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Cultural landscapes, social networks and historical trajectories: A data-rich synthesis of Early Bronze Age networks (c. 2200-1700 BC) in Abruzzo and Lazio (Central Italy)

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Chapter 8

The first fifteen to twenty generations: a synthesis of Early Bronze Age cultural landscapes and social networks

“how far is it possible to study the ancient landscape when the monuments are stripped away?” (Bradley 2000, 14)

Building on Cocchi Genick’s synthesis (1998), the preceding overviews and discussions of metalwork deposition (Chapter 4), funerary practices (Chapter 5), cave use (Chapter 6) and settlement patterns (Chapter 7) have shown that there are considerable gaps in their respective distributions in Abruzzo and Lazio. For this reason, this synthesis starts with a more general assessment of EBA archaeological records. In general, the question is to what extent ‘gaps’ put constraints on the synthesis of historical trajectories between the Copper Age and EBA2 (§8.1). The premise is that the examination of ‘period specific’ archaeological records (§2.1.3) and archaeological synthesis of cultural landscapes and social networks can and should be regarded as mutually informative. Making explicit what remains implicit in Cocchi Genick’s synthesis (1998), the spatial and contextual patterns recognised in the preceding chapters will be brought together in a ‘multi-sited’ analysis (§8.2). Here the ‘multi-sited’ questions that remained (§4.5; §5.3; §6.3; §7.5) will be addressed, especially those concerning spatial relationships between distinctive elements in cultural landscapes. This analysis will also address diachronic patterns, highlighting changes in relationships between elements in cultural landscapes in terms of social networks (§8.2). Subsequently, working with the bias towards deposition, the overrepresentation of particular forms of place-making will be taken as a starting-point to discuss changes in cosmologies (§8.3). In particular, the prominence of metalwork deposition as a form of place-making, which is not addressed in full by Cocchi Genick (1998), will be explored in more (relational) detail. Taken together, the assessment of EBA archaeological records (§8.1), the ‘multi-sited’ analysis of cultural landscapes (§8.2) and changing cosmologies (§8.3) will result in a diachronic synthesis in terms of demographics and connectivity that can substantiate the intimate connection between place-making and social change in historical trajectories (§8.4).

8.1 Archaeological records: absence of evidence or evidence of absence?

Copper Age and EBA archaeological records from Abruzzo and Lazio differ considerably in terms of the archaeological visibility of a range of elements in cultural landscapes (Table 8.1). The issue at stake is whether ‘gaps’ can actually be more informative of past realities than they seem at first sight. Low archaeological visibility of a particular phenomenon can as much be the result of a failure to uncover its remains (i.e. a research bias) as derive from its historically specific character (i.e. a cultural bias). The question is whether ‘gaps’ in EBA records can be filled (i.e. absence of evidence) or should be taken at face value (i.e. evidence of absence). It was argued that the combination of a ‘non-selective’, ‘multi-sited’ approach and a diachronic approach has the potential to resolve this issue (Chapter 2).

A comprehensive study of Copper Age archaeological records was beyond the scope of this thesis, but a diachronic comparison of archaeological visibility (Table 8.1) gives the impression of a fuller understanding of Copper Age cultural landscapes. The ‘depletion’ of archaeological records is exemplified by the decrease in archaeological visibility of funerary practices in EBA (Chapter 5). On the other hand, the overview shows that a few elements seem to have been absent from Copper Age but present in EBA archaeological records (Table 8.1). These ‘new’ presences include hoards (or multiple depositions) of metalwork, ‘isolated’ acts of ceramics deposition (i.e. outside man-made and natural subsurface features) and lake-side cult places, the latter established in EBA2. Given the bias towards deposition in archaeological records (§2.1.2; §2.1.3), the addition of these depositional practices (as new forms of place-making) presumably refers to a past reality. Overall, EBA archaeological records show a relatively wide range of depositional practices, with the exception of burial (Table 8.1). Such a cultural bias towards deposition lends credibility to reconstructions based on patterns recognised in these practices. At the same time, it should not be overlooked that the abandonment of particular types of place related to Copper Age depositional practices constituted significant network changes in themselves.

The virtually wholesale abandonment of Copper Age cemeteries stands out in particular, as the reverse of low archaeological visibility of EBA burial (Chapter 5). This network change coincided

with the emergence of a dissociative pattern in metalwork deposition (Table 8.1). EBA metalwork was not only dissociated from human remains (as grave goods), but also from caves, and instead tends to be associated with natural places in the open-air (§4.2.4). In turn, this preference in metalwork deposition can be interpreted as part of a wider pattern that EBA depositional practices were situated at a range of natural places, including lakes in addition to caves (Table 8.1). This adds up to a greater sense of making connections with natural places dispersed throughout the physical landscape, which arguably is cosmological in character (§8.3). The virtual absence of monument construction after the abandonment of the Copper Age tradition of rock-cut tombs is striking and underscores the shift towards a concern with natural places in depositional practices.³⁰⁵

	Copper Age	EBA1	EBA2
Metalwork deposition (chapter 4)			
Funerary contexts	++	-	-
Caves	+	-	-
Hoards	-	+	+
Isolated finds (non-funerary)	+	+	++
Funerary practices (chapter 5)			
Rock-cut tombs	++	?	?
Individual burials	+	?	-
Caves – articulated burial	+	+	-
Caves – disarticulated human remains	+	+	+
Cave use (chapter 6)			
Metalwork	+	-	-
Funerary practices	+	+	+
Food and/or ceramics	+	+	+
Open-air sites (chapter 7)			
Settlement – houses	++	+	?
Settlement – funerary practices	+	?	-
Settlement – deposition (pits and other features)	+	?	?
Deposition – food and/or ceramics (isolated?)	-	+	+
Lake-side cult places	-	-	+

Table 8.1: a general overview of archaeological visibility of the constituent elements of Copper Age-EBA cultural landscapes in Abruzzo and Lazio [abundant (++); present (+); uncertain (?); absent (-)].

Since metalwork deposition is relatively well-known (Chapter 4) and cave use relatively well-studied (Chapter 6), settlements and funerary practices pose the main challenge in the interpretation of EBA archaeological records in Abruzzo and Lazio (Table 8.1). Due to a general lack of excavations of EBA open-air sites, it remains to be seen, for instance, whether the overall scarcity of man-made features such as pits (§7.3.2) refers to a past reality. If so, it would extend the diachronic pattern of disengagement from Copper Age traditions of using man-made places for repetitive deposition in favour of ‘isolated’ acts of deposition (see above). The same pattern complicates the interpretation of limited surface assemblages as settlements, because the possibility that these should be considered as acts of ceramics deposition that made a connection with natural places, dissociated from settlements, cannot be excluded (Chapter 7). Fortunately, the issues related to this particular ‘gap’ can be resolved by future excavations of EBA open-air sites, as well as ‘filled’ by final publications of past and present ones. On the other hand, filling the ‘gap’ related to funerary practices (chapter 5) is more problematic. The question is whether the current state of ‘absence of evidence’ refers to a past reality (i.e. evidence for the lack of EBA places of burial), or not. In this respect, it is significant that a diachronic and ‘multi-sited’ pattern can be discerned in terms of the intersection of elements in cultural landscapes.

Whereas Copper Age funerary practices intersected with other elements in cultural landscapes (i.e. metalwork deposition, cave use and settlements), such intersections are generally absent from EBA archaeological records (Table 8.1).³⁰⁶ In particular, the strong Copper Age association of metalwork with human remains seems to have broken down in EBA cultural landscapes. The breakdown of this intersection in favour of a connection with natural places (§4.2.4) argues against the interpretation of isolated finds of EBA metalwork as the remains of burials destroyed by later, post-depositional activity.

³⁰⁵ Exceptions are a limited number of cairns at crater lakes in northern Lazio in EBA2 (§7.1.3) and perhaps a few new rock-cut tombs of ‘MBA’ tradition in northernmost Lazio at the EBA2-MBA1 transition (§5.1.3).

³⁰⁶ With the exception of one or two definite cases of funerary cave use in ‘coastal’ and intermontane Abruzzo (§5.1.1; §5.1.2).

Moreover, the overall increase in locations of metalwork deposition underscores that it constituted a distinctive form of place-making, dissociated from burial. Given the pattern that dissociates EBA metalwork from settlements, caves and human remains (Table 8.1), it seems likely that funerary practices constituted distinctive places in the cultural landscapes of Abruzzo and Lazio, too. At the same time, the possibility that human remains are associated with another element with low archaeological visibility cannot be excluded, but such an association (in this case with EBA settlements) has not been recorded yet.³⁰⁷

To sum up, this assessment of archaeological records has been an attempt at engaging with patterns of differentiation in archaeological visibility of the constituent elements of cultural landscapes (Table 8.1). The aim was not to explain away ‘gaps’ in archaeological records, but to provide a general background for the interpretation of spatial relationships between places in cultural landscapes (§8.2). Such an assessment of archaeological records can be used to inform interpretations of spatial distributions. It could lend credibility to scenarios that interpret ‘gaps’ in EBA archaeological records on (sub)regional scales as evidence of absence (i.e. a cultural bias), not absence of evidence (i.e. a research bias). Above all, however, it highlights that, at present, major constraints exist for a detailed synthesis of EBA cultural landscapes and social networks in Abruzzo and Lazio. As a consequence of the virtual absence of evidence for EBA burial and settlements, the focus in archaeological synthesis lies, by default, on regional to supra-regional scales and networks, rather than the detail of networks on (sub)regional scales.

8.2 Cultural landscapes, social spheres and connectivity: outlines of a synthesis

In the introduction to the case study (Chapter 3) it was argued that from a network perspective the EBA cultural groups in Central Italy in Cocchi Genick’s synthesis (1998) are problematic. The presumption of diachronic validity of these groups is (potentially) at odds with network changes between EBA1 and EBA2. In particular, it was argued that the largest cultural group, covering ‘coastal’ Lazio as a whole, is debatable (§3.2.2). The incorporation of the FUCINO BASIN in the same group, based on Ialongo’s synthesis (2007), extends its coverage even further (§7.2). In the following discussion an attempt will be made at refining Cocchi Genick’s cultural groups and defining ‘subgroups’ and related boundaries in Abruzzo and Lazio. The starting-point is provided by a series of maps (Figures 8.1, 8.2, 8.3 & 8.4) that entail a phase-by-phase compilation of the spatial distributions of metalwork (§4.4), burial (§5.1.4), cave use (§6.1.4) and settlement patterns (§7.2). Leaving funerary practices aside because of their low archaeological visibility (Chapter 5), the diachronic patterns recognised in metalwork deposition (Chapter 4), cave use (Chapter 6) and settlement patterns (Chapter 7) are similar in the sense that all of their distributions were extended between EBA1 and EBA2. By incorporating their distributions in a single, ‘multi-sited’ distribution map, spatial relationships between different forms of place-making can be visualised, thereby shedding light on the structure of cultural landscapes and social networks. In turn, ‘multi-sited’ spatial patterns can be used to inform the issue of ‘gaps’ in EBA archaeological records (§8.1).

The question is whether the general impression of ‘synchronicity’ in diachronic trends between forms of place-making can be substantiated and to what extent they should be regarded as spatially interrelated phenomena. A related question is whether ‘multi-sited’ spatial patterns can be distinguished, in which particular practices and/or places were confined to particular ‘spheres’. The following series of maps affords making such cross-references between spatial patterns in the distributions of the constituent elements of cultural landscapes, as well as corroborating (or refuting) reconstructions of connectivity based on those patterns.

