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WHEN THE BOUGH BREAKS: CHILDHOOD MORTALITY AND BURIAL PRACTICE IN LATE NEOLITHIC ATLANTIC EUROPE

Summary. *Towards the end of the fifth millennium BC, a new funerary tradition developed in Iberia and elsewhere in Atlantic Europe involving the use of megalithic tombs and natural or artificially constructed caves for the collective burial of the dead. Ancestor worship has been the most common theoretical framework used to explain this Neolithic burial tradition, despite demographic information which indicates that these burials house the remains of a significant percentage of children and adolescents. Using data from Late Neolithic (3500–2500 BC) tombs in south-western Iberia as a departure point, in this paper we suggest that by reconsidering the impact that childhood mortality had upon burial and grave visitation practices in Neolithic communities, archaeologists can gain valuable phenomenological information which will allow for a more robust, multivocal interpretative approach.*

INTRODUCTION

In affluent parts of the world few parents are prepared for the death of a child. Nonetheless, among populations where access to antibiotics, antidiarrhoeals, vaccinations, and adequate sanitation and nutrition is limited, child death remains an all-too-common occurrence. Similarly, we know that rates of childhood mortality were starkly higher among prehistoric populations, who also lacked access to forms of medical care crucial particularly to the survival of infants and young children (Goodman and Armelagos 1989; see Lewis 2007 for discussion), and thus we can assume that funerary practices associated with the death of children were likely to have been a familiar part of community life in the past. Indeed, the frequency of deceased non-adults (infants, children and adolescents) in the archaeological record bears witness to this fact. In studies of prehistoric funerary practices, non-adult burials are an important source of information about social organization: inordinately rich child burials are typically interpreted as a sign of ascribed status or emerging class structure, and burials that treat children similarly to adults suggest that they were recognized as valued members of their communities (Oxenham *et al*. 2008). Likewise, when children are given substantially *different* funerary treatments from adults – distinct bodily preparations, positioning, locations or burial goods – it is possible for archaeologists to infer valuable information about age-related social differentiation. Thus, both in life and in death, children represent their communities in profound ways.

Yet, despite the frequency of non-adult remains in burials and the valuable information about funerary practices that can be obtained by studying them, until recently infants, children and adolescents were largely absent from most archaeological accounts, and the role they played in the creation of material culture and social practices largely ignored (Sofaer Derevenski 1996; Finlay 1997; Kamp 2001; Rothschild 2002; Baxter 2005; Wileman 2005; Schwartzman 2006, 123). One place where children have continued to be missing from archaeological discourse is in the interpretation of the Neolithic collective burial practices of Atlantic Europe. Using data from Late Neolithic (3500–2500 BC) tombs in south-western Iberia as a departure point, we argue that by reconsidering the impact that childhood mortality had upon burial and grave visitation practices in Neolithic communities, archaeologists can gain valuable phenomenological information (i.e. that related to the character of individual human experience (Brück 2005, 46)) allowing for a more robust, multivocal interpretative approach to collective burial and megalithic Atlantic Europe.

COLLECTIVE BURIALS AND NEOLITHIC ANCESTORS

Beginning in the fifth millennium BC, a new funerary tradition developed in Iberia and elsewhere in Atlantic Europe involving the use of megalithic tombs and natural or artificially constructed caves for the collective burial of the dead. Although it was originally thought that megalithic tombs were the result of cultural diffusion from the east (Childe 1940, 47), radiocarbon dates later revealed that Iberia was one of the earliest centres of megalith construction (Renfrew 1973). Since this time, archaeologists have grappled with the implications of the indigenous development of the megalithic phenomenon, its widespread geographic dispersal in Atlantic Europe, and the long-term, polysemous use of these monuments. Because collective burial traditions in Europe are largely coeval with the Neolithic Revolution (but see Cauwe 2001), archaeologists have theorized that megalithic structures must have, among other things, served important social functions related to the development of sedentary, fully agricultural societies (cf. Renfrew 1973; Vincent 1990; V.O. Jorge 1995; Gonzalo 1997; Bradley 1998; Arias 1999; Scarre 2002; Thomas 2003).

While many theorists have taken an approach to collective burials based upon social organization, alternately interpreting them as either (1) emphasizing an egalitarian ethos, or (2) masking or mediating emerging social inequalities (Gilman 1976; Shanks and Tilley 1982), recently the Neolithic emphasis on the reuse of monuments and the manipulation of human remains has been viewed through the lens of ancestors and ancestor worship (Barrett 1988; 1993; Morris 1991; Thomas 1991; Cooney 1992; Tilley 1994; 1996; 1999; Whittle 1996; Pearson and Ramilisonina 1998; Bradley 1998; Edmonds 1999; Arnold and Murray 2002; V.O. Jorge 2004; García Sanjuán 2006).

