Time and Mind: The Journal of Archaeology, Consciousness and Culture
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/rtam20

Megalithic Antithesis: Case Study of the Funerary Monument of Colos (Abrantes, Central Portugal)

Ana Cruz[a], Davide Delfino[b], Filomena Gaspar[c] & Álvaro Batista[c]
[a] Centro de Pré-História/Instituto Politécnico de Tomar
[b] Câmara Municipal de Abrantes-projeto M.I.A.A./Instituto Terra e Memória/Grupo "Quaternário e Pré-História" do Centro de Geociências (CGeo-U.C.)
[c] Câmara Municipal de Abrantes
Published online: 12 Aug 2015.

To cite this article: Ana Cruz, Davide Delfino, Filomena Gaspar & Álvaro Batista (2015) Megalithic Antithesis: Case Study of the Funerary Monument of Colos (Abrantes, Central Portugal), Time and Mind: The Journal of Archaeology, Consciousness and Culture, 8:3, 303-320, DOI: 10.1080/1751696X.2015.1066125

To link to this article: http://dx.doi.org/10.1080/1751696X.2015.1066125

Time & Mind, 2015
Vol. 8, No. 3, 303–320, http://dx.doi.org/10.1080/1751696X.2015.1066125

Routledge
Taylor & Francis Group

Megalithic Antithesis: Case Study of the Funerary Monument of Colos (Abrantes, Central Portugal)

Ana Cruz[a], Davide Delfino[b]*, Filomena Gaspar[c] and Álvaro Batista[c]

[a]Centro de Pré-História/Instituto Politécnico de Tomar; [b]Câmara Municipal de Abrantes-projeto M.I.A.A./Instituto Terra e Memória/Grupo "Quaternário e Pré-História" do Centro de Geociências (CGeo-U.C.); [c]Câmara Municipal de Abrantes

(Received 23 April 2014; accepted 31 March 2015)

In this paper the authors attempt to explain the funerary behaviors of the agro-pastoral societies who lived in Abrantes (Central Portugal) between the Neolithic and the Early Bronze Age. Our aim is to fully understand the Colos site based on archaeographical data and then insert it into a broader, comprehensive context. What makes this case particularly interesting and noteworthy is its lack of visibility in the landscape, situated next to a natural rock outcrop, which is in contrast to the megalithic practice of the time. We wonder if this invisibility and absolute lack of reference to its physical space has some social and cultural connection with a particular agro-pastoral community or if, instead, it is anomalous.

Keywords: atypical monument; funerary; cremation; Neolithic; Chalcolithic

The Physiographic Framework

The funerary monument of Colos (S. Facundo, Abrantes) is located on the western fringe of the Iberian Peninsula (Figure 1) in the Portuguese Middle Tagus region, Santarém district.

*Corresponding author. Email: davdelfino@gmail.com

Figure 1. The Colos site location in Middle Tagus Valley and Iberian Peninsula.
Source: CPH-IPT. (Centro de Pré-História - Instituto Politécnico de Tomar).

The Middle Tagus region is noted for its geomorphological diversity and for the presence of a number of archaeological sites which cannot be typologically categorized using the current archaeological literature. The Jurassic limestone of the Nabão river basin, the Old Massif of the Zêzere river basin and the Quaternary terraces of the Tagus river basin make this one of the most geologically unique areas in Portugal, and this geomorphological diversity is reflected, in a rather interesting way, by the late prehistoric population's behavior to settlement strategies and the architecture of their funerary monuments which is significantly different from other well-known megalithic monuments. The Colos site is unusual because its design and style of burial deposition does not match the other burial monuments recognized in the region – the rural communities of Colos opted for the funerary deposition of cremated (non-containerized) bones and a substantial collection of votive offerings in a well-defined area bounded mostly by a

Figure 2. Area of bones deposition and votive offerings (outlined in small crosses). The dashed line indicates the containment walling ("murete"), and "granito" the natural outcrop. City Archaeological Department of the Municipality of Abrantes.
Source: Álvaro Batista.

stone wall and earth (Figure 2) attached to a large granite outcrop.

This is an unusual case, but noteworthy because of the significance that Late Neolithic-Early Chalcolithic populations gave to prominent rocky outcrops which stood out markedly in the landscape. The *Pedra da Encavalada* (Aldeia do Mato) (Cruz 2011; Cruz, Batista, and Graça 2011) is a good example of this (see later, and Figure 9). In this case, the lithological constraint leads us to a landscape of granite with a small depression in the water line facing west, which defined the burial area. What characterizes both cases (*Pedra da Encavalada* and the Colos site) is their atypical natures, which are clearly different to the standard dolmen design. We have no

doubt that these people knew of the neighboring megalithic phenomenon of Aldeia do Mato (Jogada and Vale Chãos Necropolises) (Cruz 1997; 2013), therefore this monument expresses a pre-determined idea, combined with the soil features and structures, of using a single outcrop to deposit cremated human bones and votive offerings. In fact, there seems to have been a decision to conceal the Colos site within the landscape.

We believe there are at least two aspects to explore in relation to funerary archaeology. On the one hand, the presence of cremations in a period which is otherwise dominated by inhumation burials and, on the other, the seemingly deliberate absence of dolmen-type structures, these being replaced instead by a simple containment wall abutted to a large rocky outcrop; the deposited material was then covered by sediments to protect and hide the remains.