Copper Age-EBA1 transition

The diachronic comparison starts with the ‘multi-sited’ distribution maps of Copper Age and EBA1 cultural landscapes in Abruzzo and Lazio (Figures 8.1, 8.2 & 8.3). Because the Copper Age is beyond the scope of this thesis, the respective compilation (Figure 8.1) has been limited here to cave use (§6.1) and so-called ‘isolated’, non-funerary finds of copper metalwork (§4.2). In addition, the cores in the

³⁰⁷ It was already argued that the diachronic pattern of an increase in contexts of secondary burial between EBA1 and EBA2 was inversely related to the decrease of archaeological visibility of primary contexts of burial (§5.2). For this reason, it seems unlikely that larger EBA cemeteries (of primary burials) are undiscovered and more likely that secondary treatment took place outside man-made or natural places.

distribution of Copper Age cemeteries (§5.1) are highlighted in the distribution map (Figure 8.1). It was argued that these provided a focus for social interaction and were crucial in the overall structure of regional to supra-regional connectivity (§5.2; §7.2).

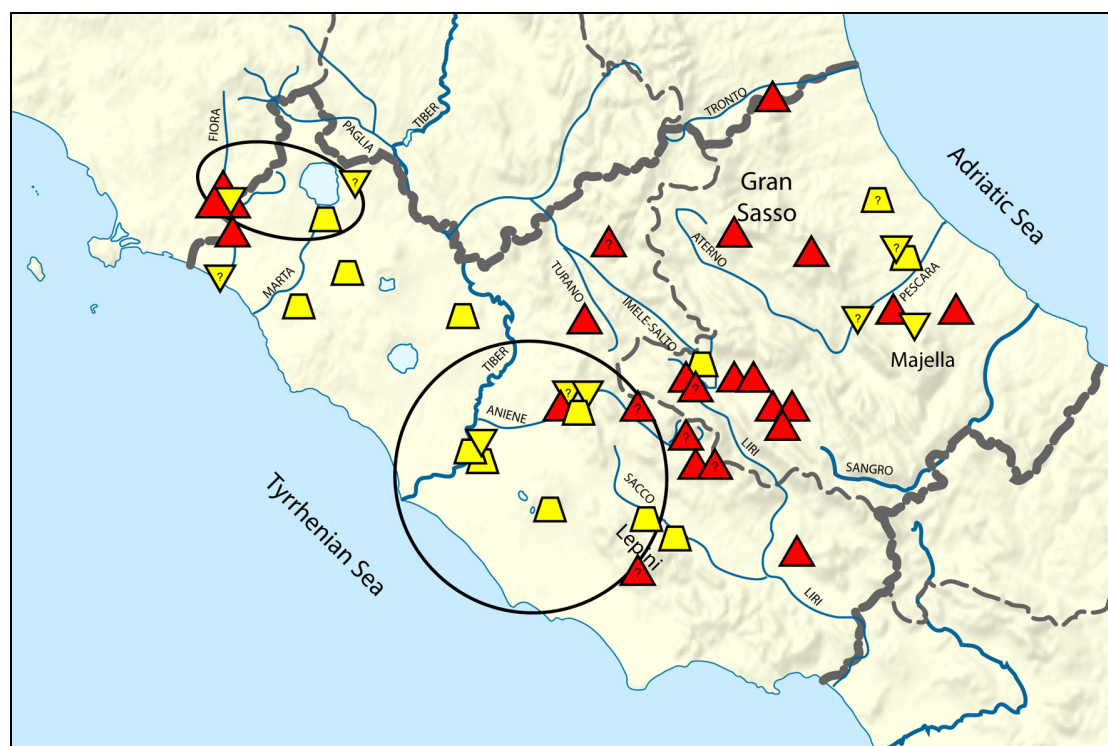


Figure 8.1: multi-sited map (adapted from http://commons.wikimedia.org/wiki/File:Italy_map-blank.svg) showing the distributions of Copper Age cave use and ‘isolated’ finds of copper metalwork from Abruzzo and Lazio, with concentrations of cemeteries in Lazio encircled.

The general impression from trajectories of open-air sites is that EBA1 ceramics are overrepresented at places with a Copper Age history (§7.1). This was interpreted as the preservation of a late-final Copper Age settlement pattern (§7.2) in the distribution of open-air sites dated to the Copper Age-EBA1 transition (Figure 8.2). Here it should be recalled that the main break in trajectories of open-air sites occurred at the EBA1-EBA2 transition (§3.2.2; Table 3.5). A diachronic comparison of Copper Age and EBA1 cultural landscapes (Figures 8.1, 8.2 & 8.3) is fraught with more difficulties in the case of metalwork deposition, cave use and burial in Abruzzo and Lazio. The general problem is one of chronological resolution, in particular the uncertain attribution of the transition from copper to bronze metalwork to EBA1 (§4.3), the generic dates of EBA1 cave use (§6.1) and low archaeological visibility of EBA1 burial (§5.1). Nonetheless, there is some evidence for persistent use of Copper Age places of burial in northernmost Lazio and ‘northern’ southern Lazio (Figures 8.1 & 8.2). This was regarded as an indication for the persistent role of funerary practices as a form of place-making related to social interaction (§5.2.2), especially in the case of northernmost Lazio given its position in regional to supra-regional connectivity at the Copper Age-EBA1 transition (§3.2.2; §7.2). At the same time, a ‘gap’ emerges in EBA1 site distributions with the abandonment of caves in the intermontane region between northern Lazio and northern Abruzzo, irrespective of the generic dates for Copper Age and EBA1 cave use (Figures 8.1 & 8.2). A similar (or the same) ‘gap’ in the northern part of the intermontane region can be discerned in the distribution of both ‘isolated’ finds of copper metalwork (Figure 8.1) and the distribution of EBA1 metalwork (Figure 8.2).

To reiterate, the general impression is that settlement patterns persisted and that, at the same time, the distributions of cave use and metalwork deposition show the emergence of a ‘gap’ in the intermontane region at the Copper Age-EBA1 transition (Figures 8.1 & 8.2). Whereas a research bias cannot be excluded for the ‘gap’ in northern coastal Abruzzo (§3.1; §7.1.1), the intermontane ‘gap’ can be regarded as a past reality based on the ‘multi-sited’ approach. This could indicate an increasing preference for (or a ‘contraction’ towards) a ‘southern’ cross-APENNINE axis of regional connectivity

between southern Lazio and southern Abruzzo by way of the FUCINO BASIN (§7.2). It was argued that, on the Tyrrhenian side of the peninsula, the virtually wholesale abandonment of Copper Age traditions of burial (Chapter 5) would have changed cultural landscapes dramatically (§8.1), but that this does not seem to have affected the structure of regional connectivity in ‘coastal’ Lazio (§7.2). What remains to be seen, however, is to what extent the nodal role of Copper Age cemeteries in northernmost Lazio (Figure 8.1) was taken over by cave use in southern Tuscany at the Copper Age-EBA1 transition, also in the light of the ‘horizon I’ axe hoard (Figure 8.2). Given the lack of ceramic connectivity between the caves in Tuscany and sites in Lazio in subphase BA1A (Figure 3.1), the nodes with ‘Bell-Beaker’ assemblages in northernmost Lazio seem more likely candidates for meeting-places with the Tuscan network, at least from the perspective of ‘coastal’ Lazio as a whole (§3.2.2). In addition, the potentially high degree of continued use and reuse of Copper Age cemeteries in the ‘core’ areas in northernmost Lazio and ‘northern’ southern Lazio (Figure 8.1), hence the persistence of these places in EBA1 cultural landscapes (Figure 8.2), will remain uncertain until a comprehensive dating programme on human remains has been carried out (§3.3).

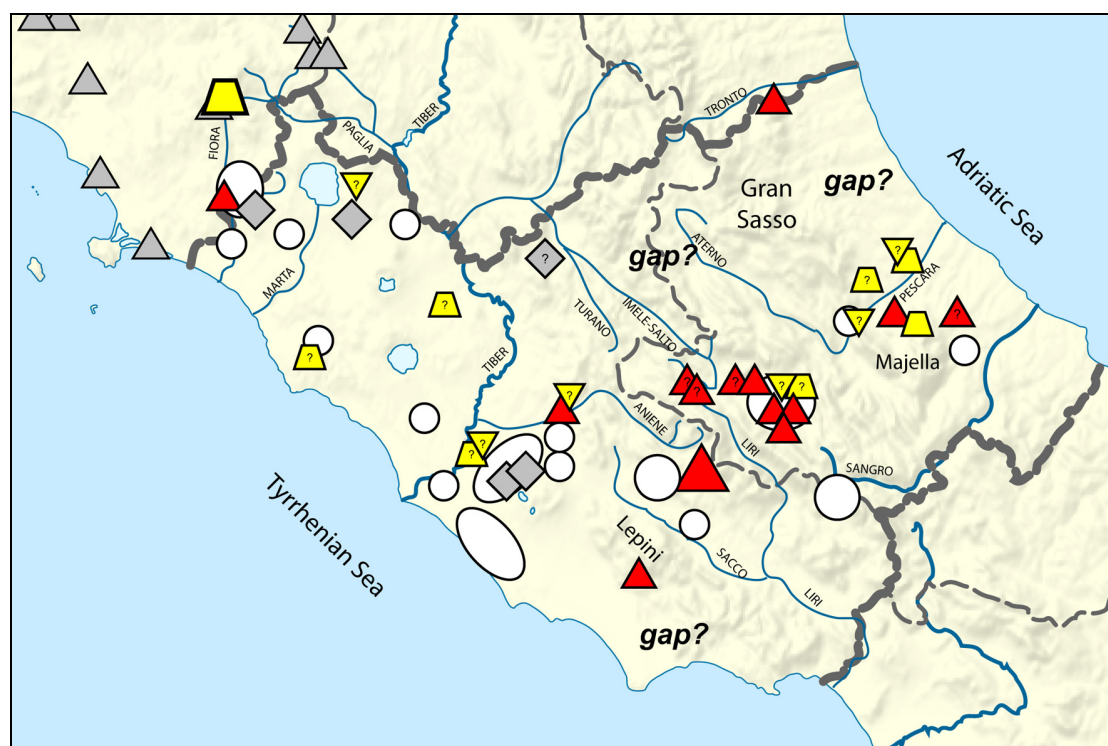


Figure 8.2: multi-sited map (adapted from http://commons.wikimedia.org/wiki/File:Italy_map-blank.svg) of cultural landscapes in Abruzzo and Lazio in subphase BA1A, including halberds and axes dated to ‘horizons I-II’ (§4.1), as well as contemporary cave use and a ‘horizon I’ axe hoard in southern Tuscany.

EBA1

Diachronic comparison of both EBA1 subphases [BA1A & BA1B] in terms of cultural landscapes (Figures 8.2 & 8.3) is problematic, given the standing issue of chronological resolution (or historical validity) of subphase BA1B in Abruzzo and Lazio (§3.2.2; §7.2). One significant change entailed the abandonment of the ‘Bell Beaker’ cult place at FOSSO CONICCHIO in northernmost Lazio (§3.2.2; §5.1), which had been a node in regional and supra-regional connectivity (§7.2). Another network change concerns the addition of a few open-air sites specifically dated to subphase BA1B in the intermontane region (§7.2), but these do not fill the intermontane ‘gap’ in site distributions at the Copper Age-EBA1 transition (see above). In a similar vein, the spatial distribution of ‘horizon II’ axes (Figure 8.3) follows the same pattern as metalwork generically EBA1 in date (Figure 8.2) and copper metalwork (Figure 8.1). In other words, the distributions of sites dated specifically to subphases BA1A and BA1B are fairly similar in terms of cultural landscapes (or at least highly complementary). This broad sense of similarity could have resulted from the lack of chronological resolution (and/or historical validity) of

subphase BA1B (§3.2.2; §7.2), given the relatively large number of sites that cannot be dated more specifically than EBA1 (in a generic sense). This could also raise doubts about the synchronisation of ‘horizon II’ in metalwork typochronology and subphase BA1B in ceramics typochronology (§4.1.1; Table 4.3).

