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Animal 'Ritual' Killing: from Remains to Meanings

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Introduction

As humans, we interact with our environment and the other species inhabiting it in a variety of ways. Animals not only provide a source of sustenance, but a means for humans to express their social concepts through interaction. The range of human interactions with other species can still be seen in our modern world; such as the use of animal characteristics as metaphors and the humanisation of certain species. Douglas (1990, p. 33) suggests we think about how animals relate to one another, on the basis of our own relationships. Therefore, human social categories are extended into the animal world. Classical literature can offer examples of this. Aristotle (*Politics*, 1254b) discussed the similarity between working animals and slaves, which in Roman law were treated together, noting "the usefulness of slaves diverges little from that of animals; bodily service for the necessities of life is forthcoming from both". This entwining of the human and animal worlds was also present in the form of animal sacrifices and Gilhus (2006) has discussed the inventions and developments of such a tradition in depth. Evidence of animal sacrifice is not just limited to the classical world, for example we also have evidence from iconographic depictions from Mesoamerica (Emery 2005), as well as ethnographic observations (Morris 2000, p. 138).

The challenge we face is to use archaeologically recovered faunal data to investigate such social zooarchaeological issues. As the majority of animal remains are of a fragmentary nature, most investigations into social concepts have utilised articulated animal remains. A number of terms have been used when discussing such concepts including animal burials and special animal deposits. However, for this paper the term associated bone group (ABG) has been adopted. Although at first it may appear unimportant, the terminology and language used by archaeologists describing a deposit can greatly influence its interpretation, and importantly, the concepts of other archaeologists. Terms such as 'special', to many archaeologists, automatically implies a ritual connotation, similarly 'burial', a term utilised mainly for human remains, may conjure images of a ceremonial/ritual event. This is important because within British archaeology the interpretation of these deposits has been stuck in a dichotomy between the ritual and the mundane (Morris 2008a; 2011). Hill (1995) was also critical of the use of 'special deposit' and suggested the term associated/articulated bone group, to remove any connotations.

This paper draws on the results of a project that investigated the nature of ABGs in Britain from the Neolithic (*c.* 4000BC) to the end of the late

medieval period (*c.* AD1550). Due to the large time-span it was not possible to investigate every deposit in Britain, therefore just published data from southern England (Dorset, Hampshire and Wiltshire) and Yorkshire was utilised. The results of the project are discussed in detail elsewhere, along with a complete list of the sites recorded (Morris 2008b; 2011), therefore a brief overview of the major trends will be discussed here. Further consideration will then be given to the interpretation of these deposits and a biographical method based on the actions used to create the ABG will be considered. Finally the paper will use this approach to discuss the presence of ritual animal killings in the British archaeological record.

A variable deposit

A search of the literature regarding ABG deposits would lead one to think that they were predominately a prehistoric, and in particular Iron Age (750BC–AD43), phenomena. However, the review of published faunal reports shows that this is not the case. Overall, this project recovered the details of 2066 ABG deposits, of which the majority came from Romano-British, 44% (908) and Iron Age, 38% (784) contexts. Interestingly medieval sites produced a larger proportion of the assemblage, 12% (258), compared to the earlier Neolithic and Bronze Age combined, 6% (116). Therefore these deposits appear to be more common from historic sites, which is surprising, considering the majority of the literature on 'animal burials' concerns prehistoric deposits. This difference, especially between the early prehistoric and medieval periods, is also shown when the number of sites with ABGs present is examined. The project recorded all available published sites where faunal remains were recovered, therefore allowing the proportion of sites with ABGs present to be explored. Deposits were recovered on over half of all Iron Age, Romano-British and early medieval sites with faunal remains present (Figure 2.1). In comparison they were recorded on only one third of Neolithic and one quarter of Bronze Age sites. This difference between the early and later prehistoric periods could be due to the nature of the archaeology. The majority of the Neolithic and Bronze Age archaeology in Britain consists of