Physical Setting of the Site

On a physiographic and geomorphological level it should be noted that the dominant orientation of the relief in the geographical area of Colos (S. Facundo) is northwest-southeast. On a hydrographic level, the Tagus River, Coalho and Vale das Mós brooks are the closest watercourses to this archaeological site, which is located in an area belonging to Upper Miocene and Pliocene undifferentiated (Zbyszewski, Carvalhosa, and Gonçalves 1981, 26).

Methodology

It was after Álvaro Batista confirmed (March 5, 2012) that the site had been vandalized, that a request for urgent excavation was submitted. The primary objective in this case was as a preventive intervention to attempt to limit the damages the site had undergone and also excavate any artifacts/ecofacts that might still remain *in situ*. The aim of the project was to minimize the bias introduced by vandalism and to attempt to further investigate the area already looked at in 2000 (Gaspar and Batista 2000).

The methodologies adopted were modelled on Philip Barker's (1993) well-known excavation techniques which include digging up by artificial levels of 5cm in thickness, three-dimensionally representing the findings and dry sieving with a 2mm mesh. The grid-square used in 2000 was re-used (Figures 3 and 4).

Archaeological finds

The archaeological finds recovered from the site (Figures 5 to 8) include, variously, small ceramic containers, lithic material, decorated slate plaques and cremated human bones.

Overall, 30% of the finds consisted of raw material, which will be analyzed in order to be sure that this was indeed local and not brought from elsewhere. This includes quartzites, schists, diorites, quartz and amphibolites. As for ecofacts, these consisted of mainly human bones, which accounted for only 14% of the total number of finds. Finally, the artifacts, including lithics and ceramic fragments made up the remaining 56% of the finds.

The majority of the lithics were made from quartzite (43%), followed by flint (34%) quartz (21%) and finally amphibolite (2%). Regarding lithic industry at the site, most of the debris (61%) results from knapping, mostly quartzite, the rest is comprised of blades (16%), all of them fragmented and of trapezoidal section, flints (21%) and arrowheads with triangular base (2%).

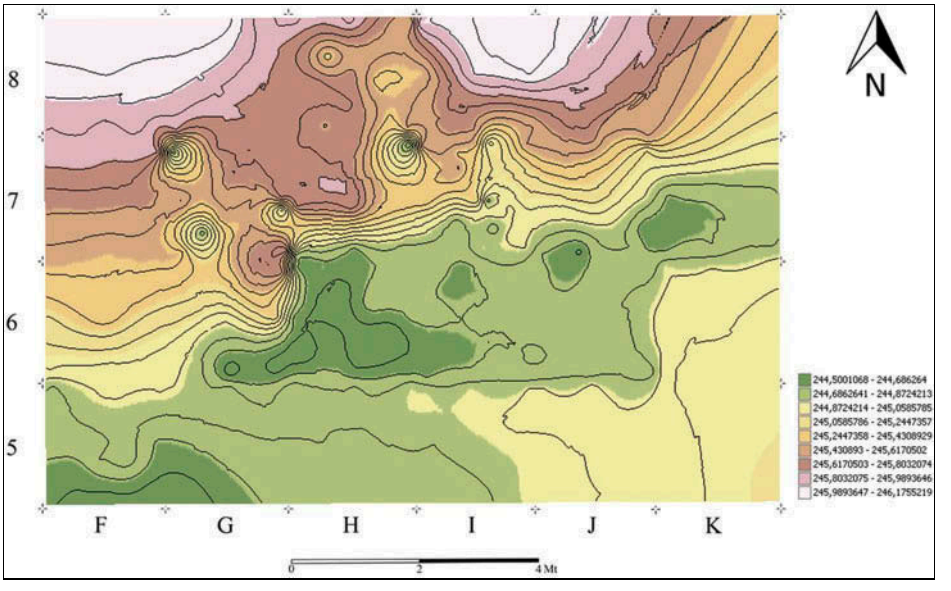

Figure 3. Excavated area.
Source: CPH-IPT.

Figure 4. Removal of the final level of the bone deposition area.
Source: CPH. IPT.

Regarding the ceramic materials, between the first investigation (2000) and the second (2012), some fragments have been recovered which allowed the reconstruction of 30 ceramic forms, but the majority are atypical fragments.

Eight types of forms have been reconstructed using relative chronology and based on parallels:

- Ovoid-shaped cup datable to Middle-Late Neolithic;

Figure 5. Votive offerings: schist plaques with decoration.
Source: City Archaeological Department of the Municipality of Abrantes. Photo: Davide Delfino.

- Tronco-conical-shaped vessel datable to Middle-Late Neolithic;
- Semi-spherical-shaped cups datable to Middle-Late Neolithic;
- Globular bowls datable to Middle-Late Neolithic;
- Cylindrical carinated type I vessels datable to Chalcolithic;
- Carinated type I bowls (Table I) datable to Chalcolithic;
- Carinated type 2 (or Watchtower type) bowls (Table I) datable to Early Bronze Age;
- Carinated type 3 bowls (Table I) datable to Early-Full Bronze Age.

The ceramic material carries strong evidence concerning its re-use across Late Pre-history: after a marked presence of Middle-Late Nolithic forms, the re-use is

Figure 6. Ceramic receptacles.
Source: City Archaeological Department of the Municipality of Abrantes. Photo: Davide Delfino.

materialized in Chalcolithic and Bronze Age forms.

As for pottery vessels production step (*chaîne opératoire*), all together these ceramic fragments have non-plastic elements and can be organized into nine different petrographic groups, probably most of them of local granitic origin (Group V) (Table 2).