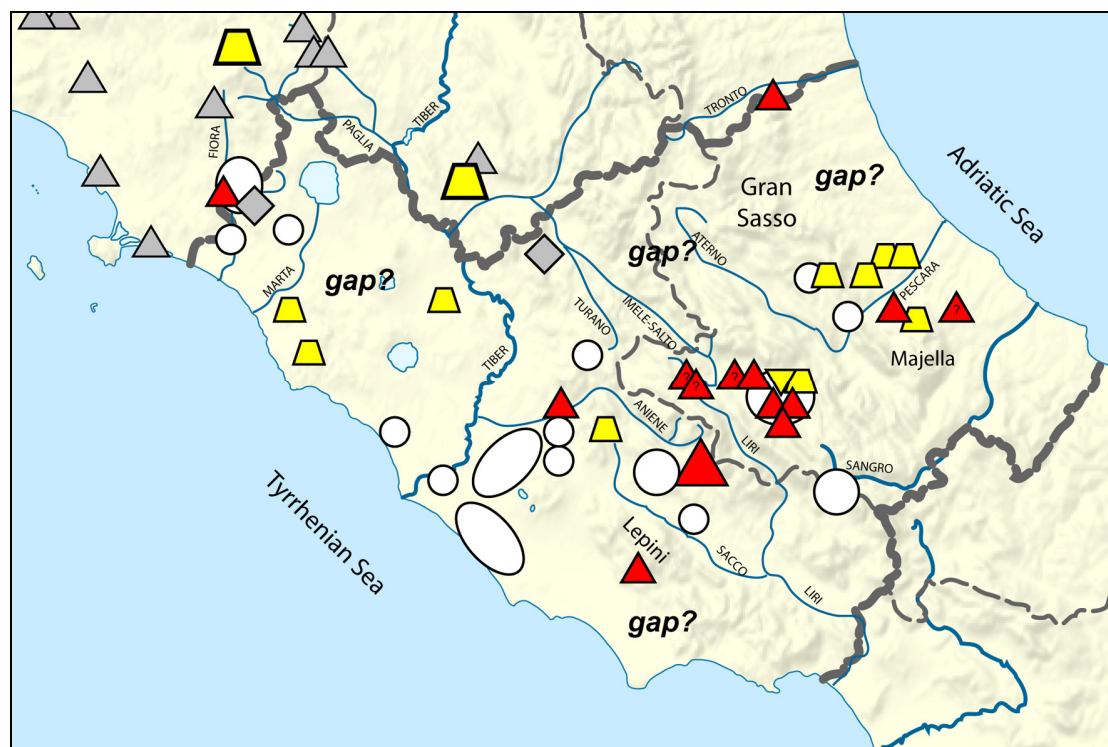


Figure 8.3: multi-sited map (adapted from http://commons.wikimedia.org/wiki/File:Italy_map-blank.svg) of cultural landscapes in Abruzzo and Lazio in subphase BA1B, including ‘horizon II’ axes (§4.1), as well as contemporary cave use and ‘horizon II’ axe hoards in southern Tuscany and Umbria.

The ‘middle’ phases in the tripartite schemes of EBA metalwork (‘horizon II’) and ceramics typochronologies (subphase BA1B) were used as an approximate date for the extension of the hoarding phenomenon to Abruzzo and Lazio (§4.1; Table 4.3). To reiterate, the spatial congruence of the ‘typo-network’ based on BA1B ceramics (§3.2.2; Figure 3.2; §7.2; Figure 7.6) and the distribution of ‘horizon II’ axe hoards in southern Tuscany, Umbria and Abruzzo (§4.1.2; Figure 8.3) was regarded as significant. This coincidence in spatial distributions strengthens the scenario that the EBA1 axis of connectivity was metalwork-based and intermontane, cross-APENNINE in character, by-passed northern Lazio, related to the emergence of a central area of axe production in southern Tuscany (§4.4.2). The abandonment of the ‘Bell Beaker’ cult place (FOSSO CONICCHIO) in northernmost Lazio (§7.2; Figure 8.2) would have predated, coincided with and/or been implicated in this network change. Apart from the abandonment of FOSSO CONICCHIO, site distributions in subphase BA1B indicate the emergence of a larger ‘gap’ in settlement patterns that extended to the heart of northern Lazio (Figure 8.3). The persistence of this ‘gap’ in EBA2 site distributions (see below) indicates that the ‘transitional’, perhaps overlapping character of subphase BA1B works both ways in terms of historical trajectories, with respect to both the ‘previous’ subphase (BA1A) and the ‘subsequent’ phase (EBA2). This significance of subphase BA1B in terms of network changes seems to underscore its historical validity, at least as a ‘transitional’ phase in historical trajectories.

The methodological premise of this thesis is that a ‘multi-sited’ approach should be adopted in order to study cultural landscapes as networks of interrelated places (Chapter 2). It can shed light on the issue of larger ‘gaps’ (i.e. areas largely without evidence) that cannot in all cases be attributed to research biases and should perhaps be interpreted as cultural biases. This possibility was highlighted in the discussion of potential research biases in the context of settlement patterns in ‘coastal’ Abruzzo (§7.1.1), the intermontane RIETI BASIN (§7.1.2), ‘southern’ northern Lazio (§7.1.3) and the ‘coastal’

province of Latina (§7.1.4). In this respect, the intermediate positions reconstructed for metalwork deposition and cave use (with respect to settlement patterns) on a supra-regional scale (§3.2.2) can also be recognised in EBA1 cultural landscapes on a regional scale (Figures 8.2 & 8.3). The dissociative pattern of metalwork deposition (Chapter 4) and the physically circumscribed occurrence of caves in Abruzzo and Lazio (Chapter 6) situate these forms of place-making outside the domestic sphere, on the margins of (or between) settled communities in cultural landscapes (Table 8.2). In other words, the presence of metalwork and/or caves in a micro-region cannot be used indiscriminately to postulate the presence of settled communities in the same area. From such a ‘multi-sited’ understanding of place-making, it cannot be excluded that the ‘gap’ in northern Lazio constituted an ‘empty’, unsettled zone, where axe depositions took place as a form of ‘boundary work’ between northernmost Lazio and southern Lazio (Figure 8.3). It provides a ‘regional’ parallel for the concentration of metalwork on the opposite side of the peninsula, in the UPPER PESCARA micro-region (§4.2.1) in southern Abruzzo (Figures 8.2 & 8.3). In this case it was argued that the presence of axe hoards can be linked to the location of the ‘supra-regional’ cultural boundary between the larger Central and Southern Italian spheres (§4.4.2).

EBA1	local (domestic sphere)	micro-regional (settled community)	regional (intercommunal)	supra-regional (cultural boundary)
metalwork [Chapter 4]	-	metalwork deposition outside domestic sphere	metalwork deposition between settled communities	metalwork deposition at cultural boundaries
			metalwork exchange?	metalwork exchange
				metalwork production?
burial [Chapter 5]	primary burial?	primary burial outside domestic sphere?	secondary burial	secondary burial
	curation of selected human remains?	circulation of selected human remains?		
cave use [Chapter 6]	-	occasional cave use within micro-region?	occasional cave use between settled communities	caves as supra- regional cult places
settlement patterns & subsistence [Chapter 7]	agro-pastoral	clustered occurrence of settlements	pastoralism hunting	hunting

Table 8.2: overview of the spatial connotations of constituent elements of cultural landscapes as a proxy for social spheres in EBA1.

The intermediate positions of metalwork deposition and cave use in cultural landscapes fill ‘gaps’ in EBA1 settlement patterns (Figures 8.2 & 8.3). The reverse is that the latter can be regarded as clustered (Table 8.2), similar to Copper Age settlement patterns (Chapter 7). In this respect, the postulated ‘empty’ zone (or gap) in northern Lazio (Figure 8.3) follows the basic structure of Copper Age connectivity, separated between the clusters of cemeteries in northernmost Lazio and ‘northern’ southern Lazio (Figure 8.1) and including the ‘Bell Beaker’ meeting-places on the southern margins of the Tuscan sphere that persisted at the Copper Age-EBA1 transition (Figure 8.2). The historical validity of subphase BA1B is corroborated in the sense that its site distributions highlight a significant regional network change in northern Lazio (see above). Taken together with the distribution of ‘horizon II’ axe hoards, the abandonment of the ‘Bell Beaker’ cult place (FOSSO CONICCHIO) in northernmost Lazio highlights the differentiation of a ‘coastal’ axis to southern Tuscany from an ‘interior’ axis on the TIBER left bank through Umbria (Figures 8.2 & 8.3). This network change is complementary with the ‘interior’ sense of connectivity in subphase BA1B in Abruzzo and Lazio (§7.2). At the same time, the new intermontane BA1B open-air sites (Figure 8.3) were situated on the margins, but within the range of existing clusters at the Copper Age-EBA1 transition (Figure 8.2). This indicates that the respective increase in intermontane activity (arguably including metalwork exchange) to a large extent preserved the prior, final Copper Age structure of connectivity and cultural landscapes.

EBA2

Despite the extension of settlement patterns (§7.2), intimately related to discontinuity in trajectories of open-air sites (§3.2.2; Table 3.5), the structure of EBA1 cultural landscapes and connectivity (see above) is largely preserved in EBA2 (Figure 8.4). The first impression is that ‘gaps’ in EBA1 site distributions and cultural landscapes (Figures 8.2 & 8.3) are ‘filled’ in EBA2 (Figure 8.4), but on closer inspection this predominantly concerns one particular form of place-making, metalwork deposition. Irrespective of typo-chronological issues, metalwork deposition can be regarded as a form of place-making with ‘intermediate’ connotations in EBA cultural landscapes on (sub)regional scales (see above). Incidentally, the persistence of this spatial connotation leaves open the possibility that some of the metalwork that is regarded here as EBA2 in date (Figure 8.4), could as easily pertain to EBA1 cultural landscapes (Figure 8.3). Although it would not change the place of metalwork in cultural landscapes, this particular ‘time-transgressive’ scenario should be taken into account in interpreting the ‘time series’ of the proliferation of metalwork deposition, exemplified by the hoarding phenomenon (§4.1; §4.4). A different synchronisation of (ceramics and metalwork) typo-chronologies could mean that the changes in the volume of metalwork in circulation were not as dramatic as they seem, but the diachronic pattern of a steady increase culminating in EBA2 remains unmistakable (Figures 8.2, 8.3 & 8.4). Given its prominence in cultural landscapes, the question is how metalwork deposition was related to other forms of place-making in network changes at the EBA1-EBA2 transition.

