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This volume

This volume comprises the proceedings of an international workshop that took place at the UCLouvain in Belgium on the 8th and 9th of December 2016. This workshop addressed the topic of collective burial practices, focusing on two main questions: "Who are the deceased buried together in collective tombs?" and "Why are these deceased buried collectively?" Archaeologists, ethnologists and ethnoarchaeologists were thus invited to discuss the identity of the deceased deposited in collective burial places, as well as the ideological and social motivations for gathering the dead in the same tomb over several generations. The chapters in the volume examine case studies ranging from contemporary Madagascar and Austronesia to the Prehistoric Mediterranean and Dynastic Europe. They also reinitiate discussions regarding the potential of archaeological and anthropobiological datasets to approach social organization among past populations.

The editors

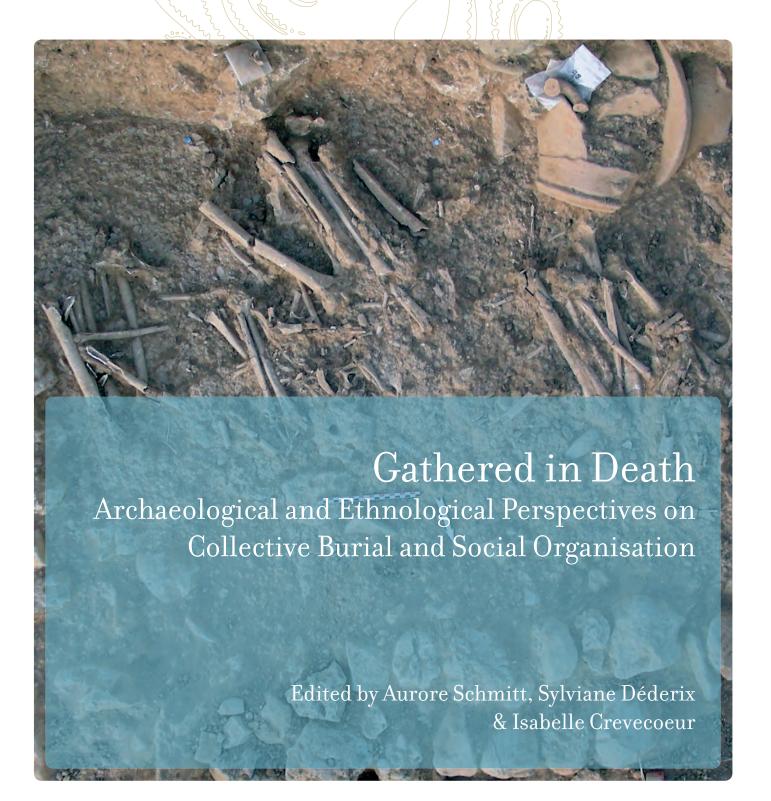
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The series AEGIS (Aegean Interdisciplinary Studies) attempts to make the results of new archaeological research on Aegean and especially Minoan societies available to the scientific and wider public at a rapid pace. Monographs, PhD dissertations, proceedings of scientific meetings and excavation reports complete each other to offer a general view of this time frame which is of primary importance to understand the ancient world and its historical, political, symbolical and social sequences.









Sathered in Death

Gathered in Death

Archaeological and Ethnological Perspectives on

Collective Burial and Social Organisation

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Burial and Social Organisation

Edited by Aurore Schmitt, Sylviane Déderix & Isabelle Crevecoeur



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(A. Schmitt)

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7. 101 Ways of Creating Collective Burials

The Exceptional Cretan Tombs in the Context of the 3rd Millennium BC Mediterranean

Borja Legarra Herrero¹

Introduction

Large collective tombs² seem to be a popular feature across the Mediterranean and most of continental Europe from the end of the Neolithic into the first phases of the Bronze Age (*ca.* 4000-2000 BC). Collective burial deposits were just one of the several types of interments that formed the complex funerary customs of the period, but their significance at this time is unparalleled in European history since. Amongst the popularity of collective tombs in the 4th and 3rd millennium BC, Crete proves to be exceptional due to the almost exclusive use of tombs with commingled burial deposits for more than a millennium (*ca.* 3200-1800 BC; see **figure 7.1** for chronology), which contrasts starkly against the burial variability in most other Mediterranean regions.

At the same time, this is a millennium in which the island's communities saw major changes in their size and complexity with significant developments in demography, settlement patterns, economic and political organisation. One cannot but feel that the effort and resources put on the Cretan collective tombs mark them as an important social arena at the forefront of these changes and that the exceptional burial record may have played a role in the development and sustainability of complex societies in the island at a moment when these were extremely rare across the Mediterranean.

This article analyses this Cretan exceptionality in its Mediterranean context by reviewing the newly published bioarchaeological and taphonomic data from the tombs and contextualising it within the rich knowledge of the funerary record that has been developed in the last two decades.