The samples excavated during the 2000 investigation revealed human remains that clearly showed signs of a cremation burial and included the remains of four individuals: three adults and one non-adult. One of the adults would have been between 35 and 40 years old while the other was a younger adult. Regarding combustion temperature, temperatures above 440°C and 650°C have been registered (Matos, 2001). The 2012 bone sample was the object of a very limited study due to the scarcity of excavated material. The sample consisted of bone splinters, making it impossible to determine the minimum number of individuals. Based on color analysis, we can establish that the bone fragments were exposed to temperatures above 645°C, although it is worth noting differences within the same color (Tomé, 2013).

The Megalithic Context

The more stable Neolithic economy and the increasing importance of lineage within social dynamics led to the development of megalithic building. At that time, we see a collective attitude towards death that could very well have

Figure 7. Lithic implements: flint halberds and arrowheads.
Source: City Archaeological Department of the Municipality of Abrantes. Photo: Davide Delfino.

Figure 8. Lithic implements: bladed objects.
Source: City Archaeological Department of the Municipality of Abrantes. Photo: Davide Delfino.

mirrored the social and cultural relations in terms of ideology. Collective funerary procedures seem to be imbued not only with regard to kinship, but also by the evocation of a common ancestor.

The Neolithic megalithic culture appears to be a non-linear manifold phenomenon with a *status quo* of its own in Abrantes municipality. The ideological roots from Epipaleolithic times were still

Figure 9. Pedra da Encavalada. This dolmen is partly an artificial megalithic construction, but also uses a natural outcrop for its walls.
Photo: Nuno Miguel Queiroz.

Table 1. Typology of carenated forms.

CAREEN TYPE 1	
CAREEN TYPE 2	
CAREEN TYPE 3	

Source: City Archaeological Department of the Municipality of Abrantes. Davide Delfino.

so strong that in certain examples like Colos, the arrival of new symbolic Megalithic innovation served some regionalist purposes as we can see by the artifacts and ashes depositions. It is precisely within the long course of time (Braudel, 1969) that the Colos site falls, crossing and overlapping ancient cosmological features and new megalithic ideology. We may therefore consider the existence of a mechanism underlying social and religious evolution in rural communities to be "A set of ritual or 'magical-religious' procedures and funerary practices that are materialised in the collectivism of spaces reserved for the dead" (Ventura 1999, 36).

It is now possible to assume that the advent of megalithic monuments dates back to before the dolmen period in Central Alentejo (Scarre et al. 2003, 85; Calado 2004, 249) having been introduced in this region around the 6th Millennium BC and having expanded to northern and southern territories. This expansion would have accompanied the agro-pastoral movement or, rather, the consolidation of Neolithic culture. Calado supports the idea that menhirs precede dolmens in Central Alentejo and goes further by claiming that the increase of rural settlements is contemporary with this

Table 2. Petrographic elements in the pottery.

Petrographic Group	QUARTZ	MICAS	FELDSPARS	CHAMOTTE	MAPHIC ROCKS
I		XX	XX		
II	X		X		XX
III	XX	X			
IV		XX			
V	X	XX	XX		
VI	XX	X	XX	X	
VII		XX	X		X
VIII	XX		X		
IX	X	X	XX		XX

Note: X= present; XX= abundant.

event. He also suggests, in order to build a coherent model, that the Neolithic process would have been rooted in the Mesolithic communities of the Tagus and Sado estuaries, and that by maintaining a high standard of mobility, would have assimilated new technologies through the contact with already Neolithically developed communities of Andalusia and Valencia (Calado 2004, 250). Calado also considers the existence of contacts across the Atlantic seaboard, creating a dual model as a substitute of the "wave of advance model" (Ammerman and Cavalli-Sforza 1984), in which contacts either by land or by sea are considered (Calado 2004, 251). The appearance of menhirs preceding full megalithic culture being an autonomous cultural phenomenon. Also, C.T. da Silva (1997) claims that the core of the megalithic embryo is to be found in the communities already adopting Neolithic traits, where kinship ties were strengthened by the production economy.[1]

As for landscape archaeology, a new specific spatial organization may be observed, which may indicate a probable rupture in society and an ideological turning point as to what these standing stones would have meant for the Neolithic communities. Funerary burial activity is connected to the grouping of individuals, in which several generations belonging to the same community gathered together in the same place of worship. It is very likely that the social organization, despite the same cultural background of the recovered items, has undergone changes during this long period of time which spans the Neolithic and the Chalcolithic, until we reach a change with the Bell-Beaker communities. These changes would however have been progressively reinforced over the fourth and third millennia, but would maintain the same megalithic leitmotif regarding the funerary rituals.

A Comparative Funerary View of Colos

It is worth undertaking a comparative exercise with the megalithic examples of the Middle Tagus region, in an attempt to contextualize the funerary monument of Colos. This will require referring to another atypical megalithic monument – *Pedra da Encavalada* – also located in the

municipality of Abrantes, but built in an area adjacent to the river Zêzere. Based on absolute dating results we consider the construction of this monument (Cruz 2011; Cruz, Batista, and Graça 2011; Cruz 2013) to be prior to the construction of short corridor dolmen monuments. These are exemplified by Vale Chãos megalithic necropolis (Cruz, 2011; Cruz, Batista, and Graça 2011), by Jogada megalithic necropolis (Cruz, 2011; Cruz, Batista, and Graça 2011), Medroa menhir (Gaspar and Batista 2000) and Alqueidão megalithic complex, all of them on the left bank of the Zêzere. On the right side of the Zêzere are the Val da Laje and Pedras Negras dolmen necropolises. Megalithic development would thus be consolidated through the construction of *Pedra da Encavalada* dated from the Fifth Millennium BC, followed by the gradual erection of more complex dolmen structures. We can also cite as an example the contemporaneity of these monuments with others of its kind outside of the Middle Tagus region, such as Chã de Santinhos I (Jorge 1985), the Megalithic complex of Abogalheira (Silva and Cunha 1988), Carapito I (Cruz and Vilaça 1994), Casa da Moura (Zilhão 1998), Orca das Castenairas (Leisner and Ribeiro 1966), Outeiro de Ante 3 (Jorge 1980–1981) and Outeiro de Gregos 2 (Jorge 1980).