Ancestor worship and ancestor veneration are blanket terms used to describe a host of different behaviours based upon beliefs about some form of continued existence of the dead, both as individual ancestors (typically remembered by the living) and corporate groups or 'ancestor collectives'. Although documented examples of ancestor worship are too numerous and extraordinarily diverse to review here comprehensively, the maintenance and cultivation of ancestral relationships are often explained as a combination of several phenomena: (1) the wish to placate the dead, who are feared because of their other-worldly status, (2) the wish to garner favours from the dead, who are seen as powerful and desirable allies, (3) the wish to provide for the dead, who, without physical bodies, cannot provide for themselves but who nonetheless have

a continued interest in the affairs of the living, and (4) the wish to make connections with the dead publicly visible as the ideological basis for political legitimization or familial rights to land or resources. Thus ancestor worship can be seen to benefit both the deceased and the mourner (Kyu 1984, 205). The strong presence in many ethnographic accounts of some form of ritual behaviour associated with attending to the dead, such as family networks that form the basis for 'funeral associations' (Gutschow and Michaels 2005) or other types of mutual dependence between the living and the dead (Kyu 1984, 200), indicates that ancestor veneration is a common, culturally widespread phenomenon. Archaeological evidence of Neolithic graveside feasting suggests that communing with the recent and ancient dead was often as important as maintaining social relations with the living (Milledge Nelson 2003).

The pervasiveness of ancestor worship has made it a conceptually attractive lens through which to interpret the megalithic tombs, caves and rock shelters of Atlantic Europe. Several features of megaliths suggest that these burials were intimately connected to ancestral rites: (1) the architectural design and reuse of collective tombs, with chambers, passages or other entrances that allow for continual access to the dead (Jorge and Jorge 1997; Barrett 1988), (2) the routine maintenance, manipulation and commingling of human remains over time (Duday 1987), (3) the existence of perforated amulets made from human crania and other types of bone relics at Neolithic settlement sites (Fowler 2001), and (4) the logistically complicated and labour-intensive construction of megalithic architecture, perhaps representing 'houses' of the ancestors (Hingley 1996). Speaking of the importance of ancestral relationships to Neolithic groups, Leonardo García Sanjuán writes, 'Transformed into ancestors, the dead communicated with the living, legitimising ideological agendas and social and political strategies, leading and maintaining traditions, bringing order to the world and to society' (2006, 149).

Recently, however, the universality of ancestor worship has been critiqued, highlighting the variability and nuance of funerary practices (cf. Steadman *et al*. 1996). Several archaeologists have pointed out that many discussions of ancestor worship have relied upon an uncritical 'generic ancestor', undifferentiated through time and space, resulting in ancestors that are something of a conceptual gloss (Barrett and Fewster 1998; Thomas 2000, 664). Others have noted that the 'universal ancestor' became an orthodox explanation for many types of archaeological phenomena so quickly and without question that it was never thoroughly tested (Whitley 2002; 2003). Speaking of the popularity of the role of ancestors as an explanatory model for Neolithic funerary practices over the past two decades, James Whitley has stated that 'Ancestors were to the 1990s what chiefdoms [Yoffee 1993] were to the 1970s . . . ancestors are everywhere, and everything is ancestral' (2002, 119).

Clearly interactions between the living and the dead played a powerful role in the Neolithic worldview. Nonetheless, by focusing on burial spaces in terms of the socio-political aspects of ancestor veneration, we draw attention away from the personal nature of loss, and how mourning for, or perhaps convivially commemorating, the recently dead may have affected how megalithic burial spaces were used and experienced by individuals. Focusing on ancestors also tends to overshadow the fact that Neolithic collective burials routinely contain significant numbers of non-adults (especially young children) (Silva 1999; 2003; Rogers 1990; Cardoso and Cunha 1995; Jackes *et al*. 2001; Antunes-Ferreira 2005; Waterman 2007; Boutilier 2007; Lillios *et al*. 2010) who by virtue of their age and non-reproductive status are generally not considered to be ancestors (the potential ritual transformation of deceased non-adults into ancestors is discussed below). The prevalence of non-adults in many Neolithic collective burials demonstrates that a significant amount of time and energy was devoted to ritual activities

involving non-adult burials. This suggests that while social practices related to ancestor veneration and political legitimation may have played a powerful role in these ritual contexts, childhood mortality is likely to have influenced the social construction of certain practices associated with collective burials as well. Although physical immaturity is a biological concept, childhood is a socially constructed category and conceptions of children and childhood vary widely cross-culturally. Thus, teasing out the social roles of non-adults in the past is problematic. Generally speaking, however, the death of a child is a qualitatively different experience for families than the death of an individual well into their reproductive years (see Young and Papadatou 1997 for discussion), and is certainly quite different from interactions with ancestors or corporate ancestral groups that were not personally known (Freedman 1970). We suggest that, in consideration of the variation in age-at-death of individuals interred in Neolithic collective burials, a more holistic approach is to consider that for Neolithic peoples, megaliths, caves and other collective burial spaces were experienced in multivocal ways – connected as much to recent personal loss, memories and commemorations as they were to maintaining ancestral relationships.