1. Mediterranean collective tombs and their importance

The papers in this volume make clear that 'collective tomb' is a loose term that can be applied to a wide range of phenomena. Collective tombs can differ in a number of traits such as the amount of interments, the age and gender structure of interred populations and the manipulation of the human remains before their final deposition. The bioarchaeological analyses presented in the workshop left clear that commingled deposits are the archaeological visible end of very variable *chaînes funéraires – i.e.* the sequences of human practices that constituted the funerary process and helped to produce the burial deposits as discovered by the archaeologist; the term does not include non-human processes. Different practices and processes can create archaeological burial deposits with a similar appearance. The rich ethnographic examples presented in the conference also showed that collective deposits are used by cultures with very diverse ideological takes on death and they respond to a broad range of social concerns. Concepts such as ancestry, commonly used in relation to collective tombs, can represent a collection of meanings and situations: in some cases, ancestors are just vague reminders of things past, while in others they are active agents that have an impact on living populations (Whitley 2002). The case of Madagascar illustrates well this variability as collective burial practices by neighbouring communities mark divergent ideas about death and play different social roles (Bloch 1971; Jindra & Noret 2011).

On the other hand, understanding the preference for collective tombs in the Mediterranean solely in a local manner feels like a missed opportunity. Collective tombs became popular at a comparable historical moment, the end of the Neolithic, when indications of social, political and economic complexity appeared in most Mediterranean populations (Broodbank 2013), suggesting a possible link between both phenomena. The repercussions of

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² I use here the term 'collective tomb' to refer to buildings that contained a significant number of disturbed human interments in commingled deposits.

domestication and increasing sedentism were felt by Mediterranean societies long after their first adoption. An infilling landscape limited problem-solving social strategies such as fission and relocation to new parts of the landscape. There was an increasing investment of effort in agriculture with the use of traction animals, more demanding preparation of soils, *etc.* that dissuaded mobility, particularly as prime agricultural areas may not have been available anymore (Tomkins 2004; Halstead 2008). Organic demographic growth presented also challenges in internal structure and resource exploitation that impacted interactions with neighbouring communities (when to hoard, when to share; Halstead 1995; Halstead & Isaakidou 2011). As mobility became increasingly restricted and competition for resources with neighbouring groups escalated, communities may have found that identities attached to a geographic locale and to co-residence were becoming more important. Being part of a well-respected or feared community could strengthen the position of individuals in social and economic interactions at the regional level.

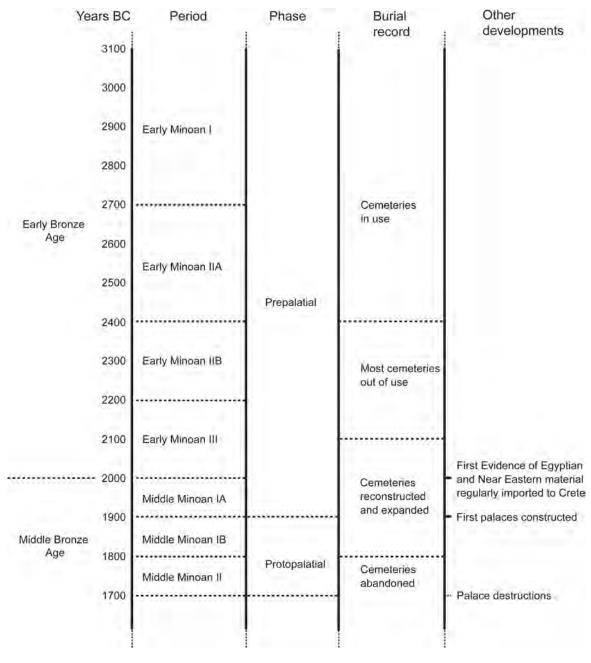


Fig. 7.1 Cretan Chronology (based on Manning 2010: 23, table 2.2)

These ongoing tensions between the securing of basic resources, interaction, and a number of nested identities were never really resolved, not just because external causes such as climate uncertainty prevented long lasting solutions, but also due to human nature and the eternal shifting of social relationships. It was in this developing situation that several Mediterranean communities may have found collective burial a useful social practice that helped them to navigate the ongoing challenges that domestication and sedentism had brought. Collective burials in Chalcolithic Spain, Neolithic Malta or Early Bronze Age Crete may have been part of the repertoire of strategies that aimed to deal with comparable social issues about territoriality, organisation of resource exploitation, community versus kinship identities and interaction beyond the community. It is in this period that some exceptional settlement patterns are also found that suggest exploratory solutions to the new challenges. For example, the megasites of Chalcolithic Iberia with large ditches and walls delimited sparsely inhabited areas (Máquez Romero & Jiménez Jáimez 2010), a settlement structure that finds parallels in places like the Neolithic Tavoliere (Skeates 2001) or Manika, in the Early Bronze Aegean (Sampson 1988). In other regions, the opposite solution was favoured, such as the tightly clustered tell communities of Neolithic Thessaly (Perlès & Johnson 2004) and compact settlements on hilltops in Argaric Iberia (Aranda Jiménez *et alii* 2015).

2. Cretan exceptionality

Crete stands out in this general picture for two reasons: first, the use of collective burial was almost exclusive in the archaeological record; second, this custom lasted for more than 1000 years (**Fig. 7.1**). This pattern was unmatched by nearby populations despite the Southern Aegean (Peloponnese, Cyclades, Crete, Dodecanese and South-Western Anatolia) being a densely connected region already in the Neolithic. Reviews of burial habits in the Peloponnese (Cavanagh & Mee 1998; Cultraro 2007; Weiberg 2007) show that a significant amount of cemeteries were formed by individual tombs or by tombs with a small number of primary interments. In the Cyclades, tombs with large amounts of commingled bones are unknown, and the cemeteries were normally formed by small tombs with one or two interments (Doumas 1977). In the Eastern Aegean, a similar picture emerges, in this case with the use of individual pithos burials (Massa & Sahoglu 2011).

