone mortuary platforms associated with Early Iron Age cremation graves, was on the edge of a palaeo-channel also found at Podgorica, 360 m south of the lowland settlement at Drugomelj (Novšak 2005, 223–5).

Memory and movement in the Early Iron Age landscape

The development of hillforts and the rise of visible elite burial in the Early Iron Age, that is from the end of the ninth and the beginning of the eighth century BC onwards, led to an increasingly visible formalization of the lines of approach to hillfort centres and of movement through the landscape (Mason 1996b, 274–82; 2008, 102–4). Many Late Bronze Age upland settlements were abandoned or did not become hillforts, but equally many hillforts and settlements were demonstrably based on Late Bronze Age settlements (Mason 2008, 97). There is evidence of earlier occupation at Cvinger (Dular & Kriz 2004, 211), Novo mesto (Kriz 1997, 21–9), Vrhobreznje (Dular et al. 1991, 69–76), Crnomelj (Mason 2007, 363, 364), Metlika (Brečičak 1992, 255–6; Dular & Tecco Hvala 2007, 186, 347), Stična (Gabrovec 1994, 34) and Vinji vrh (Kriz pers. comm.; Mason & Merc 2010, 258). However the extent and nature of this occupation is uncertain, given the larger area of Early Iron Age hillforts and the limited extent of excavation. Where evidence from the limited excavation in the interiors/edges is lacking, there is often evidence of Late Bronze Age ritual/mortuary activity in the immediate vicinity as at Kučar (Dular et al. 1995, 9; Mason et al. 2004a, 118; Mason et al. 2006, 148–9) (Fig. 15.4). However it is unclear if this site should be considered as a ‘new’ Early Iron Age foundation, appropriating a Late Bronze Age ‘upland’ ritual site, continuous occupation from an earlier period or the recollection of a Late Bronze Age settlement.

The enclosure of hillfort settlements with drystone ramparts created highly visible places that were centres of reference or nodal points in the landscape. The elites and putative descent groups that were connected with the hillfort centres were interred in earthen barrows that clustered around the hillfort (Mason 1996a, 78–83; Dular & Tecco Hvala 2007, 257–8, 247–50). The barrows in themselves might reflect the bounded nature of the hillfort or the putative descent group that they represented through the placement of a stone kerb around the edge of the barrow. The placement of the barrows increasingly defined and formalized the approaches to these hillforts (Mason 2008, 99–104).

The appropriation and reinterpretation of a Late Bronze Age mortuary area is even more apparent in Novo mesto, where the Late Bronze Age flat cemetery on Kapiteljska njiva was chosen as the site for a large Early Iron Age barrow cemetery (Fig. 15.2). This would not seem to be a case of the reuse of an abandoned site, but the development of a Ha B cemetery into an Early Iron Age barrow cemetery. Here we find examples of early barrow forms that were also current in the wider southeastern Alpine region. The barrows extended over the entire Early Iron Age and marked a route towards the northern side of the Marof hillfort. However the earlier barrows at the northern end of the route mirrored to some extent the Late Bronze Age hollow way that ascended from the Krka valley via the northwestern slopes of the hill. A further access point probably ran through the deeply incised valley between the Late Bronze Age flat cemetery, the Early Iron Age barrow cemetery on Kapiteljska njiva and the Late Bronze Age flat cemetery at Kučar (Dular et al. 1995, 8, fig. 2; with the addition of recent data; drawing by Dimitrij Milček Vrhovnik).
on Mestne njive (Krič 1995, 111; Dular & Tecco Hvala 2007, 184–6). A similar situation may be observed at Rogoža, where four Early Iron Age barrows respected the edge of the former site of the Late Bronze Age settlement (Sirmulič Gulič 2001, 125; Črešnar 2010, 69). The isolated barrows and barrow groups in the landscape were not always directly associated with earlier activity as was the case at Otočec (Krič 1989, 213–14; Dular & Tecco Hvala 2007, 323). However, where excavation of a wider area has taken place, it has become clear that such barrows may well be associated with earlier settlement. This was the case at Mačkovec, where the two excavated barrows that overlooked a route into the Krka valley were closely associated with Late Bronze Age settlement, but would have been visible on the skyline from the route way below (Mason 2012, 153–4; Udovč 2009, 5, 6). These isolated barrows marked lines of movement and travel through this landscape, which were demonstrably in use in earlier periods. The placement of barrows beside or on earlier settlement and existing routes served to incorporate them into the ancestral space of a community. Thus these barrows represent the monumentalization of memory either as a symbol of dominance of elites over or the legitimation of elites by association with ancestral places and so with ancestors. The presence of Early Iron Age activity, the material residue of acts of commemoration, and continued burial at these isolated barrows indicated a strategy for their incorporation and with them of routes through the landscape into the communal space/area of control of communities, either locally or at specific hillfort centres.

Conclusion

The memory of these places in the Late Bronze Age landscape was transformed in the Early Iron Age landscape. This marked a change in the role of memory in the landscape from the Late Bronze Age to the Early Iron Age in the region. Formalized paths continued to mark boundaries and represent lines of movement, but in the Late Bronze Age they marked boundaries within settlements and between settlements and ‘outside’, connecting the places of the living with the places of the dead, often in areas that were less visible, liminal, but repeatedly visited. In the Early Iron Age some places, such as settlements, cemeteries and prominent features in the landscape, were incorporated into or embellished with new structures, such as hillforts and barrow cemeteries, which enshrined and reinterpreted their memory and function in the landscape, whilst others were apparently abandoned, later to re-emerge in the Late Iron Age. Movement through this landscape was enshrined in memory through the marking of paths and the elaboration of approaches to hillforts with funerary monuments, which monumentalized and supplanted the memory of earlier places, thus the line of movement was liminal in itself, where mortuary zones were no longer a destination, but became a zone of transition.