THE PREVALENCE OF NON-ADULTS IN COLLECTIVE BURIALS IN THE LATE NEOLITHIC PORTUGUESE ESTREMADURA

In the coastal region of south-western Iberia, the Portuguese Estremadura (Fig. 1), the Late Neolithic was a period of socio-political transformation typically associated with a new emphasis on agricultural subsistence (Gonçalves 1999), social differentiation, and the cyclical integration and fission of groups responsible for the construction of both large, fortified settlements (such as Zambujal, Vila Nova de São Pedro, Leceia) and elaborate, labour-intensive collective tombs (Lillios 1995; 2008; Kunst 1995; Forenbaher 1999). This temperate region has long been known as a core area of prehistoric population aggregation, and is rich in terms of archaeological sites, particularly those of the Late Neolithic (Kunst and Trindade 1990; Cardoso 2000). Although most evidence indicates that Late Neolithic Estremaduran groups were not highly stratified, it is generally agreed that some social differentiation existed and that this differentiation generally increased over time (Vaz Pinto and Parreira 1979; S.O. Jorge 1990; Gonçalves 1994; V.O. Jorge 1995; Kunst 1995; Forenbaher 1999; Lillios 1995; Díaz-del-Río 2006).

Similar to elsewhere in Atlantic Europe, Neolithic groups in the Estremadura typically buried their dead in collective tombs: megaliths (dolmens, passage graves or corbel vaulted tombs), caves, rock shelters or rock-cut tombs. The earliest megaliths in Portugal appear centred around Évora in the Alentejo region at the end of the fifth millennium BC, and similar monuments appear in the Estremadura by the end of the Middle Neolithic (Chapman 1990). Collective burials were used and reused for extensive periods of time (Jorge and Jorge 1997), and newer megalithic structures were often constructed upon or annexed to older ones (e.g. Leisner *et al.* 1965). While the specific sequence of interment and subsequent manipulation of skeletal remains or secondary burial is generally unknown, the commingling of bones at these locations suggests that as part of the funerary process some human remains from previous burials were moved and reconfigured in various ways inside the burial spaces.

Unlike the interior of Portugal and other areas of Iberia where acidic soils do not favour the preservation of human remains (but see Lomba Maurandi *et al.* 2009), the alkaline soils of the Lisbon peninsula provide an excellent environment for bone preservation. Thus, in many parts of the Estremadura archaeologists have been able to recover substantial remains of

Figure 1
Map of the Portuguese Estremadura.

individuals of all ages from Neolithic burials. Despite problems associated with commingled, fragmentary and taphonomically damaged human remains, archaeologists and biological anthropologists have been able to acquire excellent data from these burials in terms of minimum numbers of individuals (MNIs) and non-adult age-at-death (Duarte 1993; Silva 1995; 1999; 2003; Antunes-Ferreira 2005; Lillios *et al.* 2010).

Although more concentrated areas of non-adult remains are sometimes encountered in Late Neolithic burials (Lillios *et al.* 2009), non-adult bones are generally intermixed with adult bones, and handled and relocated in a manner indistinguishable from adults (Silva 2003). While calculating mortality rates in prehistoric burial assemblages can be fraught with difficulty (see Jackes 1992; Wood *et al.* 1992; Milner *et al.* 2000), MNIs from Late Neolithic Estremaduran

TABLE 1
Percentages of non-adults calculated from the MNI at 12 Estremaduran Neolithic collective burials

Time Period	Site	Site Type	Dates	MNI	Non-adults	Non-adult %	Reference
M/LN	Feteira II	Natural cave	*c.*3700–2900	68	26	38.23	Waterman 2006
MN/LN/CA	Cova da Moura	Natural cave	*c.*3600–2200	90	15	16.66	Silva 2003; Jackes *et al.* 2001
LN/CA	Poço Velho	Natural caves	*c.*3000–2400	115	22	19.13	Antunes-Ferreira 2005
LN/CA	Serra da Roupa	Natural cave	N/D	40	12	30.00	Silva 2003
LN/CA	Lapa da Furada	Natural cave	N/D	130	64	49.23	Cardoso and Cunha 1995
LN/CA	São Paulo I	Artificial cave	N/D	254	123	48.42	Silva 2003
LN/CA	Paimogo I	Tholos	*c.*3000–2500	413	123	29.78	Silva 2003; Jackes *et al.* 2001
LN/CA	São Pedro do Estoril II	Artificial cave	*c.*2500–2300	53	12	22.64	Silva 1999
LN/CA	Carcavelos	Dolmen	*c.*2600	74	40	54.05	Boutilier 2007
LN/CA	Cabeço da Arruda I	Artificial cave	N/D	19	5	26.31	Silva 2003
LN/CA	Cabeço da Arruda II	Tholos	N/D	74	20	27.02	Silva 2003
LN/CA/EBA	Bolores	Rock shelter	*c.*2800–1700	14	7	50.00	Lillios *et al.* 2010