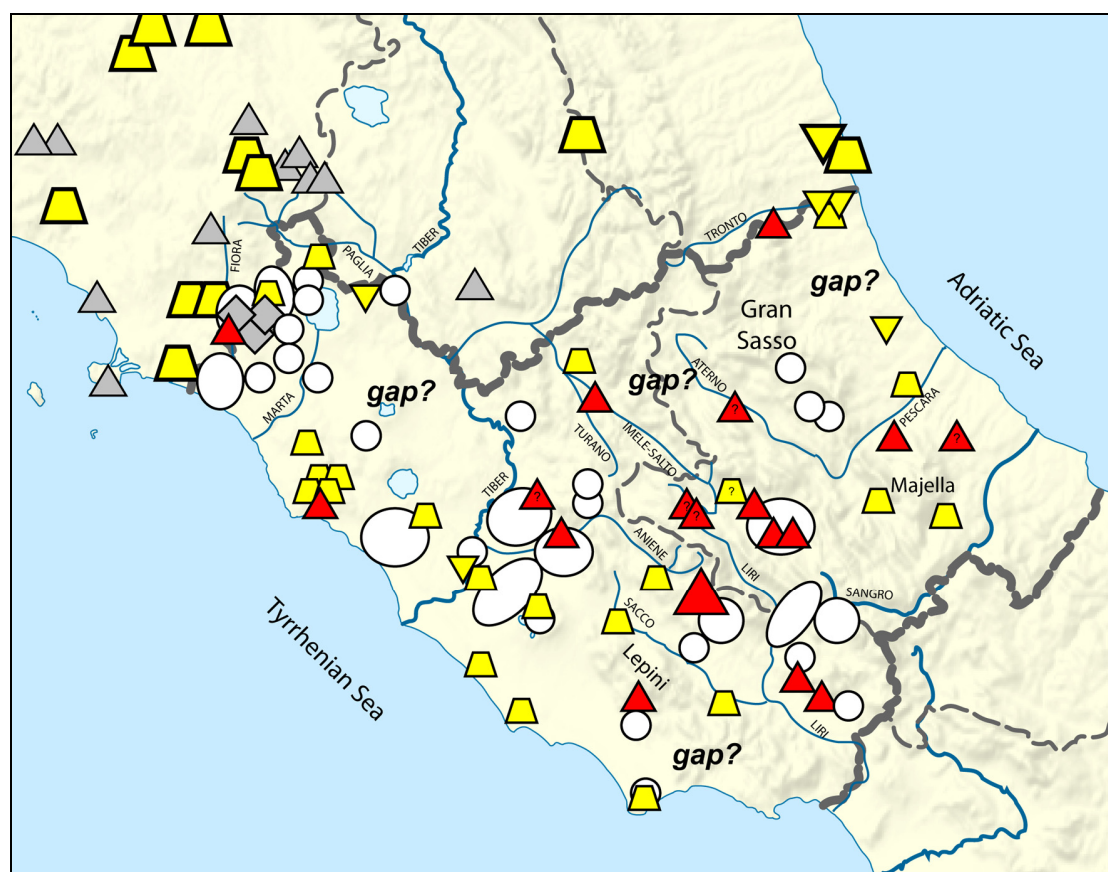


Figure 8.4: multi-sited map (adapted from http://commons.wikimedia.org/wiki/File:Italy_map-blank.svg) of cultural landscapes in Abruzzo and Lazio in EBA2, including (metal-hilted) daggers and ‘horizon II-III’ and ‘horizon III’ axes (§4.1), as well as contemporary cave use and ‘horizon II-III’ and ‘horizon III’ hoards in southern Tuscany, Umbria and southern Marche.

Starting with settlement patterns, a settled community emerged in northernmost Lazio in EBA2 (Figure 8.4), including a major cult place at LAGO DI MEZZANO (§7.1.3; §7.2). It was argued that this cannot be disconnected from the apparent intensification of metalwork production in southern Tuscany (§4.1.2; §4.4.3). It seems likely that this insertion of a settled community in a border zone (or

nodal area) in Copper Age-EBA1 connectivity (§3.2.2) was due to its involvement in metalwork production and/or exchange. Such a connection is corroborated by the inclusion of LAGO DI MEZZANO in the network of caves focused on Tuscany (§3.2.2; Figure 3.3) that on a supra-regional scale matches the core in the distribution of EBA2 hoards (§4.1.2; Figure 4.4). Based on the distribution of ingots (§4.1.2; Figure 4.1), it is likely that metalwork production took place in southern Tuscany (and mining in central Tuscany). Given spatial proximity, the participation of people from northernmost Lazio as a periodic workforce, arguably both in mining and production, is not unlikely. Their involvement in metalwork exchange is corroborated by the ‘fall-off’ pattern in the ‘Tuscan’ metallurgical sphere (§4.1.2; §4.3.2) from multiple object depositions in southern Tuscany to predominantly single finds in southern Lazio (§4.2.3; §4.4.3). Within this spatial pattern, the area characterised by axe depositions in the TOLFA MOUNTAINS micro-region (§4.2.3) probably served as a zone of intercommunal interaction between people from northernmost Lazio and southern Lazio, including exchange of finished pieces of metalwork. The nodal role of the TOLFA MOUNTAINS micro-region as a meeting-place in regional networks is corroborated by the emergence of a cult place in the vicinity at the PIAN SULTANO rock fissure(s), including secondary burial (§5.1.3; §6.1.3). In other words, despite the emergence of a settled community in northernmost Lazio the ‘gap’ in settlement patterns in northern Lazio persisted between EBA1 and EBA2 (Figures 8.3 & 8.4).

Parallel to the trajectory of community formation in northernmost Lazio, a settled community emerged in the area to the north of the LOWER ANIENE valley at the EBA1-EBA2 transition (§7.1.4). This shift towards the interior in settlement patterns in ‘northern’ southern Lazio (Figures 8.3 & 8.4) recalls the apparent shift towards the interior in connectivity between BA1A and BA1B (see above), preserved in EBA2 connectivity (§7.2). This network change also entailed an extension of site distributions in the interior at the EBA1-EBA2 transition, onto the TIBER left bank and into the adjacent parts of the intermontane region, which opened up an ‘empty’ zone along the coast of southern Lazio that was ‘filled’ with axe depositions (Figures 8.3 & 8.4). To reiterate, from a ‘multi-sited’ perspective, the presence of EBA2 metalwork cannot be equated with the presence of settled communities, in the light of the intermediate position of metalwork deposition in cultural landscapes (Table 8.3). This can also be discerned on (sub)regional scales, in the sense that settled communities in the interior of southern Lazio are separated by axe depositions and an area of cave use (Figure 8.4). The spatial distribution of EBA2 axe depositions in ‘coastal’ Lazio as a whole indicates that exchange followed a ‘coastal’ axis of between southern Tuscany and the TOLFA MOUNTAINS micro-region in northern Lazio (see above) into southern Lazio where the occurrence of axe depositions was more dispersed (§4.2.3).

Given the predominance of the ‘coastal’ axis, it seems unlikely that the EBA2 settled community to the north of the LOWER ANIENE valley situated itself on an ‘interior’ axis in metalwork exchange along the TIBER left bank from southern Tuscany (Figure 8.4). On the other hand, it may have been prompted by the ‘interior’ axis that emerged from the distribution of ‘horizon II’ axe hoards (Figure 8.3). Another possibility is highlighted by the presence of an ‘oversized’ metal-hilted dagger dredged from the TIBER near ROME (§4.2.3; §4.3.3) that links the LOWER ANIENE community to the cross-APENNINE axis that connected the Adriatic side of the peninsula to southern Tuscany. ‘Two-way’ traffic along such an axis was reconstructed, by way of Umbria, comprising metal-hilted daggers (from southern Marche & northern Abruzzo) and axes (from southern Tuscany & northernmost Lazio) in EBA2 (§4.1.2; §4.4.3). The scenario that this axis ran through Umbria and by-passed the RIETI BASIN is corroborated by the persistent ‘gap’ in the northern part of the intermontane region at the EBA1-EBA2 transition (Figure 8.3) in EBA2 site distributions (Figure 8.4).

In general, the increase in intermontane activity and connectivity, as evidenced by EBA2 site distributions (§7.2; Figure 8.4), did not change the structure of EBA1 connectivity. The main cross-APENNINE axis remained the one that had connected southern Lazio and the PESCARA valley through the FUCINO BASIN in EBA1 (Figures 8.2 & 8.3). It was argued that the increase of occasional acts of place-making at caves along this particular axis indicates an intensification of cross-APENNINE traffic (Figures 8.3 & 8.4), in coincidence with a decrease in cave use in the FUCINO BASIN itself (Chapter 6). In the absence of composition analyses of EBA2 metalwork from the intermontane region, it remains to be seen to what extent this axis of cross-APENNINE connectivity was metalwork-based (§4.3.2). Nonetheless, at least some form of metalwork exchange can be presumed given the general lack of direct evidence for metalwork production (§4.4.3). On the other hand, the ‘percolated’ occurrence of limited assemblages of PALMA DI CAMPANIA ceramics in southern Lazio (§7.2; Figure 7.9), as well as ‘isolated’ finds of reportedly axes of ‘Southern Italian’ type in southernmost Lazio and southern Abruzzo (§4.4.3), could indicate that ‘coastal’ directionality prevailed over a cross-APENNINE sense of

connectivity in ‘cross-cultural’ interaction, including metalwork exchange, at the intersection of the larger Central and Southern Italian spheres. Based on the spatial distribution of metal-hilted daggers in Southern Italy (§4.1.2; Table 4.9), it was argued that another metalwork-based cross-APENNINE axis was situated to the south of the FUCINO BASIN in EBA2 and connected the regions of Molise and Campania (§4.4.3; §9.2.2).

EBA2	local (domestic sphere)	micro-regional (settled community)	regional (intercommunal)	supra-regional (cultural boundary)
metalwork [Chapter 4]	-	metalwork deposition outside domestic sphere	metalwork deposition between settled communities	metalwork deposition at cultural boundaries
			metalwork exchange	metalwork exchange
			metalwork production?	metalwork production
burial [Chapter 5]	primary burial?	primary burial outside domestic sphere?	secondary burial	secondary burial
	curation of selected human remains?	circulation of selected human remains?		
cave use [Chapter 6]	-	occasional cave use within microregion?	occasional cave use between settled communities	caves as supraregional cult places
settlement patterns & subsistence [Chapter 7]	agro-pastoral	clustered occurrence of settlements, including more ‘isolated’ ones	pastoralism hunting	hunting

Table 8.3: overview of the spatial connotations of constituent elements of cultural landscapes as a proxy for social spheres in EBA2.

The emergence of such a main cross-APENNINE axis in the adjacent regions of Southern Italy could provide an explanation for the relative lack of EBA2 metalwork from the UPPER PESCARA micro-region (§4.2.1; Figure 8.4), after the focus it had provided for metalwork deposition, as well as for connectivity on a supra-regional scale, in the prior, EBA1 situation (Figure 8.3). However, it remains difficult to appreciate cultural landscapes and social networks in ‘coastal’ Abruzzo (§3.1; §7.1.1), where EBA archaeological records are (at present) limited to metalwork deposition and cave use. Still, from a ‘multi-sited’ perspective, the alternative scenario that the persistent ‘gap’ in ‘coastal’ Abruzzo (Figures 8.2, 8.3 & 8.4) actually constituted a largely ‘empty’, unsettled area, cannot be dismissed, given the spatial pattern that metalwork deposition and cave use tend to occupy intermediate positions in EBA cultural landscapes, even on a regional scale (Tables 8.2 & 8.3). In this respect, the ‘gap’ in ‘coastal’ Abruzzo could provide a parallel to the ‘gap’ in EBA2 site distributions in northern Lazio, on the opposite side of the peninsula (Figure 8.4), both sandwiched between two and the same cross-APENNINE axes in supra-regional connectivity, one to the north through Umbria and the other to the south through the FUCINO BASIN (see above). In turn, this situation could have provided a condition of possibility for the shift in focus to the interior in ‘northern’ southern Lazio (§7.1.4), with the LOWER ANIENE community occupying an intermediate, connecting position between those cross-APENNINE axes of connectivity.