As we cast our nets wider across the Mediterranean, there are few examples that match Cretan burial history. The best comparison comes from Malta during the Temple Period. The evidence available indicates that Temple Period populations used large collective burials for centuries (Malone et alii 2009; Stoddart 2016; Malone et alii, this volume), although the patchy archaeological record does not allow to confirm whether these were the only types of tombs used (Sagona 2015: 110-113). In most other areas of the Mediterranean the picture is much more mixed. In Iberia there is evidence of communal burials in the megalithic tombs typical of the southern and western regions of the peninsula (Muñoz Amilibia 2001), but those only formed a small part of the burial record of the 4th and 3rd millennium BC (Lorrio 2008). Smaller rock-cut tombs were common, and in places like Valencina de la Concepcion collective megalithic tombs and individual tombs were used contemporaneously (Costa Caramé et alii 2010; Vargas Jiménez et alii 2012). In sites such as Los Millares the megalithic tholos tombs contained only a small number of interments (Almagro & Arribas 1963; Díaz de Torres 2008). The recently discovered burial at El Camino del Molino (Lomba Maraundi et alii 2009) bears the best resemblance with Cretan tombs as it contained the remains of hundreds of commingled interments. This tomb remains an exception in the archaeological record of Chalcolithic Iberia and by 2200 BC a new type of individual interment inside or nearby houses became dominant in South-Eastern Iberia (Lull 2000). In Chalcolithic and Early Bronze Age Italy, different regions had different traditions but collective tombs were popular during the 4th and 3rd Millennia BC in the form of rock-cut tombs and rock shelters that housed primary and secondary burials (Manzon et alii 2012; Dolfini 2015). Such tombs were used alongside individual types of interments such as those in tumuli (Cazzella 2012; Guida 2012; Recchia 2012). The Levant provides a similar situation with a combination of collective burials like the so-called 'charnel houses' and individual types of interments (Chesson 1999; Akkermans & Schwartz 2003; Ilan & Rowan 2016). Egypt is well known for the highly individualistic nature of its burial rites presenting a conceptualisation of death that seems quite opposed to that on Crete.

The mortuary landscape of Crete was every bit as varied as these other Mediterranean regions (Legarra Herrero 2009), and tomb type, cemetery organisation and burial assemblage differed between communities in the island.

Unlike any other area, however, every Cretan community decided to bury their dead in large collective tombs³. The quick overview of the Mediterranean proves that fragmentation and connectivity led naturally to much variability in burials, and therefore the continuity of collective practices in the burial record of Crete can only be understood as a conscious choice to avoid the expected fluidity in a Mediterranean burial landscape. The fact that slow organic changes typical of any culture or the well documented external links of Crete with other cultures failed to break the hegemony of collective burial in the island for more than a millennium requires explanation.

The study of funerary architecture, tomb layout and material assemblages inside and outside the tombs (Legarra Herrero 2014) has provided a first insight into the role of collective burials in Cretan society. There is still much speculation about how the collective deposits were formed and what clues a careful study of the human remains and their deposition patterns can give about the collective nature of cemeteries: were the commingled remains found in the different tombs and in different periods the result of similar *chaînes funéraires*? Were there changes in the way these commingled deposits were created following the known changes in architecture, layout and assemblage in the cemeteries? What was the composition of the living group that interred the deceased in the tomb? The recent wealth of new bioarchaeological and taphonomic data gives for the first time the chance to delve in detail into some of these questions and to consider how the new type of information affects prior analyses of the tombs.

3. Cretan *chaînes funéraires*: the new bioarchaeological and taphonomic evidence

Osteological studies on the human remains from Cretan tombs have been historically few and limited in their scope, and new developments in the field have only been felt on Cretan archaeology in the last decade or so. Starting with the publication of Tholos Gamma at Archanes Phourni (Papadatos 2005) (**Fig. 7.2** for mentioned sites) and the tholos tombs at Moni Odigitria (Vasilakis & Branigan 2010), the dataset has grown in the last five years with studies of the cemetery of Petras (Triantaphyllou 2009; 2012; 2016), the tholos tomb and rock shelter at Livari (Papadatos & Sophianou 2015; Triantaphyllou 2016), Tholos B at Apesokari (Vavouranakis & Bourbou 2015), the tombs at Sissi (Driessen *et alii* 2009; Schoep *et alii* 2011; 2013; Crevecoeur *et alii* 2015) and the microstratigraphic analysis of Koumasa Tholos B (Boness & Goren 2017). Detailed information is finally coming from enough sites to allow a first assessment of processes of human deposition in Cretan collective tombs.

The new osteological data requires to be combined with high-quality stratigraphical and taphonomical information to answer existing questions about the commingled deposits of the tombs. Our understanding of the rate of deposition, patterns of interment and episodes of cleaning, abandonment and reuse remains poor. Two recently published sites illustrate how collective deposits in Crete were formed through very different chaînes funéraires in combination with site specific taphonomic processes, confirming the need for understanding island burials in a case-to-case basis. The cave of Haghios Charalambos in the Lasithi Plateau contained material from the Neolithic onwards (Langford-Verstegen 2015), as well as hundreds of human bones. Excavators suggest that the bones were deposited in an orderly arrangement in the cave just before it was sealed in the MM II period or shortly after (Betancourt 2014: 98). The structure of the deposition seems to correspond to one event that took place in MM II and it has little to no relation to the original deposition of the human remains over the prior millennium. The recent excavation of a small deposit inside Tholos B at Koumasa provides a very different picture (Boness & Goren 2017). Here micromorphological analyses have produced evidence of microscopic fragments of human remains embedded in the soil that is consistent with heavy and continuous disturbances and manipulation of the human remains. The Koumasa evidence indicates two main burial deposits (layers 2-4, and layer 1), each sealed by a large fire episode (Boness & Goren 2017: 511-513). The deposition in the lower layer at Koumasa Tholos B seems to be the result of a mixture of constant deposition and manipulation of human remains and rarer fire events. Koumasa and Haghios Charalambos are two examples of how modern analyses can offer an insight into the complicated chaînes funéraires that formed the collective deposits but they only provide information about