burials make it clear that non-adults constitute a significant portion of all burials, with researchers consistently finding that approximately 30 per cent of individuals in burials are non-adults (Table 1). In some cases the numbers are even higher (e.g. Lapa da Furada, São Paulo II, Carcavelos), with non-adults accounting for as many as half of all interred individuals (Cardoso and Cunha 1995; Silva 2003; Boutilier 2007). Mortality profiles from collective burials in Atlantic Europe and Neolithic collective burials elsewhere demonstrate a similar demographic pattern (Goodman and Armelagos 1989; Rogers 1990; Le Mort 2000; Chambon 2003; Fernández Crespo 2007; Jarošková and Dočkalová 2008; Halcrow *et al.* 2008; Oxenham *et al.* 2008; Jiménez-Brobeil *et al.* 2009; Lomba Maurandi *et al.* 2009).

When the available age-grade patterns of non-adult burials in the Estremadura are examined, it becomes clear that there is a paucity (but not a complete absence) of infant remains (Silva 2003) – a demographic cohort for which mortality rates should consistently be around 25 per cent of all live births in pre-vaccination populations (Guy *et al.* 1997). Taphonomic studies have shown that the delicate, porous bones of infants and children are less likely to survive over time; therefore, even in contexts with good preservation we can expect some undercounting of non-adults (Lewis 2007). However, the absence of infants from collective burials in which the bones of many very young children are found suggests that infants were perhaps not afforded the same burial rites as children, adolescents and adults. In many societies with high infant and childhood mortality rates, cultural practices exist that encourage family members to forego emotional attachment to infants until they survive critical developmental periods. These practices can include expedient burial rites and prohibitions against excessive mourning, as well as the exclusion of newborns and young infants from particular burial spaces (Scheper-Hughes 1993; Young and Papadatou 1997; Scott 1999). The archaeological record for the Portuguese Estremadura during the Late Neolithic suggests that the remains of infants may have been purposely excluded from collective burials, while children who survived through infancy were commonly incorporated into the same burial spaces as adults.

Age-at-death, time-since-death and sphere of influence: variability in the Neolithic burial process

As the Estremaduran burial data in Table 1 indicate, approximately a third of all interments were devoted to the primary (and/or secondary) burial of non-adults. It is important therefore to consider how the nature of burial, grieving, visitation and potential ancestral inclusion may have differed for infants, young and older children, adolescents and adults. Although the potential variability of practices related to age-at-death is immense, several general trends seem evident.

In societies in which there are few children of ascribed or otherwise highly marked status, we suggest that the social impact of infants less than one year and young children (here defined as one to five years of age) is largely limited to the domestic sphere (Fig. 1). In this case, the death of an infant, while potentially tragic for individual families, has little impact on the larger community: fewer memories are associated with neonates, and they have little or no opportunity to achieve socio-political importance. As children in these communities grow older, however, their relationships with adults become less ephemeral, investment in them is greater, and their sphere of influence broadens within the community accordingly.

In agricultural societies, older children and adolescents are an important source of labour in terms of small tasks: clearing agricultural fields, tending and harvesting plant resources, gathering wild foods and firewood, herding and caring for livestock, cleaning and other maintenance-related chores, and caring for siblings and other young children (Mueller 1976; Lillehammer 2000). Moreover, as specialized craft production expands children may be valued as a crucial source of labour in industrial activities (Bass 2004), and in Neolithic Spain
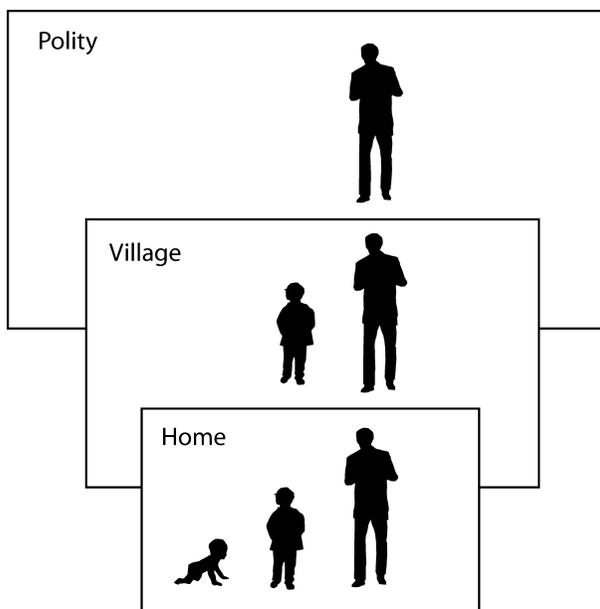

Figure 2
Potential sphere of influence in the community according to age.

there appears to be evidence of children working in variscite mines (Villalba *et al.* 1987). In addition to being an increasingly valuable source of labour, older children and adolescents are also more visible in the community, having had additional time to form work-related relationships, friendships, and bonds with extended family. Thus, the death of an older child among Neolithic agriculturalists would have potentially marked the loss of a substantial investment of both emotional and material resources. As an individual's sphere of influence continues to widen during adolescence, his or her social networks, economic responsibilities and travel opportunities become more expansive. By the time individuals reach early to middle adulthood, their sphere of influence may extend well beyond the local community or village. Long-distance exchange and exogamous marriage patterns may create situations where individuals have strong relationships in multiple localities. The rearing of children and grandchildren, relationships with extended family, long-term economic ties and other factors may continue to widen an adult's sphere of influence as they age.