To sum up, a ‘multi-sited’ and diachronic comparison of compiled distribution maps does not show dramatic changes in the overall structure of cultural landscapes in Abruzzo and Lazio between EBA1 and EBA2 (Figures 8.2, 8.3 & 8.4). The site distributions in each subsequent phase tend to extend beyond that of a previous phase only to a limited extent. In other words, the proliferation of new places and other minor network changes in EBA2 (Figure 8.4) was to a large extent conditioned and constrained by the structure of EBA1 cultural landscapes (Figures 8.2 & 8.3). Accordingly, a high degree of consistency can also be discerned in the relationships between forms of place-making in EBA1 and EBA2 cultural landscapes (Tables 8.2 & 8.3). Metalwork deposition, cave use and secondary burial occupied intermediate positions with respect to settled communities and can arguably be interpreted as intercommunal in character and as a form of boundary work (§8.4). It was argued that, contrary to pastoralist practices, hunting can be added to an intercommunal sphere as a practice dissociated from the domestic sphere (§7.4).

From a ‘multi-sited’ perspective, metalwork deposition and cave use fill ‘gaps’ in settlement patterns (Figures 8.2, 8.3 & 8.4) and thereby corroborate (or at least do not argue against) the scenario that these were to a large extent clustered in character, similar to Copper Age settlement patterns (§7.2). In the end, only future research can establish to what extent ‘gaps’ in current site distributions result from a research bias. Nonetheless, the diachronic dimension of ‘gaps’ in site distributions, persisting throughout the sequence (Figures 8.2, 8.3 & 8.4), highlights that the possibility that they constituted a past reality (i.e. a cultural bias) cannot be dismissed immediately.

8.3 Place-making and cosmologies: working with the bias towards deposition

The preceding analysis of EBA cultural landscapes illustrates that the assessment of ‘gaps’ in EBA archaeological records (§8.1) can be informed by ‘multi-sited’ patterns in site distributions (§8.2). First, it was argued that archaeological visibility of EBA depositional practices is to a large extent unaffected by research biases (Table 8.1), with the exception of burial (Chapter 5). If so, this would mean that cosmologies are within grasp, since these are intimately related to depositional practices as forms of place-making (§8.1). This was to a large extent corroborated by the spatial relationships of these forms of place-making that show recurrent patterns, which could be interpreted in terms of social spheres (Tables 8.2 & 8.3). Metalwork deposition (Chapter 4) and cave use (Chapter 6) tend to occupy intermediate positions in EBA cultural landscapes and, as such, seem to have been related to predominantly intercommunal spheres (§8.2). Working with the bias towards deposition, here an attempt will be made to interpret these forms of place-making in terms of cosmologies. In this respect, it was already argued that a change can be discerned in notions of place and ancestorhood between the Copper Age and EBA2 (Chapters 5 & 6), with depositional practices showing an increasing concern with natural places, as opposed to man-made structures (§8.1). Overall, the increasingly predominant EBA form of place-making in Abruzzo and Lazio is metalwork deposition (Figures 8.2, 8.3 & 8.4), apparently intimately related to changes in cultural landscapes and implicated in the shift in focus towards natural places. Metalwork is therefore one of the main elements to be explored in more detail (see below) after a closer look at the cosmological connotations of EBA place-making in general.

Differentiating the subsurface

Despite the low archaeological visibility of funerary practices, a significant change in place-based notions of ancestorhood can be discerned in the disengagement from Copper Age cemeteries (§8.1). With a few exceptions (§5.1), Copper Age places of primary burial and secondary handling of human remains were abandoned in Abruzzo and Lazio. In other words, low archaeological visibility of EBA funerary practices indicates that the place of human remains in cultural landscapes and cosmologies had changed (§5.2). With the abandonment of Copper Age places of burial, ‘non-funerary’ acts of deposition had become predominant, at least in EBA archaeological records (§8.1; Table 8.1). At present, the most likely scenario is that primary burial followed the shift in focus of depositional practices from man-made structures to natural places, in the context of cultural landscapes as a whole (§8.2) and in the light of the bias towards depositional practices in EBA archaeological records (§8.1). Accordingly, notions of ancestorhood would have been increasingly related to natural places (rather than the man-made structures). Although the focus in deposition shifted away from the persistent (re)use of man-made ancestral places with subsurface connotations (i.e. Copper Age cemeteries and long-lived settlements), EBA deposition remained concerned with the subsurface. Different from the Copper Age concern with man-made places, EBA people increasingly made a connection in the act of deposition with subsurface features of physical landscapes. This is underscored by the extension of the range of depositional practices (Table 8.1), starting with hoards (i.e. multiple depositions) of metalwork in EBA1 (Chapter 4) and ‘cave-like’ assemblages at crater lakes in EBA2 (§7.3). The increase in occasional acts of ceramics deposition at caves between EBA1 and EBA2 (Chapter 6) can be added to the subsurface concern with natural places.

The general impression that site distributions were extended (§8.2) indicates that EBA place-making resulted in changes in cultural landscapes and social networks. It also highlights that knowledge related to physical landscapes increased through engaging with so-called natural places. As the proliferation of open-air sites (i.e. changes in settlement patterns) was largely constrained by a persistent structure of cultural landscapes (§8.2), the accumulation of knowledge about physical landscapes mainly involved ‘intermediate’ forms of place-making (i.e. cave use and metalwork deposition). Consistent with this sense of exploration in engaging with natural places, those places with

ancestral connotations (or ‘ancestral realms’) were distributed across cultural and physical landscapes. In particular, ritualised forms of place-making concerned selecting those places for deposition where the subsurface was accessible (see below), or places that were connected to flows of natural substances, such as caves, crater lakes, sources and other bodies of water (Table 8.4). The shift in focus to natural places is not only consistent with the ‘multi-sited’ analysis of EBA cultural landscapes (§8.2), but also substantiated by the diachronic dimension of a polythetic pattern that already emerged from the assessment of archaeological records (§8.1). The disengagement from Copper Age cemeteries as a focus for place-making entailed a breakdown of intersecting depositional practices involving human remains, ceramics and metalwork. Different from the intersections in Copper Age cultural landscapes (Table 8.1), EBA cultural landscapes are characterised by mutually exclusive forms of place-making.

Metalwork was dissociated from caves and (other) funerary contexts (Table 8.1). This underscores that metalwork deposition (Chapter 4) was a form of place-making distinctive from cave use (Chapter 6), the latter sometimes intersecting with funerary practices (Chapter 5). The mutual exclusiveness of those ritualised forms of place-making (i.e. metalwork deposition and cave use) that are most frequent in EBA archaeological records, highlights a trajectory in which cosmologies (and related knowledge) emerged that were different from the prior, Copper Age situation. Phrased in polythetic terms, metalwork was subjected to selective deposition, generally dissociated from other objects and substances, notably ceramics and human remains that are, by contrast, relatively frequent at caves and settlements (Table 8.1).³⁰⁸ The selection of distinctive places for metalwork deposition highlights differentiation in the conceptualisation of so-called ‘natural places’ in physical and cultural landscapes. Subsurface places, i.e. caves and rock fissures, were deemed appropriate for ceramics and human remains but inappropriate for metalwork and, as such, were distinguished from natural places in the open air (Table 8.4). At the same time, such a distinction between deposition of metalwork in the open air and ceramics underground is ‘fuzzy’ in the sense that it is cross-cut by the strong possibility that acts of EBA ceramics deposition also engaged with natural places (as well as prior, man-made places) in the open air (§7.3), parallel to occasional acts of ceramics deposition as the predominant form of EBA cave use (§6.2). In a similar vein, the scenario proposed for low archaeological visibility of EBA funerary practices is that primary burial took place on the surface, arguably at ‘natural places’ outside the domestic sphere, with selected human remains subsequently ending up at caves and perhaps settlements (§5.2) and intersecting with ceramics deposition, but not metalwork deposition (Table 8.4).

	metalwork	ceramics	human remains
surface [settlements]	dissociated from settlements at deposition	house assemblages depleted by deposition elsewhere?	primary burial on surface?; selected human remains in circulation in domestic sphere?
surfacing flows of natural substances [natural places]	metalwork deposition predominantly making a connection with flows of water (river sources, streams, crater lakes and other wet contexts)?	ceramics deposition at crater lakes; as well as occasional acts of deposition at other (wet) natural places and prior places?	?
subsurface [caves]	subsurface connotation of raw material?; inappropriate for finished objects?	ceramics deposition at caves and rock fissures	secondary burial at caves and rock fissures

Table 8.4: a comparison of classes of objects and substances selected for deposition with the cosmological connotations of their respective depositional contexts.

The main exception that breaks this multi-faceted polythetic pattern is the cult place at LAGO DI MEZZANO, newly established in EBA2, where repetitive acts of metalwork and ceramics deposition intersected (§4.2.3; §7.1.3). This supra-regional node (§3.2.1) is a special case as a new type of place (§8.1; Table 8.1) that emerged in an established zone of social interaction in northernmost Lazio (§7.2),

³⁰⁸ The pattern of selective deposition (or a ‘negative’ relationship between places and practices) constituted by the absence of metalwork from caves (as well as settlements) is striking in the light of the proliferation of metalwork deposition, but at the same time follows the prior pattern that non-funerary acts of copper metalwork deposition had already to a large extent been excluded from caves (as well as settlements) in Abruzzo and Lazio (Chapter 4).

with a deep history and ingrained ancestral connotations as a core area of Copper Age burial (§5.1.3). The intersection of metalwork and ceramics deposition at LAGO DI MEZZANO (§7.1.3) highlights that, despite following a dissociative pattern elsewhere, these ritualised forms of place-making should, nonetheless, be regarded as interrelated in a cosmological sense. Here it should be recalled that the EBA2 climatic ‘dry event’ (§3.4) ‘revealed’ subsurface outlets channelling flows of natural substances at LAGO DI BOLSENA (in the immediate vicinity of LAGO DI MEZZANO) which became a focus for monument construction (i.e. cairns) and subsequently deposition (§7.1.3). Places where underground flows of natural (or supernatural) substances surfaced were selected for repetitive acts of deposition, thereby engaging with (or ‘tapping into’) a subsurface realm. The emergence of a tradition of deposition at crater lakes cannot be disconnected from the subsurface realm constituted by the Copper Age cemeteries in northernmost Lazio (§5.1.3). In the light of EBA dates for occasional (re)use of some of these ancestral places (§3.3), the scenario that Copper Age cemeteries and EBA2 deposition at crater lakes were regarded as connected in a cosmological sense (following their shared subsurface and ancestral connotations) should be taken into consideration. In the same context, the ancestral and subsurface connotations of EBA cave use should be recalled (§6.2.2).