Therefore, we can confidently include *Pedra da Encavalada* within pro-megalithic culture not only because of its huge architectural dimensions, but also for the artifacts collected from the burial pits. However, it should be noted that these pits, two meters in diameter and arranged around the whole perimeter of the mound, would have been individual pits, which leads us to assume that, in this crucial phase of the megalithic development in the lower Zêzere region, the collectivization of death, typical of later periods, was not yet present. In what concerns a possible interpretative proposal of this monument, as a function of the archaeographical data, we suppose that an individual burial must have occurred in Structure 1 (single chamber) followed by six pit burials with a stone structure around the whole perimeter of the mound (Structure 2). Absolute dating suggests that these burials were contemporaneous and did not last long in time.

Also in the Middle Tagus region, but on its western karstic landscape, a contemporaneous parallel can be established with Nª. Srª. das Lapas Cave (5.130±140 BP – 4.290–3.672 cal BC 2 sigma – B top, and 6.100±70 BP – 5.230–4.847 cal B.C. 2 sigma – B bottom) (Oosterbeek 1994), where two individual burials pits bounded by limestone blocks has been found, and the Earlier Neolithic strata of Caldeirão Cave (Zilhão 1992).

Interpretation

Colos is an archaeological site that no similar or equal example can be found in the Portuguese archaeological literature, which makes it so far a unique monument of its kind.

Even when we label it as "monument" we are not sure if we should call the place where the artifacts and ecofacts have been collected a monument or rather simply the natural feature of the granitic outcrop. In other words, we can theorize that this particular rock outcrop would initially have held a particular meaning for the agro-pastoral communities of Colos, who would

"read" the landscape in its context and would, in a second phase, attach to it a specific, perhaps numinous, feeling associated with death (or, if you like, an afterlife). If this is true, intensive prospecting will be required in an attempt to locate large outcrops that may also be places of burials – the apparent significance of natural outcrops has been noted in other European examples (e.g., Shepherd 2013; Devereux and Wozencroft 2014). After all, if there is one archaeological site (i.e., Colos) with these features, we can hypothesize the existence of other similar sites. Considering the richness of the collection recovered at Colos in 2000, especially the size of the blades and flints (that are up to 25cm long), and, comparing them with lithic industry elsewhere in the municipality of Abrantes, it is clear that the Colos collection comprises high-value items originating from outside the Tagus valley. This implies the presence of at least one neighboring settlement whose characteristics would be consistent with the richness of the artifacts of those buried in Colos.[2]

The walls identified in the area where the artifacts were recovered in 2000 could easily be considered as structures surrounding them. This votive deposition of artifacts and ecofacts virtually placed against the rock outcrop confers on it a symbolic nature which cannot be ignored. One must, therefore, consider that the deposition of these grave goods along with the remains of human bones may be a conscious and deliberate action. These considerations lead us to think on *Pedra da Encavalada* that was also found attached to a large outcrop and which acted as a pivot for the construction of the closed chamber using other orthostats.

The second consideration has to do with the phenomenon of cremation, which in itself is nothing new in the Neolithic and Chalcolithic, as is witnessed for example by the settlement of Perdigões in Reguengos de Monsaraz (Valera and Silva 2011, 8), which would later (Late Bronze Age) arise in Abrantes, more precisely in the basin of the Zêzere, as can be seen in the *tumuli* already excavated (Cruz 2011). It is meaningful that the cremated remains at Colos and Perdigões are spread throughout the burial area, almost as if they were collective burial remains, in contrast to those of the Late Bronze Age *tumuli* which were collected in cinerary urns. Such disposal of the physical body through fire can also be regarded as having symbolic connotations, although cremation is not so frequent in this particular phase of recent prehistory. We are therefore in the presence of a different funerary ritual concerning the megalithic ones. The relative dating of pottery is also evidence of its continuing use since the Middle Neolithic to the Bronze Age.

Interestingly, a little later (Late Bronze Age), and also within the Abrantes territory, containerized cremation deposits protected by a lithic armor of large quartz and quartzite clasts is to be found (Cruz 2011). Colos, as well as Perdigões (Valera and Silva 2011), are the predecessors of this new ideological attitude towards death that breaks with the dolmen burial pattern between the late Third Millennium BC and the late Second Millennium BC in the Portuguese Middle Tagus region.

Further consideration leads us to the type of material exhumed, not only in this present investigation but, and especially, in

the research from 2000, such as materials belonging to agro-pastoral communities, which in terms of relative chronology can be considered as contemporaneous with Late Neolithic – Early Chalcolithic. The existence of slate plaques, typically native, are a grave goods element well known in Western Iberian, thus justifying the assigning of this site to the dawn of megalithic ideology in this region.