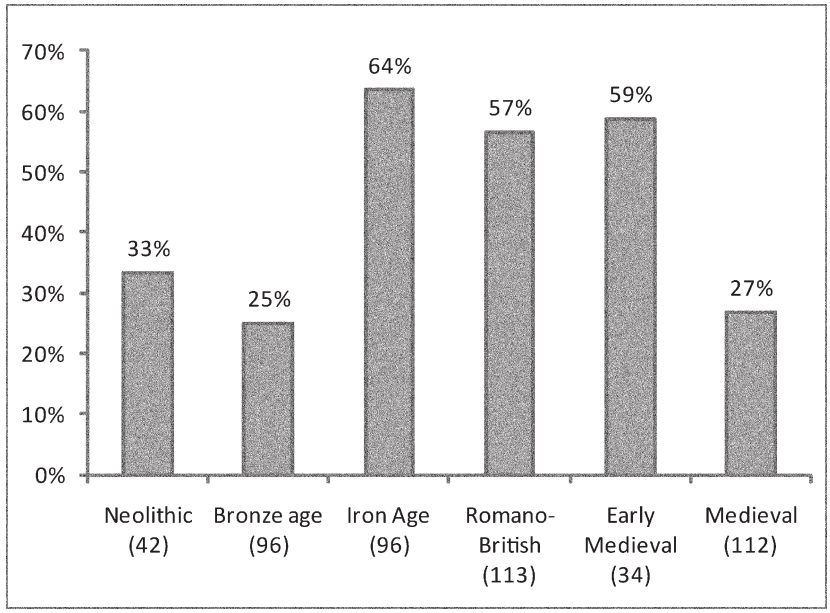

Figure 2.1: Percentage of sites with ABGs present. Total number of sites in brackets.

funerary monuments. In comparison, much of the data from the Iron Age onwards comes from large settlement sites, such as Danebury (Grant 1984) and Owslebury (Maltby 1987), as well as later urban sites like Dorchester (Maltby 1993) and York (O'Connor 1988; 1989).We must also consider the scale of excavations, the majority of earlier prehistoric sites are excavated on a relatively small scale compared to some of the later urban investigations.

The composition of the ABG assemblages also varies between periods. This is best shown by considering the species deposited in this manner. Firstly, domestic mammals dominate the assemblages from each period and region. This is interesting considering the importance placed on wild species by authors such as Green (1992). Overall, wild mammals account for only 4% (76) and wild birds 6% (121) of the total ABG assemblage. There is however variation, for example the higher percentage of wild mammal and bird ABGs on later Medieval sites compared to the Iron Age does call into question some of the assumptions made in 'Celtic' centric literature.

Although domestic mammals are common, there is variation in the species proportions between periods (Figure 2.2). For the prehistoric periods the most common species appears to correlate with the most common non-ABG species, with cattle in the Neolithic and sheep/goat in the Bronze Age and Iron Age. However, just like the 'normal' faunal assemblage this overall pattern does not translate to every site. For example the majority of late Bronze Age deposits at Poundbury were cattle (Buckland-Wright 1987).

One of the notable trends in the ABG assemblage is the gradual increase in dog remains and by the Iron Age dogs are the second most common species. However the proportion of dogs vastly increases in the Romano-British period to make up 43% of the assemblage (Figure 2.2). This change is not a sudden one and the early Romano-British pattern on non-urban sites is very similar to the late Iron Age (Morris 2010b). This appears to be related to a change in the social identity and practice of local groups. From the Romano-British period onwards the species proportions of the ABG and 'normal' faunal assemblages no longer correspond, with dog the most common in the early medieval, and domestic fowl (chicken) in later medieval periods.