In addition to age-at-death as a consideration in burial rites and grief experiences, we argue that time since death would also impact upon burial and grave visitation experiences (Fig. 3). Considering the dearth of infant remains in the Portuguese Estremadura, it appears that infants may have been sometimes excluded from formal collective burial spaces. Thus, for infants, we imagine that grave visitations were foregone and grief experiences remained personal, perhaps terminating when close family members passed away. However, because young children are found interred with adults of all ages in Estremaduran collective burials, it seems that at least some children were afforded formal burial rites in collective burial spaces. Owing to their expanded sphere of influence, grief related to the deaths of older children may have extended well outside the domestic sphere. With the death of an older child or adolescent, substantial economic losses could also occur in terms of lost labour resources, but the overall socio-political ramifications would still be limited in comparison to adults. As long as memories of the deceased child persist, we can imagine that ritualized remembrance and/or grave visitation could potentially occur, though a lack of offspring and strong communal ties is likely to have limited the broader influences of a child's death in most circumstances and excluded them from any lineage-based commemoration in the 'distant dead' visitation scenario.

For young adults, however, the sphere of influence would widen. Full burial rites would be afforded, and grief would likely be community-wide. As young adults are often in the midst of navigating various economic and social networks, the likelihood that a death may have socio-political ramifications increases. Young adults may also have begun to bear offspring, leading to a greater potential for lineage commemorations and grave visitation over time. However, their potential number of descendants may be limited owing to death earlier in the reproductive years. Likewise, death in early adulthood would potentially limit the deceased's social influence within the family and limit the longevity of personal recollections.

We suggest that the death of an older adult would vary markedly from the other three age-grade categories in several ways. First, with a lifetime spent establishing familial and social networks, older adults would conceivably have the broadest sphere of social and economic influence. Thus, the passing of an older individual may trigger major socio-political transformations, especially if he or she wielded significant social power. Additionally, older adults may have produced numerous children and even lived long enough to be personally known by several generations. This would potentially create a larger 'body of memory' within the community, granting older adults a more secure and durable position within the social memory

	Infant	Child	Young Adult	Older Adult
Burial: *Newly deceased personally known by members of community*	Familial mourning Burial rituals limited No descendants Limited sociopolitical ramifications	Familial and community mourning Formal burial No descendants Limited sociopolitical ramifications	Familial and community mourning Formal burial Few or no descendants Increased potential for sociopolitical ramifications	Familial and community mourning Formal burial Many descendants Strong potential for sociopolitical ramifications
Initial Grave Visitations: *Recently deceased still known by most members of community*	Personal remembrance No formal visitation No sociopolitical ramifications	Diminished familial and community mourning Grave visitation Commemoration based on personal memories. No sociopolitical ramifications	Diminished familial and community mourning Grave visitation Commemoration based on personal memories Increased visibility of family of deceased	Diminished familial and community mourning Grave visitation Commemoration based on personal memories. Increased visibility of family of deceased
Later Grave Visitations: *Deceased dead for a generation or more; personally remembered only by some members of community*	Personal remembrance No formal visitation	Limited grief/no mourning Grave visitation Commemoration based on personal memories.	Limited grief/no mourning Grave visitation Commemoration shifts towards lineage-based relationships Few descendants to participate in ritual remembrances. Limited opportunities for political advancement	Limited grief/no mourning Grave visitation Commemoration shifts towards lineage-based relationships Many descendants to participate in ritual remembrances. Increased opportunities for political advancement
Ancestral Grave Visitations: *Deceased long dead; not personally known by any members of community*	No remembrance No formal visitation No lineage relationships to commemorate	No remembrance No formal visitation No lineage relationships to commemorate	Commemorations based on lineage relationships. Few descendants to participate in ritual remembrances. Limited opportunities for political advancement.	Commemorations based on lineage relationships. Many descendants to participate in ritual remembrances. Increased opportunities for political advancement.

Increasing Sphere of Influence →

Recent Death →

Distant Death →

Figure 3

Death, burial and grave visitation in late prehistoric Portugal: possible experiences by age-grade and time.

of kin-based groups (Climo and Cattell 2002). Although we must acknowledge that infertility and high infant and child mortality rates would potentially limit the possibility that all older individuals would have a large number of genetic offspring, we can expect that even older childless adults would have established numerous memorable relationships with other community members and had the opportunity to ascend to positions of social importance during their lifetime.