³ At the beginning of the Bronze Age, two cemeteries on the north coast of the island, Haghia Photia (Davaras & Betancourt 2004) and Gournes (Galanaki 2006) followed Cycladic burial traditions with small rock-cut tombs that normally contained one or two interments. These cemeteries were soon abandoned, and they provided the last trace of individual tombs on Crete for the next millennium until the appearance of pithos burials in the MM IA period (Legarra Herrero 2016a).

a limited set of practices within the long ritual activities that were conducted in each tomb. They are also a clear reminder of how far back Cretan burial studies are from the detailed chronological analysis that are revolutionising the study of collective burials elsewhere (Whittle *et alii* 2007).

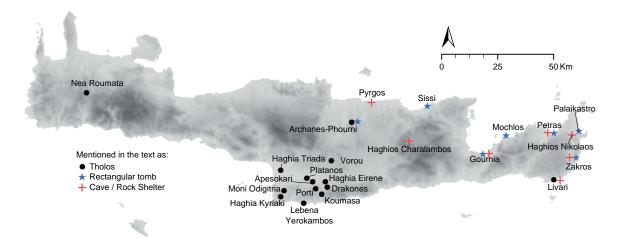


Fig. 7.2 Sites mentioned in the text (B. Legarra Herrero)

The limited new data is consistent with the early reports of the Cretan tombs that identified major differences between burial deposits. Xanthoudides recognised fire episodes in Koumasa Tholos B (which is confirmed by the recent excavations), Platanos Tholos A (Xanthoudides 1924: 89), Drakones and Porti (Xanthoudides 1924: 56). Fire events were reported also in Haghia Triada Tholos A (Cultraro 2004), Moni Odigitria Tholos A and B (Vasilakis & Branigan 2010) and Lebena Yerokambos 2a (Alexiou & Warren 2004), although it is difficult to match the different descriptions to form a common pattern. In some cases they seem to describe a large firing episode such as at Porti (Xanthoudides 1924: 56), while in others they seem to refer to small localised fires, as in the case of Moni Odigitria Tholos B (Vasilakis & Branigan 2010: 256) and perhaps Haghia Kyriaki Tholos A (Blackman & Branigan 1982: 50). In other cases, the excavator explicitly mentions the lack of evidence of fire as in Haghia Eirene and Platanos Tholos B (Xanthoudides 1924). It seems safe to assume that similar types of tholos tombs had different histories of use, and that the *chaînes funéraires* that created their archaeological deposits were distinctive to each tomb, evidencing differences in the way death was socialised in each cemetery.

The combination of detailed new analyses and coarsely-grained old data may give the impression of variability at the tomb level that precludes the identification of patterns in the Cretan funerary behaviours. But a stronger case for the opposite can be made in which the recent analyses shed a new light on the study of old data, enabling to search the Cretan record for chronological and/or geographical trends more reliably.

3.1. Chronological variability

The ethnographic analysis presented in the conference recognised the relative temporal shallowness of 'traditional' burial customs in places like Madagascar and Benin. Burial practices in Madagascar do not seem to have great historical depth as there is a limited number of built tombs known, nor do houses at Benin contain hundreds of interments spanning several generations. Despite the 'traditional' label, burial customs in these places are the result of ever-evolving rites (Jindra & Noret 2011). While funerary changes in modern Africa may have been accelerated by the disruptive colonial practices of the last 500 years, they send a powerful message about how the 'traditional' label hides continuous changes in burial practices. Despite the perception that traditions are maintained unchanged for many generations, there are powerful cultural processes that foster change and make continuity extremely difficult. Cultural 'drift' (Shennan 2002), natural unconscious changes that can be explained by failing memory or lack of shared knowledge are clearly relevant for understanding the evolving nature of funerary customs. Funerals happen ever so often, sometimes with months and years between them, which opens

them to misremembering and new interpretations. In some occasions, the resources (human or material) to conduct the ritual as usual may not be available, prompting improvisation. Of course, ideology and systems of belief can change defying any logical explanation, triggering changes in the related funerary domain. At the other side of the spectrum, funerary customs may be altered due to conscious choices following social, economic and political reasons (Carr 1995; Jindra & Noret 2011). Given the dynamic history of Crete during the Bronze Age, including interconnections with populations outside the island, cultural variability and major socio-political changes, all aspects of the funerary customs are to be expected to have been in a constant flow.