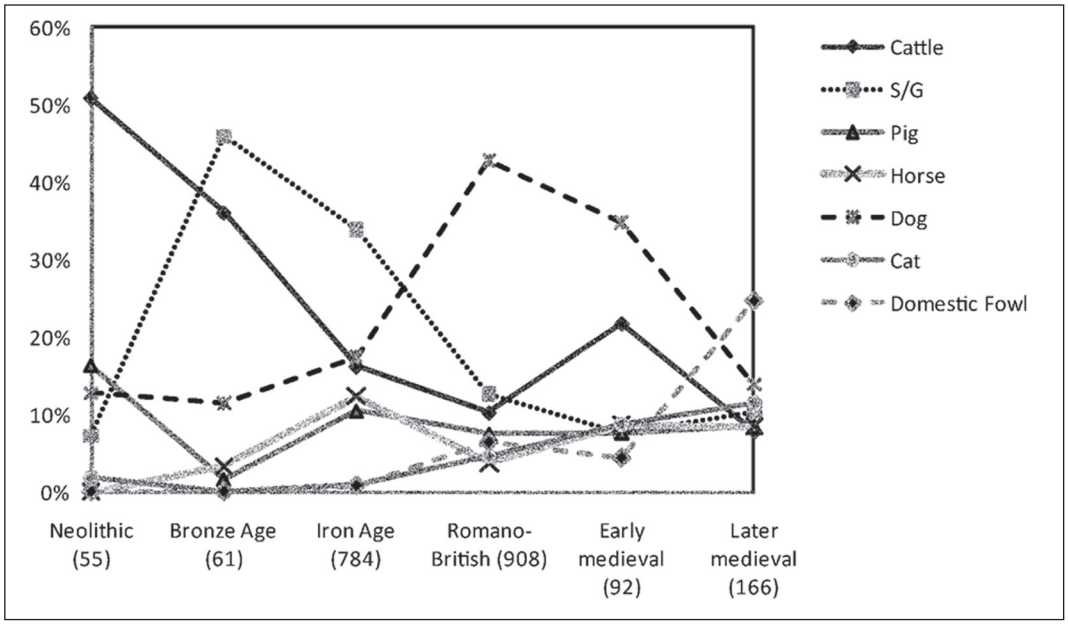

Figure 2.2: Percentage of ABG species per period. Sample size in brackets.

As well as variation in the species deposited as ABGs, the composition and context of the deposits also differs between periods, sites and features (for more detail see Morris 2011). The majority, 61% (1256), of the deposits recorded for this study consist of partial skeletons, 26% (535) were complete (meaning all body areas were represented, not necessarily all bones present) and the rest unknown. Some species, such as domestic fowl, were often found complete, 56% (109), in comparison with only 8% (155) of complete horse ABGs (Morris 2010a). Amongst the partial ABGs, the elements deposited varies between time periods. For example, the majority of cattle and sheep/goat deposits in the Iron Age (700BC–AD43) and early Romano-British (AD43–150) periods consist of axial elements. However, from the middle Romano-British period (AD150–350) the proportion of axial elements drops and lower limb bones such as the metapodials and phalanges often form ABG deposits (Morris 2008a). Finally, these deposits, although commonly recovered from pits, are found in a wide range of context types across all periods. These can range from a partial sheep/goat deposit recovered from a Bronze Age post-hole at Shearplace Hill (Dorest) (King 1962) to the articled horse limb bone incorporated in the metalling of a mid Anglo-Saxon road at *Hamwic* (Southampton) (Bourdillon and Andrews 1997).

From actions to meanings

This variation in the composition and nature of ABG deposits becomes extremely relevant when we start to consider how they are interpreted. Although they have long been noted in the archaeological record, such as the remains from Swallowcliff Down (Clay 1925) and Maiden Castle (Wheeler 1943, 54), it was not until the 1970's that British archaeologists started to regularly offer interpretations. Throughout this project the interpretation of the ABGs suggested by the original reporting author was recorded, with these ranging from 'cullings' to 'offerings'. A functional interpretation was recorded when a number of possible 'functional' suggestions were put forward, rather than one specific explanation. A ritual/sacrifice interpretation was recorded when the original author alluded to a form of ritual activity, often mentioning the possibility of sacrifice, but without giving a specific explanation. Overall, twelve different explanations were recorded, with the data showing that prehistoric (Neolithic to Iron Age) deposits are often viewed as the result of a ritual/sacrifice, whereas historical (Romano-British onwards) deposits are most often give 'functional' interpretations (Table 2.1). This suggests that the interpretation of these deposits may be linked to our knowledge and preconceptions of archaeological time periods.

An example of how our preconceptions are linked to archaeological periods is shown by the interpretation of two complete sheep ABGs from excavations at Mildenhall, Suffolk (Morris 2009). The site consists of an Iron Age settlement, and includes a number of complete and partial ABG deposits from the pits and ditches. Recovered in the remains of a shallow ditch were two overlaying sheep skeletons (Figure 2.3). Although the ditch they were recovered from could not be dated it was assumed by the excavating team that the ABGs represented 'ritual' Iron Age deposits. However, upon examination of the skeletal material the sheep turned out to be modern 20th century animals, buried by the previous farming occupant of the site. This resulted in the deposits interpretation being changed from a 'ritual' deposit to a more pragmatic, utilitarian one. It is worth considering how the interpretation of remains can become set within the field before there has been a chance of a dialogue between the zooarchaeologist and field work team.