The presence of typically megalithic grave goods (slate plaques and ceramic plain globular forms) along with Chalcolithic and Early Bronze Age material (low-carinated forms) reminds of the cultural horizons of Ferradeira and Montelavar (Cardoso 2002) that imply an even more interesting approach: (1) the continuity of funerary use at Colos from the Late Neolithic to circa the Early Bronze Age; (2) the possible absence of the bell beaker culture south of the Tagus river, considering that it has been suggested that there are areas in Portugal without bell beaker culture such as Beira Baixa (Vilaça 1995,128).

The fourth consideration concerns the absence of megaliths in this region, even though suitable raw material for the construction of dolmens and menhirs abounds. This is, in fact, a region in which granite is readily available and it seems strange that, instead of building a megalithic monument, our ancestors have consciously and deliberately opted for using a natural outcrop for votive deposition.

Death, Cosmology and Religion

Undoubtedly, Colos reflects a religious approach towards death that is different from the typical Megalithic approaches. The case study of the site implies not only an archaeographical approach, but also a cosmological and philosophical-religious approach to the possible beliefs of the community while attempting to arrive at an interpretation based on the archaeological remains of funerary practices. It seems possible to provide an interpretation of the social and cultural organization of the community who buried their dead at Colos. We have to understand how cultural manifestations materialize in ritual funerary gestures recorded archaeographically.

We know that the ethnographic parallels are used with some frequency during the study of religions (Renfrew and Zubrow 1994; Johnson 1999; Kaliff 2007). However, there is nothing in common between the studied communities within a geographic context and a specific historical period of agro-pastoral communities in the Portuguese Neolithic, Chalcolithic and Early Bronze Age periods. In fact, we even think that the similarities that may exist may have had a diverse meaning.

Although we are fully aware that this twenty-first-century interpretation of what Colos was about may not correspond to the reality of many thousands of years ago, we dare to consider this site of deposition attached to the granite outcrop as a sacred place, a place with a special religious significance for the group of people engaging in the funerary ritual.

Richard Bradley (2005, 28–36) takes a particular position when advocating the non-separation between ritual environment and home environment, i.e., he does not claim a clear-cut separation between the sacred and the profane, but he rather considers that these are concepts that may help understand the rituals practiced in pre-historical societies. Although we agree with Bradley's claim of not establishing a clear-cut separation between the sacred and the profane, we are obliged to consider that in this particular case of Colos there seems to have

been a true separation between the place of the dead and the place of the living, because no evidence of population or habitat has been found in the vicinity of the site. But perhaps we can justify this topographical location with the need to sanctify the landscape through ritual. Following this approach, it seems to us that the funerary deposition in specific locations took place there because the communities already viewed them as sacred (Kaliff 2007, 80). We therefore dare to consider that specific outcrops that stand out in the landscape would be at the same time topographical references and ritual spaces. Thus this peculiar situation of the votive deposition at Colos (Frisberg 2005; Widholm 2006, 55) could be explained. We believe that agro-pastoral communities would have topographical references in the landscape whose meaning would be far beyond mundane aspects. These landscape elements would have a transcendental importance as a previous cultural and cosmological reference and also in these places rites, not only funerary but also votive, would have been performed, whose details are unknown to us but which would have been peculiar to the cosmology of those communities.

From a strictly archaeographical point of view of the Colos site, we can in summary observe and record its orientation relative to the Ribeira de Coalhos and Ribeira de Vale das Mós as the nearest water courses and also relative to the river Tagus, the orientation of the stone structure relative to the outcrop and its topographical location, the roughly circular site plan, the site size and materials used (blocks of diorite), and the small number of individuals buried (four).

Seen through its material remains, Colos reflects a new vision: a "two-speed" megalithic culture: one the typically dolmen-style structures as we know it, not only in Portugal but also elsewhere in Europe, and the other, a silent and discreet form of megalithic activity which merges with the landscape itself, of which this site is an example.

As has been discussed, what we find in Colos is a very simple burial stone structure compared with the dolmen mega-constructions in solid stone but, in contrast, one that is very rich from the point of view of the exhumed collection. Also with regard to the excavated artifacts, it becomes necessary, on the matter of cosmologies, to question whether the depositions are carried out with the intent to gratify the deceased offering the goods that belonged to him/her or, rather, the depositions were made with a higher purpose, to please the gods (Hedeager 1992; Kaliff 2007, 84, 167–170).

In cosmological terms we agree with Hertz (1907) when he advocates that religious beliefs would come together with social reality and organization. It seems to us that a juxtaposition of the religious reality of these agro-pastoral communities of Colos and their social, political and economical environment constituted a whole which must be interpreted as such. It is also important to stress the importance of Blau's (1970) systems theory to format the social organization model and the relationships between the various social dimensions, of Tainter's (1978) interpretation of the consumption of energy in funerary rituals, of Goldstein's (1976, 1981) interpretation of the spatial structure of cemeteries and O'Shea's (1981, 1984) assessment of

taphonomic processes in archaeological contexts.

In the para-megalithic setting of Colos, together with its atypicality, Binford (1971, 7) gives us clues related to the causality and relative permanence or radical change in social organization suggesting that there may be a cultural correlation between social complexity and the extent of the social organization reflected in burial practices. We can also add that, within an idealistic perspective (Durkheim 1938, 97–112), it is very likely that there is a match between the different funerary behaviors observed and differences in religious beliefs. However, it seems more logical to us, following Binford (1971, 16), that mortuary behaviors will be explained on the grounds of social organization, rather than religious beliefs.

Acknowledgements

The authors would like to thank Dr Gustavo Portocarrero and Ana Graça for the English translation and also Abigail George and Paul Devereux for the necessary further English corrections.