In sum, we argue age-at-death and time-since-death create several types of variability in burial and grave visitation experiences. One component is a diachronic shift from a focus on personal relationships with the recently deceased towards a more impersonal, perhaps 'ancestral relationship' with the distant dead who were not known as individuals (represented by the vertical axis on Figure 2). A second component is associated with longevity, in which older adults simply have more time to produce offspring, establish more expansive familial relationships, and garner socio-political importance related to their treatment upon death (represented by the horizontal axis in Figure 2). Both components are strongly tied to the 'body of memory' or social memory that can potentially be created, both in terms of its construction and its maintenance over time.

DISCUSSION

Intracultural variations in burial practices

It is important to concede that burial and grief experiences, like kinship relationships, can be idiosyncratic and vary according to cultural practices and individual life histories (Carsten 2000). However, the contention that burial practices and experiences may vary widely according to age and socio-political relationships is well supported in the ethnographic literature. For example, Max Gluckman writes of Bantu burial rituals:

> In the burial of a Thonga child only the mother who alone has had real social relationships with it plays an important part, though the father digs the grave . . . If the child has been initiated its spirit is consigned to the ancestors. Old people are already so closely associated with death that they are sad to ″go home″ and their burial rites are few. A woman's death, unless she is the chief wife of a headman, affects only her own family. Strangers and friendless people, having no social relationship with the community, are buried without ceremony. In the descriptions of chiefs' funerals one finds that little attention is paid to their relations with their families. Apparently a chief's importance as head of his tribe overrides family relationships (Gluckman 1963(1937), 124).

Additionally, as Peter Ucko nicely summarizes, ample archaeological and ethnographic evidence suggests that differential burial rights are common for infants and children cross-culturally:

> In many societies babies and children are distinguished in burial custom from adults. In Rome, babies with no teeth received no burial at all [Nock 1932: 322]; amongst the Shona, babies and older children were buried near flood water and away from the rest of the population [Ballock 1950: 175 ff.; Peter Fry, pers. comm.]; amongst the Murngin, there is further differentiation by age: the newborn received no burial, the young child was buried in the camp, and the older child was buried at the camp edge [Warner 1964: 424– 5]; amongst several Ghanaian tribes, children were placed at crossroads, a place of dispersal to help scatter the potentially annoying

habits of individuals who were, by their age, still only incipient human beings [Goody 1962: 148 ff.]; amongst the Ashanti, any infant who dies under the age of eight days is buried in a pot in a latrine, for he was in fact just a ghost child and had no real intention of staying in this world [Rattray 1959: 59–60]; amongst several tribes, disposal of babies and young children was characterized by an absence of, or at most perfunctory, burial ritual (Ucko 1969, 270–1).

Furthermore, in many societies both past and present the actual *type* of death often dictates burial practices. For example, special funerary arrangements can be required for those who have been murdered, die from a violent accident, or from trauma related to childbirth (Ucko 1969).

In considering the Late Neolithic burials of the Estremadura, it is apparent that some age-related variability in burial practices exists, as infants are largely absent from the collective tombs. Alternative burial rituals for infants during this time period are generally unknown as infant burials are not routinely discovered in any archaeological contexts. However, a small amount of infant remains have been recovered from the Late Neolithic/Early Bronze Age fortified settlement site of Zambujal (Waterman *et al*. 2011), suggesting the possibility that the bodies of some infants were disposed of in domestic contexts – a practice that is also ethnographically well established. In other parts of Atlantic Europe, archaeologists have previously argued that collective Neolithic burials are likely to have housed only a particular subset of the population (cf. Bradley 1984). The fact that infants may have been excluded from the collective burials of Neolithic Portugal necessitates the acknowledgement that other sodalities may have been excluded from these funerary spaces as well.

In considering the role that many archaeologists have argued ancestor worship played in the social and political life of this time, burial practices related to the interment of older adults and their subsequent veneration seem best suited to this traditional framework. It seems unlikely that the death and commemoration of a child would be considered in the same light as the veneration of a socially or politically powerful ancestor through which a more significant type of legitimation could most likely be achieved. Additionally, ancestor worship connected to land rights is commonly directed at a limited rather than expansive number of individuals (Freedman 1970; Li and Chen 2006). Thus, if ancestor worship in late prehistoric Portugal was connected to the maintenance of territorial control, it is unlikely that all interred individuals were incorporated into the pantheon of ancestors, and much more likely that children were excluded. In many ethnographic accounts, the times and places in which ancestors are remembered, whether it is in domestic loci such as household shrines or in extra-domestic contexts such as tombs, often coincide with those of children, or other deceased (but non-ancestral) community members (Freedman 1970; Smith 1983; Kyu 1984; Li 2000). A strong possibility exists therefore that in the collective burials of late prehistoric Portugal, funeral rituals related to ancestor worship coincided with other types of funerary remembrances, creating diverse layers of ritual activities and experiences.