A striking aspect of the interpretation data is the variety of 'functional' explanations compared to 'ritual' ones (Table 2.1). For example, the majority of the Iron Age ABGs interpreted as ritual are mainly seen as ritual/sacrifice. One deposit, a complete juvenile cow found in a pit underneath round house 1 at Garton Slack (East Yorkshire), was interpreted as a foundation offering (Brewster 1980). All of the Iron Age and Romano-British ABGs interpreted as offerings were recovered in association with human remains. Therefore, in

Figure 2.3: The Mildenhall Hall modern sheep burials. Photo courtesy of Archaeological Solutions.

some circumstances the context and associations of the deposit do influence the interpretation.

The Romano-British data shows some interpretations are linked to species. The most common explanation recorded for this period is that the deposits represent the 'culling' of an animal (Table 2.1). All of the ABGs given this explanation are dog remains, with the exception of one raven from Oakridge Well, which was interpreted as being culled to remove a potential threat to livestock (Maltby 1994). The majority of the dogs interpreted in this way are from Maltby's investigations of the large faunal assemblages from Dorchester and Winchester (Maltby 1986; 1993; in press). However, recent work by Woodward and Woodward (2004) has reinterpreted the Dorchester dog and other ABGs as part of the foundation ritual associated with the founding of the town. They suggest dogs are traditionally associated with healing, fidelity and protection of humans and therefore suitable for ritual sacrifice and deposition within ritual features. Smith (2006, p. 43) demonstrates that dog sacrifice was carried out in Rome. During the festival of *Robigalia,* rusty-coloured sucking puppies were sacrificed to protect crops, and a ritual *Sacrum Canarium* (dog sacrifice) was carried out by priests in Rome around the same time as the *Robigalia*. The point that sacrifices occurred in the Roman period is not a contentious one. However, Smith does not indicate whether the carcasses were deposited in a specific way. Maltby (2010a) has recently reviewed the Dorchester evidence pointing out that the nature of these deposits are variable.

Therefore, some interpretations appear to be influenced by factors such as the date, type of context and species deposited. However, the majority of ABGs viewed as the result of ritualised activity are still interpreted merely as *ritual/ sacrifice*. The use of such a generalised category is related to the nature of 'ritual' as a concept. Handelman (2006) has suggested there is a meta-level *ritual* which encompasses all ritual activities. Therefore feasting, sacrifice and offering deposits are all separate ritual acts, which are classified under the general term ritual. There is also a meta-level concerning the functional/practical, with culling, disease, natural death etc, all part of the *functional* category of activities. To use taxonomy as an analogy it is the equivalent of identifying to family rather than to species. Of the 474 ABGs interpreted as ritual in nature, the generic meta-level ritual/ sacrifice explanation was utilised for 354 (74%) of them. Sacrifice has been added to the meta-level

category because the majority of publications that use the meta-level explanation for ABGs alluded to the animal being sacrificed. The use of ritual as an interpretation is also related to archaeologists' concepts. Hodder (1992, p. 223) has suggested that it is used because what is observed is non-functional and not understood. Functional is not utilised as an explanation on its own as it is understood. Therefore, a sub-category, such as culling deposit, is used. As ritual is not understood, this leads many archaeologists to use the meta-level *ritual* as an explanation in its own right (Morris in prep).

Whilst discussing Iron Age ABGs, Hill (1995) argued ritual was embedded within everyday activity, suggesting that ritual as an independent act did not exist. This point has been noted by other authors. Brück (1999) has argued that many societies have a monist rather than a dualist mode of thought; ritual and functional are not separate concepts. We view such concepts as separate because of our modern western outlook. Bradley (2003; 2005) has also suggested that throughout prehistory ritual and domestic life are intertwined and it is impossible to separate them. Pluskowski (2002) has noted that in the Medieval period the conceptual and physical were interwoven. If this is the case, then the use of meta-level interpretations for ABGs is at best unhelpful. Hill (1995) does try to move beyond such interpretations by suggesting ABGs represent the remains from feasting as well as possible offerings, with the domestic and the ritual intertwined at such events; however, the majority of archaeologists have not been as successful, preferring meta-level categories. In effect, we as archaeologists are stuck in a loop of thought regarding these deposits. We recognise that the functional and ritual divide probably did not exist, yet we still need to explain why ABGs are present, and different, to the 'normal' faunal assemblage and are constantly drawn back to vague ritual interpretations. It is this inability to separate ritual and functional explanations that has led to a number of authors offering mixed interpretations (Table 2.1). However, such approaches are as unhelpful as meta-level explanations, because they do not try to combine ritual and functional, they are simply offering alternative, either/or, explanations. Neither meta-level nor mixed interpretations are actually telling us why ABGs were created.