There are almost no closed Early Minoan (EM) I burial deposits that allow for a study of the way interments took place in this period. In the best cases such as the recently published tholos at Livari (Papadatos & Sophianou 2015) and Tholos B at Koumasa (Boness & Goren 2017), the deposit contained a mix of EM I-II material (a period of *ca.* 500 years). In the worst case scenarios such as Haghios Charalambos (Betancourt 2014), the deposit includes material ranging from the EM I to the Middle Minoan (MM) II period (*ca.* 1000 years). The rock shelter at Haghios Nikolaos near Palaikastro had at least ten skulls associated with EM I material (Duckworth 1903a; Tod 1903) and it seems to provide a rare undisturbed insight into the burial practices of the period. EM I material found among human remains in other rock shelters across Central and Eastern Crete may signal comparable interments at the beginning of the 3rd millennium BC (Legarra Herrero 2014: 141-144). The only well dated exception is the Nea Roumata tomb in Western Crete which was constructed to house a single interment (Preve 2006). Given the lack of Early Bronze Age data from Western Crete it is difficult to judge the relevance of this one example (Legarra Herrero 2014: 138-139).

For the EM II period, the extreme fragmentation of the commingled remains at Koumasa has already been mentioned (Boness & Goren 2017). A similar picture arises from the evidence of Archanes Phourni Tholos Gamma where only a few teeth and bones were reported from the lower EM IIA stratum, probably indicating the extreme fragmentation of the human remains (Triantaphyllou 2005). In the case of Koumasa, the lower layers seem to have been sealed with a fire and a layer of lime before closure (Boness & Goren 2017), something not reported from Archanes Phourni Tholos Gamma. At Livari, the EM IB-IIB deposit in the tholos tomb contained more than 11 000 fragments of bone (Papadatos & Sophianou 2015; Triantaphyllou 2016), most of them showing evidence of being burned under high temperatures. In the absence of indications of fire in the tholos and the rock shelter, excavators have suggested that the bones were burned elsewhere and later deposited in the tombs (Papadatos & Sophianou 2015). Xanthoudides reported also heavy fragmentation in the human remains found at Tholos e at Haghia Eirene, the tholos at Porti and the lower layer of Tholos A at Platanos (Xanthoudides 1924).

For the later periods, the evidence comes mainly from EM III and MM I burial deposits. At Archanes Phourni Tholos Gamma, a minimum of 30 individuals was interred during the EM III-MM I period inside and outside larnakes. In tholoi with larnakes, primary burials were placed inside the clay containers and then moved out, on to the floor, to leave room for new interments. This constituted a considerable departure from the burial process of earlier periods that is replicated in other types of contemporary tombs (Legarra Herrero 2016a) such as the caves of Pyrgos (Xanthoudides 1918) and Zakros Mavro Avlaki (Platon 1961), and some of the rectangular tombs of Archanes Phourni (Sakellarakis & Sapouna-Sakellaraki 1997) and Gournia (Boyd 1904; 1905). The patterns in the use of larnakes find parallels in the manipulation of human remains in the MM I rectangular tombs, where some rooms were employed for primary burials, which then were cleared out to other rooms in the tomb to make room for new interments. The rectangular tombs seem to have contained a smaller number of interments than the EM II tholoi that never underwent the processes that led to the highly fragmentary condition typical of the EM II tholoi. The recent excavated tombs at Sissi and Petras show evidence of a very different set of practices in the MM I rectangular tombs.

The Petras cemetery is still under excavation so the evidence is limited to a couple of tombs (Tsipopoulou 2017). House tomb 2 is reported to have contained a minimum of 37 interments, several of them articulated and one intact (Triantaphyllou 2016; 2017). Primary burials were laid in certain rooms of this tomb and then moved, sometimes with body parts still articulated, to other rooms of the burial building. The situation in Tomb 5 is not entirely comparable (Triantaphyllou 2016; Triantaphyllou *et alii* 2017). Here at least 56 individuals were interred, but there is little evidence for primary burials, and the majority of bones seems to have arrived at their final deposition after skeletonisation. As in Tomb 2, human remains were only found in certain rooms of the tomb, while other spaces were kept clear of interments.

The cemetery of Sissi presents a more complex picture not only because there is data available from more tombs (Crevecoeur & Schmitt 2009; Schoep 2009; Schoep *et alii* 2011; 2013; 2017; Crevecoeur *et alii* 2015). At Sissi, the tombs are smaller than in Petras, normally made up of two or three rooms, which is similar to the architecture of other cemeteries such as Gournia and Mochlos (Soles 1992). As in Petras and most other Cretan rectangular tombs, there are rooms (Room 1.16) that seem not to have been intended to contain burials. The specific *chaîne funéraire* for each context shows variations in the sequence of interments, the use of burial containers, the population interred and the use of features such as pebble floors. Despite this variability, it can be generally suggested that the number of interments per tomb at Sissi is lower than in the Petras tombs, normally no more than half a dozen although the minimum number of individuals peaks at 20 in Room 1.10. Also at Sissi, there appears to be a higher proportion of primary interments than in Petras, although there is a similar pattern with certain rooms mainly used for primary burials while in others only secondary deposits were found. The preliminary reports indicate that that the population interred in Sissi included children and male and females of every age.