Caves with ‘full’ assemblages in ‘coastal’ Abruzzo can be regarded as persistent places with a strong ancestral connotation. On the other hand, the proliferation of cave use in the intermontane region and ‘coastal’ Lazio only entailed occasional acts of EBA ceramics deposition, yet engaged with caves as ‘natural places’ with a subsurface connotation (with or without evidence for prior use), with a slight preference for those caves with (super)natural flows of ‘watery’ substances in their interior (Chapter 6). Taken together, the emergence of depositional practices at crater lakes in EBA2 and the proliferation of cave use highlight a concern with places characterised by subsurface (and/or surfacing) flows of natural substances. Unfortunately, the locations of EBA metalwork can in most cases not be specified, but it was argued that there is a strong possibility that metalwork deposition was directed at flows of water in the open air (§4.2.4), perhaps specifically engaged with places where water surfaced (Table 8.4). The cosmological character of this concern can be deduced from polythetic patterns in depositional practices (Table 8.4), which in turn strengthens the notion that cosmologies can and should be conceptualised as place-based. To put it differently and to be more precise, deposition is not directed at a generic subsurface, but at particular places where exchanges with flows of (super)natural substances could take place. One could argue that deposition was aimed at keeping substances in cosmological cycles in flow, in the generic sense of fertility and ancestor cults, but then place-based (§2.1.3).

It is tempting to make a connection between the general concern with flows of natural substances, notably water, and the climatic ‘dry event’, including changes in hydrological regimes (§3.4).³⁰⁹ Environmental changes related to the EBA2 ‘dry event’ could have resonated with cosmologies, in particular with ‘nature-based’ (as opposed to ‘person-based’) notions of ancestorhood. There is no evidence, however, that settlement abandonment and relocations in trajectories of community formation were prompted by climatic deterioration, nor could a dramatic change in subsistence strategies be discerned (§7.4). At the same time, it is difficult to associate metalwork deposition and cave use, as ritualised forms of place-making in EBA cultural landscapes, with ‘climate-induced’ changes in settlement patterns, given the ‘intermediate’ positions of the former with respect to the latter (§8.2). Furthermore, a ‘climate-induced’ scenario in itself does not explain the increasing prominence of metalwork deposition in EBA place-making (Figures 8.2, 8.3 & 8.4). In this respect, it is significant that the trajectory of an emergent area of metalwork production in central-southern Tuscany started in EBA1 (§4.1.2; §4.4.2), well before the impact of a climatic ‘dry event’ (§3.4). The potentially cosmological significance of this central area of metalwork production for networks in Abruzzo and Lazio should therefore be explored as a phenomenon in itself (see below), with special reference to the cosmological connotations of travel, exchange and technological innovations, in this case the introduction of bronze (or tin) and composite objects in the form of metal-hilted daggers.

Situating metalwork: from the subsurface to the surface and back

Given the prominence of metalwork deposition as a ritualised form of place-making (§8.2), here an attempt will be made to link metalwork to changes in cosmology. Starting with production, it seems likely that the technological knowledge to produce metalwork was not widely available in Abruzzo and Lazio (§4.4). Another significant element is that the increase in metalwork deposition (Figures 8.3 &

³⁰⁹ Cf. Moody 2009 on the impact of an aridity crisis on Minoan sacred landscapes and Bonnafoux 2011 on the impact of sustained droughts on Maya cosmology.

8.4) coincided with the introduction of tin as a major constituent of metalwork, in other words, a technological innovation (§4.3.2). Both these considerations indicate that, from the perspective of Lazio and Abruzzo, both raw material and finished pieces of metalwork can be characterised as ‘non-local’, which arguably conveys metallurgy with cosmological connotations. At the same time, the intensification of mining in central Tuscany and the emergence of a central area of metalwork production in southern Tuscany did decrease the physical (not necessarily social) distance to knowledge about procurement and technology, in comparison with the prior, Copper Age situation (§4.4). The shift of focus in copper mining from Liguria in Northern Italy to central Tuscany (§4.1.2) could indicate that knowledge about the subsurface origins of raw material (Table 8.4) ceased to be specialist knowledge, or would at least have been more widely available in Central Italy. People from northern Lazio could even have acquired first-hand knowledge by participating in mining activities in central Tuscany or production in southern Tuscany (§8.2). As such, there is a higher chance that the subsurface connotation of metalwork (as a substance) was part of the knowledge attached to finished objects that circulated in northern Lazio.

Following the analogy provided by the knowledge required in prospecting and mining for metallic resources, metalwork as a substance can be conceptualised as originating from the subsurface. What remains to be seen is whether it was regarded as part of the same subsurface realm to which caves provided access. The exclusion of metalwork from EBA place-making at caves could indicate that its incorporation was inappropriate because of a (perceived) connection between different places with subsurface connotations.³¹⁰ After the transformation from mined substances to finished pieces of metalwork, the latter could not return into the subsurface (i.e. caves). An alternative explanation for the exclusion of metalwork from caves is their role in connectivity, more specifically the role of caves as meeting-places in exchange networks. Rather than ending up in caves, finished pieces metalwork were exchanged at (and moved away from) caves. Pearce’s argument (2007, chapter 5) that metalwork production was intimately linked to these places in Northern and Central Italy in the earlier Bronze Age underscores the role of caves as nodes in metalwork-based networks. In Central Italy, however, such an intimate connection can only be substantiated after the EBA-MBA transition (§9.3.1). Still, a proxy for the association of caves with metalwork production can be discerned in the matching distributions of EBA hoards with the locations of caves in the supra-regional ‘typo-network’ based on ceramic connectivity (§4.1.2). This is exemplified by overlapping concentrations in the distributions of hoards and cave use in southern Tuscany (Figures 8.3 & 8.4). On the other hand, the mutual exclusiveness of metalwork deposition (in the open-air) and cave use makes it more likely that the main significance of caves lies in their role of as meeting-places in supra-regional connectivity (§3.2.2), encircling an area of metalwork production (§4.1.2).³¹¹

From the perspective of Abruzzo and Lazio, the emphasis on connectivity in cave use is consistent with the intermediate positions of caves in EBA cultural landscapes (Tables 8.2 & 8.3). On the basis of the spatial distribution of EBA cave use, it was argued that this form of place-making played a role in cross-APENNINE connectivity (§6.2.2), in particular the axis connecting southern Lazio and southern Abruzzo by way of the FUCINO BASIN (§7.2; §8.2). It seems likely that this cross-APENNINE axis, outlined by caves between southern Lazio and southern Abruzzo (Figures 8.3 & 8.4), served as the main axis for metalwork exchange, given the persistent structure of cultural landscapes including ‘gaps’ (§8.2). At the same time, it is significant, however, that the main concentrations (or repetitive acts) of metalwork deposition coincide with two particular cult places, i.e. GROTTA DEI PICCIONI in southern Abruzzo in EBA1 (Figure 8.3) and PIAN SULTANO in northern Lazio in EBA2 (Figure 8.4). The presence of axe hoard(s) in both these cases recalls the situation in southern Tuscany where the cores in the distribution of caves and hoards overlap on a supra-regional scale (see above). This broad similarity could substantiate the scenario that this particular cave (GROTTA DEI PICCIONI) and rock fissure (PIAN SULTANO) were not only meeting-places (§6.2), but also nodes in metalwork exchange. Cave use and metalwork exchange are two sides of the same coin in this scenario, the latter a practice embedded in the networks in which the former are significant nodes.

³¹⁰ Cf. Johnston 2008 on changing notions of cosmological place related to caves, potentially (re)conceptualised as ‘ancestral’ mines, in the context of copper mining. For comparison, one identified Copper Age and perhaps Early-Middle Bronze Age copper source (GROTTA DELLA MONACA) in Calabria, Southern Italy, actually is a cave (Geniola et al. 2006; Larocca 2010, 2010/2011).

³¹¹ This does neither exclude the possibility that EBA metalwork production in southern Tuscany did (periodically) take place at (some of) these caves, nor is it mutually exclusive with the scenario that the cosmological connotation of metalwork as a substance prevented their incorporation in deposition at these subsurface places (see above).

This scenario is more clear-cut in the micro-regions in southern Abruzzo and northern Lazio, respectively (see above), where a double sense of boundary work can be recognised (Tables 8.2 & 8.3). These particular areas did not only constitute nodes through which metalwork was exchanged, but also depositional zones where metalwork ended up. The same nodal areas are likely candidates for places where technological knowledge that would otherwise have been unavailable, was periodically made available (i.e. as part of boundary work). This scenario was already suggested on the basis of the overall distribution of metalwork deposition (§4.4). In the same context, it was argued that metalwork deposition in northernmost Lazio, including repetitive acts of deposition at LAGO DI MEZZANO and several hoards (§4.2.3), was as an EBA2 extension of the concentration of hoards in southern Tuscany (Figure 8.4). Based on this spatial pattern, it was also argued that the emergence of a larger settled community in northernmost Lazio in EBA2 (§7.2) cannot be disconnected from the intensification of mining and metalwork production in central-southern Tuscany (§4.1.2). It is likely that people from the larger settled community in northernmost Lazio were involved in the exchange of EBA2 metalwork from Tuscany (if not a periodic workforce in mining and metalwork production in Tuscany), given its ‘strategic’ position with respect to the remainder of Lazio (Figure 8.4). For the same reason of proximity and its position in networks, it is plausible that the same settled community in northernmost Lazio channelled cosmological knowledge about emergent natural places with subsurface connotations at crater lakes (see above).

Taken together, the proximity to technological knowledge creates the possibility that knowledge about changing natural places at the crater lakes of LAGO DI BOLSENA and LAGO DI MEZZANO resulted in a place-based technological metaphor (or a geomyth). The revelation of flows of subsurface substances (i.e. hot water and toxic fumes) at crater lakes could have been adopted as a metaphor for flows of substances in the casting of metalwork. Of course, the intimate connection of the classic Greek-Roman god HEPHAESTUS-VULCAN with his trade (i.e. metalworking) and seat (i.e. volcanoes) cannot be overlooked here.³¹² In the case of northernmost Lazio, however, it concerns a remnant volcanic environment. Rather than an eruption, it is the ‘revelation’ of subsurface outlets by the climatic dry event that would have prompted an expansion of place-based cosmological knowledge (see above). Perhaps an existing metaphor (or geomyth) that had been based on first- or second-hand knowledge about active volcanoes (and volcanic substances, i.e. magma) in Campania,³¹³ was adapted. In the absence of absolute dates within the EBA range from the cult place at LAGO DI MEZZANO, the sense of chronological order between place-making at this crater lake and the ‘Avellino’ eruption of SOMMA-VESUVIUS (§3.4) remains unresolved. In other words, the technological metaphor linking crater lakes to metallurgy could have emerged independently from active volcanoes, engaging with changing natural places in a ‘strategic’ position in exchange networks with respect to an area of metalwork production. If technological skills and knowledge to produce metalwork were largely unavailable in Abruzzo and Lazio (§4.4), this technological metaphor could then have been exchanged with (or attached to) finished pieces metalwork as a geomyth. In turn, it could shed light on the incorporation of the cult place at LAGO DI MEZZANO in a supra-regional network of caves (§3.2.1).

If the scenario is valid that metalwork exchange entailed cosmological knowledge that was intimately linked to finished objects, it would probably have included knowledge about the cosmologically appropriate treatment of objects at deposition. In that case, the dissociation of EBA metalwork from settlements, caves and (other) funerary contexts (§8.1) would have been part of the cosmological connotations of metalwork as a substance attached to (or carried by) finished objects. It could have enhanced the irreversibility of finished pieces of metalwork, in the light of the apparent lack of technological skills and knowledge in Abruzzo and Lazio itself (§4.4). A notion of irreversibility can also be discerned in the mutually exclusive compositional signatures of axes, halberds and daggers that argue against reuse of ‘Tuscan’ axes, although recycling cannot be wholly excluded in the case of metal-hilted daggers (§4.3.1; §4.3.2). Finally, the increase in the accumulation of metalwork in the EBA hoarding phenomenon (§4.1) is another indication that such a notion of irreversibility existed.³¹⁴

³¹² The title of the final publication of excavations at LAGO DI MEZZANO – *Vulcano a Mezzano: insediamento e produzioni artigianali [...] (Baffetti et al. 1993)* – comprises a pun on this geomyth, made explicit by linking direct evidence for Final Bronze Age metalwork production in the vicinity to the EBA2-MBA1 context of LAGO DI MEZZANO. Different from this pun, the geomythological scenario put forward here neither conflates different phases of the Bronze Age nor adopts a retrospective stance. Instead, it starts from a detailed, relational, place-based perspective on network changes that moreover goes beyond the micro-regional scale.