Notes

1. The examples of menhir aesthetic architecture are manifold. Major examples include: the Cromlech of Xerez (Gomes 2000), the Cromlech of Almendres (Gomes 2002), the Cromlech of Portela de Mogos (Gomes 1997), the megalithic enclosure of Vale Maria do Meio (Calado 2000), the megalithic enclosure of Fontainhas (Calado, Rocha, and Alvim 2007) and the settlement of Perdigões (Lago et al. 1998). One can perceive an almost contemporaneity in dolmen megaliths in Northern, Central and Southern Portugal, which is clear evidence of the significant development that occurred in the Fifth Millennium BC. Examples include the sites of Meninas do Crasto 2 (Jorge 1983), Outeiro de Ante 3 (Jorge et al. 1988–1989), Outeiro de Ante 2 (Gonçalves 1984), Outeiro de Gregos 2 (Jorge 1982), Outeiro de Gregos 3 (Jorge 1979), Lapa do Fumo (Soares and Cabral 1993). This megalithic practice consolidated during the Fourth Millennium extending to the 3rd Millennium.
2. This also implies the manifestation of a dual "power" by those who were buried with these artifacts: (1) Ability to trade with regions outside the Tagus Valley (large-size flint artifacts) such as Rio Maior located in the Portuguese Estremadura; (2) Social power within their own communities, in order to have high-quality artifacts in their own interment (halberds, daggers and the long flint blades) (Batista 2012, 14–19). The symbolism that emerges, and which may define the ruling elite itself, is also very clear: elites of warriors, the majority of the items being daggers, arrowheads and halberds. Another consideration concerns the use of raw-material for specific objects: some flint weapons such as halberds are not made to be used (because of the mechanical properties of flint) and others, such as daggers mimic types of daggers made of copper or arsenical copper (with a triangular base or riveted) (Rovira Llorenz, Montero Ruiz, and Rodriguez Consuegra 1997, 88, 130, 143, 176; Blas Cortina 1999, 48; Delibes de Castro, Fernandez Manzano and Herrán Martinez, 1997, 75). This suggests that different raw materials were used by the living (metal) and the dead (flint).

Notes on Contributors

Ana Cruz is a specialist in Middle Tagus Recent Prehistory. Graded in History at Lisbon University; Master in Archaeology–Landscape and Management at Minho University; PhD in "Quaternary: Materials and Cultures" University of Trás-os-Montes e Alto Douro. Director of Centro de Pré-História do Instituto Politécnico de Tomar. Lecturer in Didactics in Archaeology and Museography at Tomar's Polytechnic Institute. Researcher at the Geosciences Center of Coimbra University.

Davide Delfino graded in Heritage in Genoa University and Specialized in Pre and Protohistoric Archaeology in Milan University, is PhD in "Quaternary: Materials and Cultures" for UTAD (Portugal). Specialist in Bronze and

Iron Age and in the study of material culture. Was an advisor in Archaeological Superintendence of Liguria (Italy) between 1999 and 2007, and today is an advisor for archaeological projects in Abrantes Municipality, lecturer in Pottery Study at the Polytechnic Institute of Tomar and a researcher in the Land and Memory Institute and in the Geosciences Center of Coimbra University.

Filomena Gaspar graded in Archaeology for Coimbra University. Archaeologist of Abrantes Municipality and curator of Municipal Museum "Lopo de Almeida" in Abrantes.Álvaro Batista graded in Territory Management and a BA Student in Prehistoric Archaeology and Rock Art for Polytechnic Institute of Tomar. Technical in Archaeology of Abrantes Municipality.

References

Ammerman A., and L. Cavalli-Sforza. 1984. *The Neolithic Transition and the Genetics of Population in Europe*. Princeton: Princeton University Press.

Barker, P. 1993. *Techniques of Archaeological Excavation*. London: Batsford.

Batista, A. 2012. "Sinais da importância da pedra na evolução humana na região de Abrantes." *Museu Ibérico de Arqueologia e Arte, Antevisão IV*, 9–33. Abrantes: Câmara Municipal de Abrantes.

Binford, L. R. 1971. "Mortuary Practices: Their Study and Their Potential." *Society for American Archaeology, Memoirs* 25: 6–29.

Blas Cortina, M. A. 1999. "Asturias y Cantabria." In *Las primeras etapas metalúrgicas en la Peninsula Iberica. Estudios Regionales*, edited by G. Delibes de Castro and I. Montero Ruiz, vol. 2, 41–62. Madrid: Instituto Universitario Ortega y Gasset.

Bradley, R. 2005. *Ritual and Domestic Life in Prehistoric Europe*. London: Routledge.

Braudel, F. 1969. *Écrits Sur L'Histoire*. Paris: Flammarion.

Calado, M. 2000. "O Recinto Megalítico de Vale Maria do Meio (Évora, Alentejo)." *Actas do Iº Colóquio Internacional sobre Megalitismo (Monsaraz, 1996)*, 167–182. Lisboa: Instituto Português de Arqueologia.

Calado, M. 2004. Menires do Alentejo Central. Accessed August 4, 2008. http://www.crookscpe.org/tesemc/Vol.1.pdf

Calado, M., and L. Rocha. 2007. "Menires e Neolitização: História da Investigação no Algarve." *Xelb* 7, 75–88. Silves: Câmara Municipal de Silves/Museu Municipal de Arqueologia.

Cardoso, J. L. 2002. *Pré-História de Portugal*. Lisboa: Verbo.