The evidence from other cemeteries with rectangular tombs fits the general lines established by the Sissi and Petras studies. From Mochlos and Gournia we have little to no information about human remains from the old excavations but we have a bit more information about how the deposition was structured. Complexes I/II/III and IV/V/VI at Mochlos were originally (probably in EM II) formed by two rooms, one with a marked entrance and the second used as the burial chamber. In both cases, a third room was added, although it is not clear if it was used as an ossuary or as a ritual space (Legarra Herrero 2014: 103). At Gournia, the built tombs in the North Cemetery were also made up of a couple of rooms but no information is available about their use. At Palaikastro (Dawkins 1904; 1905; Hawes 1905), the larger multi-roomed tombs were similar to those at Petras although this time they were scattered across several locations around the settlement. The excavators suggested that some of the rooms were used for burials while others were reserved for other types of ritual practices. The number of interments reported from the Palaikastro tombs varies from one to 15 (Dawkins 1904: 197) with the exception of Tomb 7, a large building that may have been used as an ossuary as it was divided in small rooms that contained at least 97 individuals (Bosanquet 1902; Duckworth 1903b). The human remains of the two rectangular tombs at Pezoules Kephala, Zakros, are among the few studied skeletal assemblages in the Cretan Pre- and Protopalatial record (Becker 1975; Platon 2017). Neither of the two tombs had more than three rooms but they contained a significant number of interments. Tomb A contained 45 skulls, although the excavator reported the remains of about 600 individuals (Platon 1967; Becker 1975). Twenty skulls were reported in Tomb B by the excavator but the final report calculated at least 74 individuals in the tomb (Becker 1975). A larnax was reported in Room A in Tomb A, and the excavator suggests that this room was used for new interments while Rooms B and C were used for discarded bones and material (Becker 1975). In Tomb B, three primary burials were found, two marked by small stones and another one inside a larnax (Soles 1992).

Certain EM III-MM I tombs do not follow the pattern suggested by the tholos tombs with larnakes and the rectangular tombs. At Moni Odigitria (Triantaphyllou 2010), 64 interments have been estimated for Tholos B (while probably built in the EM I period, the evidence of this tholos seem to date mainly to the MM I period, see Vasilakis and Branigan 2010: 251-252) and the human bones appear to be very fragmented, resembling EM II burial deposits. On the other hand, Tholos B had a large ossuary attached, a feature with parallels in other MM I tombs such as Platanos Tholos A (Xanthoudides 1924: 90) but not in the earlier tholoi.

It is safe to say that in the late Prepalatial period there was a general trend towards a more standardised deposition and manipulation of the human bones than in earlier periods. EM II tholos tombs included a mass of fragmented bones very difficult to analyse, but by the EM III period, a different set of practices appeared across the record, including tholos tombs, rectangular tombs and probably also caves. The deposition of primary burials becomes easier to identify due the use of burial containers and the smaller number of interments per tomb. In most cases, burials were later cleared into other parts of the tomb or neighbouring areas to make room for more interments. The evidence suggests a keener interest for primary burials within the tombs and a more structured and perhaps longer set of practices with the appearance in most tombs of rooms and ritual spaces devoid of human remains and probably reserved for other funerary activities (Cultraro 2004; Legarra Herrero 2014: 151-157).

3.2. Spatial variability

The new high-definition data provided by projects such as Sissi (Crevecoeur & Schmitt 2009; Schoep 2009; Schoep *et alii* 2011; 2013; Crevecoeur *et alii* 2015) show a significant amount of variability at the cemetery level (Girella & Todaro 2016: 175, table 22.1), which makes interpretation daunting. Each tomb seems to behave differently from the one next to it, not only in the way the deceased were deposited but also in size of the tomb, architectural layout and burial assemblage. Tomb 7 at Palaikastro or the Rock shelter at Petras contained human remains that were originally deposited in other tombs of the cemetery, making clear that, despite the differences, each tomb cannot be studied as a closed, independent context. Such complex sets of *chaînes funéraires* pose many questions that will be difficult to answer for each particular case. A solution to this problem is to build larger patterns through a bottom-up analysis that reduces the fuzziness created by the high-resolution data and let us search for regularities in the record that may be more conductive to interpretation.

When the scope is broadened, the new bioarchaeological data supports the generally assumed fact that burial practices varied according to the type of cemeteries and the type of tomb. To a certain degree this can be explained also by chronological differences, with most of the EM II information provided by tholos tombs and the EM III-MM I coming from rectangular tombs. Still, there is enough evidence to suggest that each type of tomb contained remains that had undergone different *chaînes funéraires* and that each cemetery provided a different link between burial practices, ideology and social and political concerns.

Tholos tombs in EM II South-Central Crete can be characterised by fragmented, heavily manipulated and commingled deposits of human remains. The evidence from Koumasa highlights the extent of the fragmentation (Boness & Goren 2017), and with new developments in the way the number of interments are calculated in collective deposits (Robb 2016), it is highly possible that tholoi housed many more bodies than normally assumed. In terms of the manipulation that the bones were subjected to, fire was used extensively inside or outside the tomb. The rock shelter at Livari (Papadatos & Sophianou 2015), the ossuary at Moni Odigitria (Vasilakis & Branigan 2010), the Area of the Rocks in Archanes Phourni (Papadatos 2005), Pit 8 outside Apesokari Tholos B (Vavouranakis & Bourbou 2015), and areas outside Platanos Tholos A (Xanthoudides 1924) prove that human remains were moved from the tholoi to other areas of the cemeteries, and that burial practices connected built tombs with other parts of the cemeteries. The evidence from Livari also shows that in cases, the bones were manipulated before entering the tholos (Papadatos & Sophianou 2015) and there have been suggestions that, in some instances, bones may have been extracted and then re-deposited in the tombs (Driessen 2010a; Girella & Todaro 2016). The tholos chambers are only part of longer *chaînes funéraires* that may have extended beyond the cemetery, of which we know little (Driessen 2010a). Furthermore, it begs the question of why some remains were removed from the tomb, while others were left behind.