³¹³ Cf. the Southern Italian ceramics reported from the ‘Bell Beaker’ cult place at FOSSO CONICCHIO (§5.1.3).

³¹⁴ The prevalence of funerary contexts in Copper Age metalwork deposition could highlight a similar notion of irreversibility, which seems underscored by the prolific occurrence of use-wear (cf. Dolfini 2011).

Interpreting metalwork as a substance that is irreversible, comes close to regarding it as ‘non-local’ (or, inalienable; cf. Fontijn 2001/2002, chapter 3), setting it apart from ‘local’ substances such as ceramics and human remains. This distinction recalls the polythetic pattern that metalwork was dissociated from, but ceramics and human remains were incorporated in underground place-making (Table 8.4), thereby differentiating distinctive notions of the subsurface (see above). Different from metalwork deposition, the flows of substances at stake in cave use were ‘local’ and reversible. In establishing and maintaining a reciprocal relationship with the subsurface, exchanges of particular substances, i.e. ceramics (presumably including food) and human remains, took place at caves and, in return, similar (or the same) substances, i.e. food and new generations of people, were expected to flow back to communities on the surface.

So far, a variety of cosmological connotations of raw material, production, exchange and deposition of metalwork have been taken into consideration. Because of the absence of direct evidence for metalwork production in Abruzzo and Lazio (Chapter 4), work on technological metaphors (in terms of the transformation of substances) that link metallurgy (or technology in general) to notions of personhood and cosmologies (cf. Jones 2002; Keates 2002; Brück 2006b; Giles 2007) has not been considered here, but can provide a starting-point for a case study of Middle Bronze Age metalworking in the context of cosmologies (§9.3.1). A final thread in the exploration of cosmologies and EBA metalwork is the question why axes were the most prolific class selected for deposition. In this respect, the spatial pattern of the ‘intermediate’ position of metalwork deposition in cultural landscapes, in its consistent relationship with group boundaries on micro-regional, regional as well as supra-regional scales (Tables 8.2 & 8.3), concerns axes especially. The ‘multi-scalar’ dimensions of this spatial pattern argue in favour of the scenario that axes carried cosmological connotations that were widely shared. Starting as a ‘non-local’ substance, axes were exchanged and changed into a ‘local’ class of objects. The problem with distinguishing between ‘non-local’ versus ‘local’ objects and substances is, however, that technological and cosmological knowledge that could have been attached to them, is overlooked (see above). As shown by those axes that were selected for deposition in Abruzzo and Lazio, axes were perhaps never truly ‘local’ and retained their ‘non-local’ character in a ‘local’ context. To steer away from this language game based on a (false?) dichotomy (§2.1.2), the place-making connotations of axes after production and exchange and before deposition will be taken into account here.

First, the significance of axes was linked to their instrumental role, as multi-purpose, heavy-duty tools (Fontijn 2001/2002, chapter 13). Axes were used in wood-cutting and working in the construction of houses, as well as in forest clearance, creating fields and pastures in the sphere of settled communities on sub-regional scales. By extension, axes would have been instrumental in land reclamation creating new areas for settlement and pathways for connectivity on regional to supra-regional scales. In the process, they gained biographical connotations of connectivity and opening up physical landscapes. Axes exposed and laid bare the surface of the land, thereby creating access to subsurface features, in unison with the deforestation prompted by changes in hydrological regimes due to the EBA2 climatic ‘dry event’ (§3.4). All of these mediating roles situate axes practically, socially and cosmologically at the heart of changes in cultural and physical landscapes, as well as social networks. In the latter sense, axes are ‘good to think’ given their connection with founding events in trajectories of community formation, such as the construction of houses and the establishment of settlements. Taken together, the manifold connotations of axes facilitated the proliferation of metalwork deposition as a ritualised form of place-making in EBA cultural landscapes (§8.2). In the end, however, their availability for cultural and cosmological elaboration was dependent on exchange networks, linking other parts of Central Italy, including Lazio and perhaps Abruzzo, to a central area of axe production in central-southern Tuscany (§4.1.2; §4.4). Such a strong link with connectivity could partly explain that ‘intermediate’ positions in cultural landscapes (Tables 8.2 & 8.3) were the most appropriate places for axes at deposition.

Above all, the EBA increase in axe depositions and its intimate connection to the historical trajectory of an emergent area of metalwork production underscore that cosmological underpinnings of cultural landscapes (or, relational ontologies) cannot be regarded as static, but should be regarded as an emergent phenomenon that was historically situated in trajectories and related to network changes. Therefore, in the final section (§8.4), an attempt will be made to situate the seemingly static notions of cosmologies (see above) and cultural landscapes (§8.2) in the dynamics inherent in social networks, connectivity and boundary work.

8.4 Historical trajectories: social reproduction and transformation

The issue that remains to be addressed, is the pace (or rate) of network changes for a period with a reconstructed duration of roughly four hundred years (§3.3). The problem of the overrepresentation of ritualised forms of place-making (§8.1; §8.3) is that the specifics of trajectories of community formation are seemingly outside grasp. Given the lack of both funerary evidence (Chapter 5) and excavations of settlements (Chapter 7), even the general demographics remain largely unknown for about fifteen to twenty generations. At present, EBA chronologies and chronological resolution do not allow for a more detailed reconstruction of sequences of ‘events’ than a three-phase comparison. Moreover, the ‘multi-sited’ analysis indicates that EBA cultural landscapes are characterised by a relatively persistent structure (§8.2). The predominant forms of place-making (i.e. cave use and metalwork deposition) tend to occupy intermediate positions in cultural landscapes (Tables 8.2 & 8.3), irrespective of changes in their overall distributions between EBA1 and EBA2 (Figures 8.2, 8.3 & 8.4). Nonetheless, the ‘multi-sited’ analysis did corroborate and substantiate the general impression that changes took place in regional to supra-regional connectivity between the Copper Age and EBA2 (§7.2; §8.2). Here an attempt will be made to reconcile the evidence for changes in connectivity with a seemingly persistent structure of EBA cultural landscapes. First, demographics will be discussed in relation to social reproduction and network changes. Subsequently, it will be argued that the emergence of an area of metalwork production in central-southern Tuscany was not only a ‘prime mover’ in network changes on a supra-regional scale but also reverberated on the regional scale of Abruzzo and Lazio.

Demographics and network changes

In general, persistence in the structure of cultural landscapes suggests that the pace of social change was relatively slow. However, this does not mean that network changes did not occur or cannot be deduced from EBA archaeological records. Before making an assessment of the pace of change in these historical trajectories, the issue of scalarity should be acknowledged (§2.2.3). The ‘multi-sited’ analysis of cultural landscapes (§8.2) is based on a series of distribution maps that ‘collapse’ the timespace continuum of historical trajectories into ‘time-averaged’, singular entities. These misrepresent the trajectories that are inherent in social reproduction, i.e. the abandonment, (re)establishment and/or persistence of places, by which networks are renewed continuously (§2.2.3). Nonetheless, the series of ‘multi-sited’ maps does capture the intergenerational character of cultural landscapes as palimpsests. This accumulative dimension is underscored by the persistent structure of cultural landscapes (Tables 8.2 & 8.3), including ‘gaps’ in overall site distributions in Abruzzo and Lazio (Figures 8.2, 8.3 & 8.4). The notion that the relatively unchanging dimensions of cultural landscapes do make sense in terms of changes in regional and supra-regional connectivity (§8.2) seems counter-intuitive. This paradox of persistence and change derives from the intergenerational character of cultural landscapes as palimpsests and networks. To phrase it differently, the Copper Age situation provided conditions of possibility for the EBA1 situation and, in turn, the latter provided conditions of possibility for the EBA2 situation. Here demographics are relevant as one such a condition, since the number of people involved and their spatial distribution set major conditions for network changes.

Trajectories from the dissolution of ‘old’, Copper Age networks to the emergence of ‘new’, EBA2 networks took about ten EBA1 generations of social reproduction. The general impression of a seemingly ‘concerted’ abandonment of Copper Age cemeteries suggests a dramatic network change (Chapter 5). On the other hand, the relatively consistent evidence for the persistent use of some (but not all) Copper Age open-air sites in EBA1 underscores the intergenerational dimension of network changes (§7.1). In general, a large number, but not all Copper Age places had been abandoned in favour of new, EBA1 places in social reproduction. At the same time, it should be recalled that the majority of EBA1 open-air assemblages tend to be limited in scope (§7.3). Given the decrease in archaeological visibility (including a lack of excavations) of EBA1 open-air sites, with respect to long-lived Copper Age settlements, it seems likely that, in a diachronic sense, settlement dynamics followed shorter periodicities. In other words, EBA1 trajectories of social reproduction and community formation entailed relatively frequent episodes of settlement abandonment and relocation, perhaps following a periodicity of one or two generations at most, and did not result in larger, longer-lived settlements. Based on the presumption that the relatively low archaeological visibility of funerary practices and settlements (§8.1) should be explained in terms of one and the same trajectory, the absence of evidence for contexts of primary burial (Chapter 5) would have been intimately linked to a high degree of intergenerational residential mobility. Different from the Copper Age situation, human

remains ‘failed’ to accumulate in EBA1 in the absence of repetitive use of the same place for burial and in the absence of larger and/or longer-lived settlements. Nonetheless, the ‘disappearance’ of funerary practices from archaeological records with an increase in the degree of intergenerational residential mobility does highlight a significant change in social reproduction. If a similar demographic situation (in terms of number of people) can be presumed for the final Copper Age and the EBA1 situation,³¹⁵ the breakdown of larger and longer-lived Copper Age settlements (§7.3.2) can be equated with the redistribution of people over cultural landscapes in newly established, short-lived EBA1 settlements.

In retrospect, the scenario that network changes at the Copper Age-EBA1 transition followed from intergenerational settlement dynamics, is corroborated by the strong sense of discontinuity in trajectories of open-air sites between EBA1 and EBA2 (§3.1; §7.1). Settlement discontinuity in this case does not equal another change in social reproduction, but the ‘accumulated’ dissolution from Copper Age settlement patterns. To put it differently, the remaining Copper Age open-air sites with evidence for EBA1 persistence were abandoned in EBA2. Although changes had already occurred following the generational rhythms of social reproduction (see above), it is only in EBA2 that a shift in settlement patterns becomes apparent in archaeological records as a definite pattern of discontinuity in trajectories of open-air sites (§3.1; §7.1). In addition to the relatively slight extension of site distributions in the intermontane region at the EBA1-EBA2 transition (§7.2; §8.2), this network change predominantly entails the emergence of new settlement cores. This shift in settlement patterns is most obvious on opposite sides of northern Lazio, with one emergent community to the north of the LOWER ANIENE valley in ‘northern’ southern Lazio and another in northernmost Lazio (Figures 8.4). Again, the misrepresentation of historical trajectories in distribution maps should not be overlooked (see above). Although the situation in ‘coastal’ Lazio looks like a concerted effort in which a larger Copper Age-EBA1 settled community in ‘northern’ southern Lazio fissioned in order to establish new areas of settlement in EBA2, such a ‘concerted effort’ would have taken about ten generations of social reproduction and related settlement dynamics. If a similar demographic situation (in terms of number of people) can be presumed for EBA1 and EBA2, people continued to redistribute themselves in trajectories of community formation over a longer period of time, resulting in the emergence of new settlement cores. What is striking, however, is that the two reconstructed EBA2 settlement cores on opposite sides of northern Lazio were better situated to create regional to supra-regional connectivity than before. This will be discussed in more detail in the context of metallurgical spheres as an emergent phenomenon (see below).