Because burial practices can vary so widely, we recognize that our proposed schematics cannot properly account for the full range of possible funerary variability. However, the aim of Figures 2 and 3 is not to provide an exhaustive list of all possible funerary experiences, but rather to demonstrate that age-at-death and time-since-death are indispensible to any discussion of burial practices, grave visitation and mourning, as they necessarily impact upon the phenomenological, mnemonic and political economic aspects of an individual's death. If the collective burials in late prehistoric Portugal and elsewhere were in fact polysemous spaces associated with loss and the construction of memory *in addition* to ancestral ties, funerary

experiences would vary according to the demographic cohort of the deceased, their personal relationships and other temporal considerations. The interweaving of these experiences becomes even more complicated when we consider how new burials overlapped with earlier ones, as is the case for Neolithic Portuguese collective burials in which primary and secondary burials often coincide. For instance, we can imagine a scenario in which a mother could simultaneously grieve for a newly deceased child and a recently deceased sibling, while at the same time encountering the remains of her parents who passed away decades before, and the remains of ancestors she would not have known. Other attending community members would be similarly encountering deceased loved ones from various points in their lives, in addition to unknown ancestors. Thus, it seems likely that Neolithic burial spaces represent a complex palimpsest of archaeological, personal and socio-political phenomena which cannot simply be reduced to a generic manner of ancestor worship.

Children as ancestors?

Based on the assertion that the death and commemoration of a child would not have been considered in the same light as the death and commemoration of a socially or politically powerful adult, we have attempted to problematize the traditional view of Neolithic collective burials as spaces solely devoted to ancestor veneration by focusing on the prevalence of non-adult burials. However, the idea that children are less likely to wield social power both in life and death may be overly influenced by contemporary western ideas of children and childhood. It has been argued elsewhere that in prehistoric Europe the separation between childhood and adulthood was less defined and children may have played significant roles in economic activities (Lillehammer 2000), have held positions of prestige as lineage heirs, or may have served as powerful symbols of life and vitality (Lillehammer 2009). Alternatively, in some societies we also know that children have held considerable power as sacrificial victims (see Lillehammer 2009; Lally and Ardren 2009) and in such circumstances their deaths hold significant power to transform social relationships.

If the primary purpose of the Late Neolithic Estremaduran burial spaces indeed *was* to facilitate ancestor worship, perhaps non-adults were somehow incorporated into ancestral groups along with older members of the community. The archaeological record of the Estremadura indicates that non-adult bones were routinely manipulated in similar ways to adult remains, which suggests a lack of distinction between these two classes of individuals. When considering extant societies that practise ancestor worship, direct reference to deceased children considered as ancestors appears to be uncommon. However, ethnographic accounts and historical documentation reveal widely differing 'ancestral qualifications': ancestral status is regularly denied to some adult individuals, while non-adults are given ancestral status in some instances but denied it in others (Freedman 1970). For example, for the Akan people of Ghana, ancestral status is withheld from everyone but those who have obtained the standing of 'enlightened elder' during life (Ephirim-Donkor 1997, 129). In contrast, in Japanese communities where ancestor worship is prevalent, it is believed that only children and other classes of people who die before being able to join or begin their own ancestral lineage will not become ancestors and instead will be part of a separate spiritual grouping – *muenbotoke* (outside or wandering souls) (Ooms 1976, 68–9). In Chinese societies, while children are often rigidly excluded entry into ancestral groups because they have not attained parenthood (often a cultural prerequisite for ancestral status), adolescents of marriageable age who die

before producing children are occasionally posthumously married and allowed to become ancestors in order to placate their restless spirits (Freedman 1970). When considering the cross-cultural variability in practices related to ancestor worship it is important to accede that there is likely to be no 'universal ancestor', or universally accepted way of assigning ancestral status to people of different ages (Whitley 2002); therefore, we cannot completely rule out the possibility that deceased children in late prehistoric Portugal were able to obtain ancestral status along with adults.

An alternative possibility to consider is that Neolithic collective burials may have been places in which deceased children were entrusted to the care of the ancestors. In this way, child burial may have been part of ancestor veneration, in as much as the living wished to continue to 'provide' for their offspring even after death by integrating them into the larger ancestral body. Even within traditions in which children are unable to obtain ancestral status it is sometimes possible for family members to connect them to ancestor groupings. For instance, in Japan a parent or grandparent may choose to prepare their own funerary tablet and inscribe the dead child's name into it in order to attach the child to their own ancestral status and thereby protect the child from the feared spiritual *muenbotoke* state (Ooms 1976, 68–9). Likewise in Zulu religious traditions, a child who has been given an *imbeleko* sacrifice (first sacrifice) is able to join the ancestors as a companion upon the event of his or her death, while the plight of the souls of uninitiated children is *lenda* (to return from whence they came) (Ngubane 1977, 55). In some Chinese traditions, the dead are commonly venerated by the successive generations who actually remember them, but when relatives no longer have strong personal recollections of the deceased, he or she becomes part of a larger and ostensibly more impersonal corporate group of ancestors (Freedman 1970). Considering the lack of differential burial for non-adults, it may be the case that children in Neolithic burials were still considered important enough to be made part of pre-existing ancestral corporate groups.