In the later EM III-MM I period, the evidence of the tholoi shows some divergence between tholos tombs, such as the use of larnakes at Archanes Phourni Tholos Gamma and the large commingled deposits of Moni Odigitria. Moni Odigitria seems to indicate that in the more isolated Asterousia Mountains, cemeteries adopted new burial fashions only partially, indicating that variations in the tholos record depended on differing regional trajectories and geographical connectivity.

It is easy to tell apart the rectangular tombs of Northern and Eastern Crete from the earlier use of the tholoi, as the multiple burials in these tombs were less disturbed, but by the EM III-MM I period the separation between some tholoi and the rectangular tombs is less clear. While there are differences in the architecture and cemetery layout, primary burials can be now identified in both types of tombs, and new common features such as the use of larnakes link the way burial ritual were conceptualised and carried out in the different cemeteries across the island. Alongside this convergence of burial customs, variation between cemeteries remained strong. The smaller rectangular tombs made up of two or three rooms at Gournia, Mochlos, Zakros and Sissi contrasted with the larger tombs at Palaikastro, Archanes and Petras, but the number of interments per tomb varied across the two types of rectangular tombs, not showing any correspondence between architecture and the size of the buried population. There is not either a clear pattern in the structure of the cemetery, as rectangular tombs appear clustered in a large cemetery in certain cases (Sissi, Archanes, Mochlos, Petras) while in other cases they are spread across the landscape (Gournia, Palaikastro, Zakros). In most cemeteries there is evidence of ossuaries such as Tomb 7 at Palaikastro and the rock shelters at Petras and Gournia that probably housed displaced burials from several

tombs. The relationship between the tombs and repositories of secondary deposits is yet to be explored, but as with EM III-MM I tholos tombs it is becoming increasingly clear that the burials in rectangular tombs were part of larger *chaînes funéraires* involving several areas inside and/or outside the cemetery.

4. The varying creation of the collective

The review of the data confirms that Cretan cemeteries were well engineered to create collective identities (Branigan 1991; Driessen 2010a; Hamilakis 2014; Vavouranakis & Bourbou 2015; Girella & Todaro 2016). The new bioarchaeological and taphonomic evidence reinforces the suggestion that Cretan burial customs were formed by long *chaînes funéraires* that integrated deceased individuals into the collective deposits inside and outside the tombs. The new data reinforces the point that the tomb deposits were not the only place where this integration took form and that the manipulation of human remains in many areas before and after their deposition in the built tombs connected funerary practices with a range of audiences. It is fair to assume, given the disturbed and collective nature of the deposits, that group ideologies are central to understanding death on Crete (Branigan 1991; Driessen 2010a; Girella & Todaro 2016; Legarra Herrero 2016a; Vavouranakis 2017), but we should be aware that the dead, as the living, were defined by a complex set of identities ranging from individual ones (mother, female, *etc.*) to group ones (kinship, community). The aim of the cemeteries was to pass the deceased from the set of identities that defined the living to those that defined the dead, not necessarily to move them towards a more group-oriented identity.

The new data makes also clear that there is still much more work to do. It is not known where and how the body was prepared for interment, or any of the stages before a deceased was first interred in a tomb. We lack data to understand how often tombs were opened and cleared and how many times the bones were moved in and out. The appearance of a couple of skulls in settlements raises the possibility that burial practices were not just restricted to the cemetery (Driessen 2010a; 2012; Girella & Todaro 2016). We do not even know whether all these processes were meaningful acts. If the dry bones were considered to be no longer attached to the deceased, their manipulation would not follow ritual considerations but represent more mundane acts of clearing. We are not sure of the number of events that the funeral ritual involved, how they were deployed through time, and what their meanings were. In this situation, trying to provide a close reading of the Cretan funeral rituals seems risky. While specific ritual processes that form the *chaînes funéraires* in Cretan practices are being more securely identified (Branigan 1987; Driessen 2010a; 2012; Girella & Todaro 2016), it is debatable whether it is possible to make sense of the differing ritual processes identified in 1000 years of archaeological record under similar explanations. Interpretations based on the work of Hertz (1960), Van Gennep (1977), Turner (1969) and Bloch (1971), which emphasise the passage of the deceased into new identities and the social aspects of death, have much potential for Cretan studies (Girella & Todaro 2016), but the explanatory powers of such theoretical approaches can only be truly capitalised on when applied in a case-to-case basis to the range of *chaînes funéraires* identified in the archaeological deposits.

Variability makes even more remarkable the constant use of collective burials on Crete. Why, if there was such flexibility to adapt and change burial rites, individual types of tombs were never considered? EM II tholos tombs show little indication of primary burials, and in most cases it is not clear whether the first interment took place inside or outside the tholoi. Bones were crammed into the burial chambers leading to a highly fragmented deposit that included also grave goods, and in several cases the deposits were burned at some point. These patterns in the manipulation of human remains coincided with a simple cemetery layout in which the tholos burial chamber was only framed by one single room outside its entrance (Legarra Herrero 2014). Evidence of ritual outside the tholos tomb exist (Branigan 2008), but the main focus was on the burial chamber and the piling of human remains and material in it. It is presently unclear if similar processes were repeated in other contemporaneous burials such as rock shelters and caves.