Cruz, A. 1997. *Vale do Nabão. Do Neolítico à Idade do Bronze*, in *Arkeos*, 3. Tomar: Centro Europeu de Investigação da Pré-História do Alto Ribatejo.

Cruz, A. 2011. *A Pré-História Recente do vale do baixo Zêzere*, in *Arkeos*, 30. Tomar: Centro Europeu de Investigação da Pré-História do Alto Ribatejo.

Cruz, A. 2013. "The Settlements of Fontes and Pedra da Encavalada – Key Sites for the Neolithization of North Ribatejo (Portugal)." In *Iº Congresso de Arqueologia do Alto Ribatejo – Homenagem a José da Silva Gome*, edited by A. Cruz, A. Graça, L. Oosterbeek and P. Rosina *Arkeoss*, 34. 79–93. Tomar: CEIPHAR.

Cruz, A., A. Batista, and A. Graça. 2011. "Recent Prehistory and Protohistory in Abrantes and Constância council (Portuguese Middle Tagus) – The Research Preliminary State." In *From the Origins: The Prehistory of the Inner Tagus Region*, edited by P. Bueno Ramirez, E. Cerrillo Cuenca, A. Gonzalez Cordero, 93–109. BAR International Series 2219. Oxford: Archaeopress.

Cruz, D. J., and R. Vilaça. 1994. "Dólmen I do Carapito (Aguiar da Beira, Guarda): Novas Datações de Carbono 14." *Actas do Seminário O Megalitismo no Centro de Portugal (Mangualde, Novembro de 1992)*, 63–68. Viseu: Centro de Estudos Pré-Históricos da Beira Alta.

Delibes de Castro, G., J. Fernández Manzano, and J. I. Herrán Martinez. 1999. "Submeseta Norte." In *Las primeras etapas metalúrgicas en la Peninsula Iberica. Estudios Regionales*, edited by G. Delibes de Castro and I. Montero Ruiz, vol. 2, 64–94. Madrid: Istituto Universitario Ortega y Gasset.

Devereux, P., and J. Wozencroft. 2014. "Stone Age Eyes and Ears: A Visual and Acoustic Pilot Study of Carn Menyn and Environs, Preseli, Wales." *Time & Mind* 7 (1): 47–70.

Durkheim, E. (1912) 1915. *The Elementary Forms of the Religious Life*. London: George Allen and Unwin.

Frisberg, K. H. 2005. "Where are the Dead? Empty Graves from Early Iron Age Uppland." In *Dealing with the Dead. Archaeological Perspectives on Prehistoric Scandinavian Burial Ritual*, edited by T. Artelius and F. Svanberg, 143–158. *Riksantikvarieambetet arkeologiska undersokningar skrifter*, 65, Stockholm: The Swedish National Heritage Board – The Museum of National Antiquities in Sweden.

Gaspar, F., and A. Batista. 2000. "Relatório Técnico de Arqueologia." Fieldwork report sent to Instituto Portugês de Arqueologia, Lisbon.

Goldstein, L. G. 1981. "One-Dimensional Archaeology and Multi-Dimensional People: Spatial Organization and Mortuary Analysis." In *The Archaeology of Death*, edited by R. Chapman, I. Kinnes, and K. Randsborg, 53–70. Cambridge: Cambridge University Press.

Gomes, M. V. 1997. "Cromeleque da Portela do Mogos. Um Monumento Sócio – religioso Megalítico." In *Paisagens Arqueológicas a Oeste de Évora*, edited by P. Sarantopolous, 35–40. Évora: Câmara Municipal de Évora.

Gomes, M. V., 2000. "Cromeleque do Xerez. A ordenação do caos." In *Das Pedras do Xerez às Novas Terras da Luz*, edited by A. C. Silva, 17–190. Beja: EDIA.

Gomes, M. V. 2002. *Cromeleque dos Almendres. Um Monumento Sócio-Religioso Neolítico*. Lisboa: Faculdade de Ciências Sociais e Humanas da Universidade Técnica de Lisboa.

Gonçalves, A. 1984. "Escavação da Mamoa 2 de Outeiro de Ante – Serra da Aboboreira – Baião." *Arqueologia* 9: 22–44.

Hertz, R. 1907. "Contribution a une 6tude sur la representation collective de la mort." *Année Sociologique* 10: 48–137.

Johnson, M. 1999. *Archaeological Theory: An Introduction*. Oxford & Malden, MA: Blackwell.

Jorge, V. O. 1979. "O Megalitismo do Norte de Portugal. Actas da 1ª Mesa Redonda sobre o neolítico e o Calcolítico em Portugal (Porto, Abril de 1978)." *Trabalhos do Grupo de Estudos Arqueológicos do Porto* 3: 83–102.

Jorge, V. O. 1980. "Mamoa 2 de Outeiro de Gregos: Serra da Aboboreira, Baião." *Revista de Guimarães* 90: 190–209.

Jorge, V. O. 1980–1981. "Escavação da Mamoa 1 de Outeiro de Ante. Serra da Aboboreira, Baião." *Setúbal Arqueológica* 6–7.

Jorge, V. O. 1982. "Mamoa 2 de Outeiro de Gregos." *Informação Arqueológica* 2: 62–63.

Jorge, V. O. 1983. "Escavação das Mamoas 2 e 4 de Meninas do Crasto, Serra da Aboboreira." *Arqueologia* 7: 30–39.

Jorge, V. O. 1985. "Les Tumulus de Chã de Santinhos (ensemble megalithiques de Serra da Aboboreira, Nord du Portugal)." *Arqueologia* 12: 96–128.