Writing children into the archaeological record

Recent research has made it clear that anthropological archaeologists should have an abiding interest in children because of their social, economic, demographic and theoretical significance (Hirschfeld 2002, 624). While much has changed in the past decade and numerous articles have been published which focus on the lives of children in the past (cf. Sofaer Derevenski 1996; Kamp 2001; 2002; Baxter 2005), we are still left to wonder why children remain largely absent from the European Neolithic literature concerning collective burial rites and rituals (but see Scott 1999; Skeates 1991; Garwood 2007) even when their remains are so visible in the mortuary record. There are several possibilities. First, the rapid rise of ancestor worship as an explanatory model for the megalithic phenomenon has been so successful that other potential theoretical explanations have gone largely uninvestigated. Second, age-at-death demographics have yet to be well integrated and productively applied to the megalithic phenomenon in the same way that theoretical interests such as gender and memory have been. Finally, in Neolithic Iberia most theoretical literature is geared towards arguments about the level of social complexity and the nature of power held by emergent leaders, issues in which children (somewhat erroneously) are *a priori* assumed not to play a part.

In our view, however, a simpler, subtler form of bias may also be at work. Child death is a relatively rare occurrence in developed countries from which many researchers originate, colouring our perception of the impact of childhood mortality among prehistoric groups and

potentially leading to a lack of interest in the role of non-adults. According to the latest World Health Organization statistics, current median childhood mortality rates (five years of age and younger) for world populations are 23 per 1000 live births (2.3 per cent) in the most affluent developed nations. Such low rates make the concept of child death a relatively isolated occurrence for many archaeologists, and, as such, one that is not typically woven into the thread of everyday life, or research concerns.

However, in many parts of the world – for instance in Sierra Leone where as many as 262 children die per 1000 births (WHO) – child mortality rates are dramatically higher. Demographic figures and mortality profiles from historic (pre-vaccination, pre-antibiotic) populations consistently exhibit childhood mortality rates which are similar to those for contemporary Sierra Leone. We can reasonably estimate therefore that such rates would have been similarly high in prehistory. In fact, estimates of between 30 to 40 per cent of all individuals dying before they reached adulthood have become the accepted standard in prehistoric research (Lewis 2007). If these figures are accurate, it is clear that the majority of people in Neolithic communities would have faced the hardship of burying their own child or children closely related to them numerous times over the course of their lives.

It is important to reiterate that our aim here is not to dwell on mortality statistics, as the fact that childhood mortality was higher in the past is not under debate. Our overarching goal is to highlight that children are present in significant enough numbers in many prehistoric collective burials of Atlantic Europe to warrant interpretative reconsideration in terms of the role they played in the social construction of funerary practices. In our opinion, what remains to be formulated in subsequent research is how children and other demographic cohorts (1) influenced the meaning, experience and use of collective burial spaces, (2) influenced the social construction of practices associated with them, and (3) may have been ritually transformed into ancestors or incorporated into lineage groups. In a similar manner to how the concepts of gender and memory have been incorporated into archaeological discussions during the past three decades (see Gero and Conkey 1991; Sweely 1999; Van Dyke and Alcock 2003), we contend that research which seeks to incorporate the role of non-adults into settlement and burial histories will provide a more nuanced understanding of past life-ways and allow childhood mortality to contribute to our understanding of the phenomenological aspects of how these tombs were used and encountered over time.

CONCLUSION

How did people in the prehistoric Portuguese Estremadura and similar groups throughout Atlantic Europe – mothers, fathers, children and extended family – encounter collective burial spaces? We will likely never fully know. However, if cross-cultural evidence of childhood mortality is any indication, these collective burial spaces were places of memorial for the death of the young as well as the old. While the physical visibility of 'ancestral' adult individuals in Late Neolithic collective burials has secured their theoretical importance, the same cannot be said for children, whose impact on burial spaces and practices is less theoretically well defined despite demographic profiles which indicate that a significant amount of funerary activities were devoted to their interments. Moreover, these interments generally are indistinguishable from those of adults, suggesting that children and adolescents were valuable, perhaps even representative, members of their communities.

Without disputing that the collective burials of Atlantic Europe were permeated with ancestral meaning, we suggest that by including non-adults in the discussions of burial practice

and ritual, we can tease out a more nuanced and accurate portrait of funerary practice in Neolithic Atlantic Europe and allow childhood mortality to contribute to our understanding of the phenomenological aspects of how these tombs were used and encountered over time. In light of the substantial body of theoretical work devoted to the megalithic phenomena in Atlantic Europe, it could be a case of 'too few children' rather than 'too many ancestors'.

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