By the later Prepalatial period, the collective nature of the tombs has changed. The burial chambers provide now evidence of primary interment, even though human remains continue to be swept aside and placed in collective deposits, sometimes located away from the tombs. The removal of bones from the burial chambers may be done more regularly than in the earlier periods and there is no record of firing in the cemeteries. The increased popularity of multi-room rectangular tombs may indicate a preference for a more ordered interment, with a clearer spelling out of the ritual process that moved a deceased in and out of the collective tombs. These changes came as the

cemeteries became more complicated architecturally with the establishing of open areas and ritual buildings outside the tombs for collective gatherings. Innovations in the deposition of bones with the adoption of larnakes and pithoi and the construction of ritual spaces outside tombs were common to all types of cemeteries and indicate that burial rites started to converge across the island. The collective was then constructed on the basis of a better recognition of the individual burial. Demarcated individual burial does not necessarily mean that individual identities become more important but it is clear that the way the funeral related to group identity and the creation of a collective tomb changed in the MM I period. Lengthy courses of practices and complicated spatio-temporal processes meant that more people were involved in the funerals. More elaborated manipulation of bones happening in different spaces and situations could be used to communicate with different people and enabled new layers of meanings and identities to be negotiated in funerals. This is consistent with the fact that cemeteries were modified to host more activities for the living. The 'collectiveness' of the EM III-MM I tomb was constructed not only through the manipulation of the remains of the deceased and the material attached but also by the group rituals that accompanied these practices.

5. Cretan burial and its Mediterranean place

Crete slowly appeared through the 3rd millennium BC as a major player in the Aegean and the Eastern Mediterranean, a situation that peaked with palatial societies in the mid-2nd millennium BC. Despite its rich landscape and strategic position, Crete took a place at the forefront of economic, social and political innovations quite late. The rich communities of the Northern Aegean such as Troy or Poliochni had no clear parallels on Crete in the first half of the 3rd millennium BC. Cycladic culture was common on Crete at this period showing that the Cycladic centres were more proactive in the interconnectivity that shaped the Aegean at this point. By the early 3rd millennium BC, several regions within the Mediterranean had seen major developments, such as the profound socio-economic changes in the Levant (Savage *et alii* 2007; Wilkinson *et alii* 2014), the building of large temples at Malta (Sagona 2015) or the establishment of long-distance trade links in Southern Spain (García Sanjuán *et alii* 2013). Cretan populations were not particularly active in the medium- and long-distance exchange links that characterised many other Mediterranean regions at this time and the social and political structure of the island's communities while dynamic does not seem to experience exceptional changes (Whitelaw 2004; Legarra Herrero 2012; Tomkins 2012) to match those in the Argolid or Southern Spain.

By the end of the 3rd millennium BC, the picture had changed dramatically. As other parts of the Aegean seemed less dynamic than before (Pullen 2013), Crete came to life, with strong evidence of links with the East Mediterranean (Legarra Herrero 2011) and a more proactive presence in the Aegean (Broodbank & Kiriatzi 2007). Cretan communities grew quickly, reaching urban proportions by the end of the 3rd millennium BC (Watrous et alii 2004; Watrous 2012; Whitelaw 2012), a moment in which cemeteries changed also very rapidly (Legarra Herrero 2014). It is beyond the scope of this paper to discuss exactly this process and the reasons behind it (see discussions in Schoep 2012; Tomkins 2012; Whitelaw 2012; Legarra Herrero 2016b), but it is interesting to think about the growing pains of such quick developments. Survey evidence points towards a strong increase in population on Crete (Hayden 2004; Watrous et alii 2004; Haggis 2005) as the island became more densely interconnected, with elements of inter-community competition evident in the archaeological record (Sbonias 1999; Relaki 2004). This presented new challenges, particularly in areas such as resource control, mobility and collective identities, stressing the importance of co-residentiality (Driessen 2010a; 2010b; 2012) and transforming traditional kinship links (Legarra Herrero 2014). The idea of belonging was redefined alongside economic and social strategies in order to create a new working order that may be more reliant in the connection to a geographical locale and the community that lived there. Cretan cemeteries were an integral part of the mechanisms in which Cretan societies explored new organisations and identities and were instrumental to reach a new sustainable ideological and social balance (Legarra Herrero 2016b). Changes in the way human bones were manipulated and the way the collective was created in the tombs can be seen as responses to the new social, economic and political challenges. Some of the innovations, like the better delimited spaces for primary interment are difficult to interpret within the context of collective burials. Other new features, such as the more significant role of the living in the cemeteries to accompany the multi-stage manipulation of the bones, point towards the growing importance of shared practices and the establishment of arenas in which social negotiation could engage a wider range of people. The coherence in the way cemeteries behave also shows a much better connected island in which mortuary arenas played a key role in regulating interaction between communities.

Cretans seem to have held proud their history of collective burials, but it would be wrong to think that collective meant the same across the island throughout the 3rd and 2nd millennia BC. The new high-resolution data demonstrate that collective identities were constructed differently and they referred to very different social, political and economic realities across the island. This means that there is not one interpretation to fit the data. Still, the new data offer much potential for comparison in order to recognise common themes within the variability and to think whether different rituals and processes of treating the body were aimed to find solutions to common challenges that the rapidly transforming Bronze Age world ushered. More importantly, the recent analyses have finally put Cretan funerary archaeology on the right path to answer the outstanding questions about past burial practices and to recognise their central position in Cretan culture.

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