Jorge, V. O., S. Jorge, I. Figueiral, G. Delibrias, M. Fontugne, P. Cabral, and M. Soares. 1988–1989. "Novos Elementos sobre o Megalitismo da Serra da Aboboreira (Baião)." *Portugália*, Nova Série, 9–10:101–109.

Kaliff, A. 2007. *Fire, Water, Heaven and Earth: Ritual Practice and Cosmology in Ancient Scandinavia: An Indo-European Perspective*. Stockholm: Riksantikvarieambetet & Oxford: Oxbow Books.

Lago, M., C. Duarte, A. Valera, J. Albergaria, F. Almeida, and A. F. Carvalho. 1998. "Povoado dos Perdigões (Reguengos de Monsaraz: dados preliminares dos trabalhos arqueológicos realizados em 1997)." *Revista Portuguesa de Arqueologia* 1 (1): 45–152.

Leisner, V., and L. Ribeiro. 1966. "A Escavação do Dólmen – Orca de Castenairas, Fráguas – Vila Nova de Paiva." *Actas do IVº Colóquio Portuense de Arqueologia. Lucerna*, in *Cadernos de Arqueologia do Centro de Estudos Humanísticos* 5: 376–382.

Matos, V. 2001. "Relatório Técnico de Antropologia." Fieldwork report sent to Instituto Portugês de Arqueologia, Lisbon.

O'Shea, J. 1981. "Social Configurations and the Archaeological Study of Mortuary Practices: A Case Study." In *The Archaeology of Death*, edited by R. Chapman, I. Kinnes, and I. Randsborg, 39–52. Cambridge: Cambridge University Press.

O'Shea, J. 1984. *Mortuary Variability: An Archaeological Investigation*. New York: Academic Press.

Oosterbeek, L. 1994. "Echoes from the East: The Western network. North Ribatejo (Portugal): An Insight To Unequal End Combined Development, 7,000–2,000 BC." PhD diss., University College London.

Renfrew, C., and E. B. W. Zubrow, eds. 1994. *The Ancient Mind: Elements of Cognitive Archaeology*. Cambridge & New York: Cambridge University Press.

Rovira Llorenz, S., I. Montero Ruiz, and S. Consuegra Rodriguez. 1997. *Las primeras etapas metalurgicas en la Peninsula Iberica*, Vol. I. Madrid: Instituto Universitario Ortega y Gasset.

Scarre, C., P. Arias, G. Burenhult, M. Fano, L. Oosterbeek, R. Schulting, A. Sheridan, and A. Whittle. 2003. "Megalithic Chronologies." In *Stones andBones. Formal disposal of the dead in Atlantic Europe during the Mesolithic-Neolithic interface 6000-3000 BC*, edited by G Burenhult, 65–112. Oxford: Archaeo press.

Shepherd, D. 2013. "Propped Stones: The Modifications of Natural Features and the Construction of Place." *Time & Mind* 6 (3): 263–286.

Silva, E. J., and A. M. Cunha. 1988. "O Núcleo Megalítico da Abogalheira." *Arqueologia* 17: 40–44.

Silva, C. T. 1997. "O Neolítico Antigo e a Origem do Megalitismo no Sul de Portugal." In *O Neolítico Atlântico e as Orixes do Megalitismo*, edited by Rodriguez Casal, 575–585. Santiago de Compostela: Universidade de Santiago de Compostela.

Soares, A. M., and J. Cabral. 1993. "Cronologia Absoluta para o Calcolítico da Estremadura e do Sul de Portugal." *Actas do I° Congresso de Arqueologia Peninsular*, in *Trabalhos de Antropologia e Arqueologia*, 33 (3–4), 217–235. Porto: SPAE.

Tainter, J. A. 1978. "Mortuary Practices and the Study of Prehistoric Social Systems." *Advances in Archaeological Method and Theory* 1: 105–141.

Tomé, T. 2013. "Monumento Funerário de Colos (São Facundo, Abrantes)." Technical anthropological report sent to Instituto Portugês de Arqueologia, Lisbon.

Valera, A., and A. Silva. 2011. "Datações de Radiocarbono para os Perdigões (1): Contextos com Restos Humanos nos Sectores 1 & Q." *Apontamentos de Arqueologia e Património* 7: 7–14.

Ventura, J. 1999. "Monumentalidade e visibilidade nos sepulcros megalíticos da plataforma do Mondego." *Trabalhos de Arqueologia da EAM* 5: 35–49.

Vilaça, R. 1995. "A Idade do Bronze na Beira Baixa." In *A Idade do Bronze em Portugal. Discursos de poder*, edited by S. Oliveira Jorge, 127–130. Exposition catalogue in National Museum of Archaeology, Lisbon: IPM-MNA.

Widholm, D. 2006. *Sacred Sites: Burial Customs* in *South Scandinavian Bronze and Iron Age Report series* 95; Lund: Department of Archaeology and Ancient History, University of Lund.

Zbyszewski, G., A. Carvalhosa, and F. Gonçalves. 1981. *Carta Geológica de Portugal na escala 1: 50.000. Notícia Explicativa da Folha 28-C (Gavião)*. Lisboa: Direcção Geral de Geologia e Minas, Serviços Geológicos de Portugal.

Zilhão, J. C. 1992. "Gruta do Caldeirão. O Neolítico Antigo." *Trabalhos de Arqueologia* 6.

Zilhão, J. C. 1998. "A Passagem do Mesolítico ao Neolítico na Costa do Alentejo." *Revista Portuguesa de Arqueologia* 1 (1): 27–44.