From a network perspective on historical trajectories, the articulation of settlement patterns is not random, but should be regarded as an emergent phenomenon, predicated on conditions of possibility (§2.3.2). In this respect, the number of people involved and their spatial distribution set major conditions for network changes between EBA1 and EBA2. It was argued that, given a historical trajectory of approximately fifteen to twenty generations, network changes were minor and relatively slow and followed the intergenerational rhythms of social reproduction (see above). A conservative estimate of the number of people involved in network changes is a significant constraint in this trajectory, an estimate that can also be deduced from the uneven spatial distributions of settlements. If metalwork deposition and cave use have been interpreted rightly here as ‘intermediate’ forms of place-making in cultural landscapes, the implication is that settlement patterns are characterised by ‘gaps’ and ‘clusters’ (§8.2). The implication is that, similar to the Copper Age situation, a relatively high degree of movement was required in order to create connectivity, on both supra-regional and (sub)regional scales. Nonetheless, minor and slow changes would still have had a major impact in the longer run. Even if the structure of cultural landscapes did not change dramatically (§8.2), the accumulation of minor changes in regional connectivity, following the settlement dynamics inherent in social reproduction (see above), did affect exchange networks, given that these are in the end an epiphenomenon of settlement patterns (§2.2.2). It is this mutually constitutive relationship that will be explored as a conclusion to this synthesis, by making a comparison between changes in connectivity and settlement patterns (§7.2) and metallurgical spheres as an emergent phenomenon (Chapter 4).

Metal-work: connectivity and boundary work

In a discussion of Bronze Age exchange networks (§2.1.2), it was stressed that the ‘biographical’ stages of metalwork – procurement of raw material, production, exchange, (re)use and deposition – were

³¹⁵ The scenario of an increase in rates of mortality due to the potential inception of a climatic ‘dry event’ (e.g. crop failure due to droughts) can be rejected, as its sustained impact was, arguably, only felt in EBA2, if not MBA1 (§3.4).

intimately and intricately linked and should be taken into account all at once (not consecutively). With a Latourian twist here I'd like to introduce the notion of 'metal-work', appreciating the 'real costs' that are involved in creating connectivity in later prehistoric situations. Given population densities and demographics (see above), the 'gaps' that emerged from the 'multi-sited' analysis of EBA cultural landscapes (§8.2), had to be bridged to create social networks (i.e. connectivity between settled communities). They highlight the sort of distances that had to be covered in travel to meeting-places. Persistent 'gaps' in site distributions (Figures 8.2, 8.3 & 8.4) were regarded as 'negatives' (§8.2) that bring those routes to the fore that were used to create connectivity over longer distances. These routes can be further substantiated in terms of metalwork exchange, by making a comparison between the 'multi-sited' analysis (§8.2) and metallurgical spheres as a proxy for supra-regional connectivity (i.e. as networks rather than territorial entities). On a supra-regional scale, two distinctive EBA1 metallurgical spheres were reconstructed on the basis of the compositional signatures of 'horizon II' axe hoards in Central Italy, one sphere on the Tyrrhenian side and the other on the Adriatic side of the peninsula (§4.1.2). It was argued that these metallurgical spheres became articulated (or intersected) in EBA2, with the introduction of metal-hilted daggers from the 'Adriatic' into the 'Tyrrhenian' sphere and 'Tuscan' axes in the opposite direction, both by way of a cross-APENNINE axis presumably through Umbria (§4.4.3).

The reconstruction of this particular route was based on the uneven distribution of axe hoards and metal-hilted daggers (§4.1). Although the respective metallurgical spheres spatially more or less coincided with the 'Adriatic' and 'Tyrrhenian' sides of Central Italy, the emergence of a preferential cross-APENNINE axis for metalwork exchange in EBA2 (§4.4.3) shows that metallurgical spheres did not constitute discrete, spatial entities (in a territorial sense), but were open-ended networks themselves. It is the connecting cross-APENNINE axis that actually articulates the intersection of the Adriatic and Tyrrhenian metallurgical spheres (as networks). It was already argued that the location of the largest metal-hilted dagger hoard (RIPATRANSONE) in southern Marche should not be regarded as random, in the sense that its location coincides with the shortest cross-APENNINE axis in Central Italy from the Adriatic to the Tyrrhenian side of the peninsula, notably to the area of axe and ingot production in southern Tuscany established in EBA1 (§4.1.2; §4.4.2). This scenario is underscored by the emergence of a cross-APENNINE sense of direction in the distribution of EBA2 axe hoards (§4.1.2) and, to a lesser extent, by the extension of metalwork deposition on the Adriatic side of the peninsula from the PESCARA valley to include northern Abruzzo (§4.4.3) towards the hoards (and arguably area of dagger production) in southern Marche. The interpretation of metallurgical spheres as networks connected by the preferential cross-APENNINE axis through Umbria is consistent with the spatial pattern that, from an 'Adriatic' perspective, the distribution of metal-hilted daggers did not extend into southern Tuscany and northern Lazio and did not reach the Tyrrhenian coast. Supra-regional connectivity involving the 'Adriatic' sphere remained on the margins of the 'Tyrrhenian' sphere.

From the perspective of the 'Adriatic' sphere, the isolated finds of metal-hilted daggers in southeastern Tuscany and the dagger hoard (CERVARA ALFINA) in northerneastern Lazio (§4.4.3) can be interpreted as its 'maximum' overlap with the 'Tyrrhenian' sphere. The respective acts of metalwork deposition can be regarded as a form of boundary work related to those meeting-places that were reached in long-distance travel. For the latter, the cult place of LAGO DI MEZZANO in northernmost Lazio and several caves in southeastern Tuscany are likely candidates (§4.4.3), given their implication in the networks based on EBA2 ceramic connectivity (§3.2; Figures 3.3 & 3.4). In addition, the common denominator that cave use and metalwork deposition occupied 'intermediate' positions in cultural landscapes (§8.2), should be recalled. In a regional, 'Tyrrhenian' context, the distribution of metal-hilted daggers highlights an interior axis of connectivity, including the 'isolated' find from the TIBER river near the city of Rome. This relatively large dagger (§4.3; Table 4.21) is spatially associated with the new, EBA2 settlement core to the north of the LOWER ANIENE and seems to underscore that the shift of settlement patterns in 'northern' southern Lazio towards the interior in EBA2 (§7.2; §8.2) facilitated metalwork exchange. This network change followed the conditions of possibility provided by an existing interior axis of connectivity to the emergent area of metalwork production in EBA1 (§4.4.2) and the intensification of metalwork-based traffic along the cross-APENNINE axis through Umbria (§4.4.2). The 'interior' axis outlined by the spatial distribution of metal-hilted daggers was differentiated from a 'coastal' axis in northern Lazio along which 'Tuscan' axes were exchanged to southern Lazio. As reconstructed on the basis of the 'multi-sited' analysis (§8.2), the newly established cult place at PIAN SULTANO fulfilled an instrumental role as a meeting-place in metalwork exchange along the 'coastal' axis, connecting two new, EBA2 settlement cores in 'coastal' Lazio.

In general, it can be expected that network changes between EBA1 and EBA2 (§8.2) are highly compatible with the emergence and articulation of metallurgical spheres. The proliferation of metalwork deposition as a form of place-making in cultural landscapes cannot be disconnected from changes in settlement patterns, if exchange networks are regarded as an epiphenomenon of settlement patterns. Without taking the series of ‘multi-sited’ distribution maps at face value (Figures 8.2, 8.3 & 8.4), they illustrate a high degree of ‘synchronicity’ between the emergence of an area of metalwork production in central-southern Tuscany (§4.1.2; §4.4) and regional trajectories of community formation and/or settlement patterns (§7.2; §8.2). The scenario that changes in settlement patterns in ‘coastal’ Lazio were a concerted, ‘instantaneous’ effort, was rejected, because it disregards the dynamics inherent in social reproduction in historical trajectories (see above). At the same time, the coincidence of changing spatial patterns in exchange networks and settlement patterns in Lazio and Abruzzo does suggest that the ‘metal-work’ scenario provides the best fit for network changes between EBA1 and EBA2. It situates the emergence and extension of the ‘Tuscan’ metallurgical sphere in the same historical trajectory as changing settlement patterns. It also shows in the increasing prominence of metalwork deposition in cultural landscapes, incorporating the EBA hoarding phenomenon. Not only did the emergence of an area of metalwork production in central-southern Tuscany (§4.1.2; §4.4) provide a condition of possibility for network changes in Lazio and Abruzzo (see above), as well as changes in cosmology (§8.3), but these network changes provided – in turn and at the same time – a condition of possibility for the intensification of metalwork production. In other words, the notion of a ‘metal-work’ considers metalwork as a so-called ‘prime mover’ in EBA ‘systems’, creating and changing conditions of possibility, but then conceptualised from a network perspective as historically situated.

Conditions of possibility for the Middle Bronze Age

The aim of the case study and synthesis (Chapters 3-8) was to consider the Early Bronze Age not as a ‘transitional’ period, sandwiched between periods that are characterised by ‘richer’ archaeological records (i.e. the Copper Age and the Middle Bronze Age), but as a historical trajectory of network changes in itself. Given the relatively ‘poor’ character of archaeological records with respect to the Copper Age (§8.1), the reconstruction of EBA trajectories tends to follow the relatively pronounced bias towards deposition. It was argued, however, that working with such a bias as a structural property of EBA archaeological records should not be equated with circular reasoning, since that would be to deny that it constituted a cultural bias and a significant constituent element of past realities. Although new excavations and finds will inevitably change the general state of archaeological knowledge and, by consequence, the results of the ‘multi-sited’ analysis (§8.2), future work will not change the situation that metalwork deposition was a distinctive and prominent form of place-making in EBA cultural landscapes. Similarly, the wider significance of metalwork in terms of changing cosmologies (§8.3) is beyond doubt. Future research also holds the promise that the trajectories of EBA network changes that were put forward in this synthesis, can and will be substantiated further (if not rejected). What remains to be seen is whether the bias towards deposition can, in the end, really be used to substantiate the ‘intermediate’ positions of metalwork deposition and cave use in a ‘zonal’ structure of cultural landscapes, hence their connection with boundary work in social networks (Tables 8.2 & 8.3). This requires future research to remediate the current lack of excavations of EBA open-air sites and the generally low archaeological visibility of EBA funerary practices (§8.1), which in turn will help to bring the reconstruction of sub-regional (perhaps even micro-regional) networks within grasp. For now, the only remedy is to follow historical trajectories and make a detailed diachronic comparison in order to check whether the reconstructed EBA2 situation makes sense as a starting-point (as conditions of possibility) for network changes in the Middle Bronze Age (cf. Van Rossenberg forthcoming). A first step towards such a data-rich diachronic comparison is the extension of the case study to include network changes at the Early-Middle Bronze Age transition (Chapter 9).