One of the main reasons archaeologists have such a problem in defining ritual is that many still associate it exclusively with religious and spiritual

Period of deposit	Neolithic	Bronze Age	Iron Age	Romano-British	Early Medieval	Later Medieval
Functional		9	8	8	1	8
Culling			17	238	10	7
Disease			1	9	1	19
Fall			14	32		
Natural death		1	82	95	6	12
Waste	7	5	221	141	33	56
Mixed	6	6	94	115	4	1
Ritual/Sacrifice	24	28	237	64	1	
Feast	14					
Foundation Offering			1	2		6
Offering	1	1	25	68	2	
Unknown	3	11	84	136	34	53

Table 2.1: Summary of the total number of interpretations given to ABGs in each period. Mixed deposit means both a ritual and functional explanation is offered.

beliefs. However, social anthropologists have shown there are many different types of rituals. These can be secular, religious, class-related, sex-related, personal etc. (Bell 1992; 1997; Humphrey and Laidlaw 1994; Kreinath *et al.* 2006). Although rituals are often a part of religious practices, each has a different meaning and purpose and many secular rituals also exist. Therefore, we should not instantly equate ritual with religious. The characteristic that most 'rituals' examined by social anthropologists share is that the actions are formulaic, there is, in effect, a script (Snoek 2006). Perhaps we should see ritual as framing a formularised action/activity. If this is the case, then we could argue that a large proportion of the archaeological record was created by a ritualised act. However, using the term still keeps us at a meta-level of explanation. Brück (1999) suggests a way forward is to jettison ritual and instead look at rationality. In effect, Brück is arguing that we should try to understand why people are 'doing things' without imposing our concepts upon the people. This is a useful suggestion for ABGs, as we need to move away from meta-level explanations of activities. However, ritual as an activity/concept/event does exist and it would also be a very hard task to remove ritual from the archaeologist's mindset. With regards to ABGs, ritual is not a problem; it is the use of the term as both a description and an interpretation where the problem lies. To develop our understanding of ABGs we need to start looking at specific explanations regarding their creation.

Associated bone groups represent only the final action in a possible long series of events. To fully understand these remains we need to move away from the below ground deposit and consider the above ground events behind their creation. Therefore considering the animals 'life history', rather than concentrating on a single time-frame, their final resting place prior to archaeological recovery. An understanding of an object's existence can be gained by adopting a biographical approach. This draws on the work of Igor Kopytoff (1986) who suggested 'things' could be examined at multiple points in their existence such as creation, exchange, consumption and death. In general, the biographical approach allows artefacts to become 'networks of significance' (Thomas 1996, p. 159), given 'secondary agency', in that they do not have the power to initiate happenings, but are objective embodiments of the power society or individuals have given them (Gell 1998, pp. 20–21). Such theories are just as relevant to human-animal relations. For example, consider contemporary western reactions to dogs (man's best friend) and snakes (association with evil); both species embody different meanings and their secondary agency will cause very different reactions in humans. Although drawn from anthropological theory, there is also an intertwined tradition of examining objects 'life histories' within archaeology (Jones 2002, p. 84; Schiffer 2005; Skibo and Schiffer 2001). The *chaîne opératoire* is used to examine events and their underlying decisions in object manufacture (Dobres 1999). In addition use-wear analysis has also been utilised to examine an objects life. Such approaches are normally associated with 'created' objects such as flint, metal and bone tools, however, the ABG deposits discussed here are also cultural creations. In this regard the biographical study of ABGs and other animal remains draws upon the work of Schiffer (1983; 1987) and a taphonomic approach to the formation of the archaeological record.

The biography of artefacts is also the study of transition, as artefacts acquire different meanings throughout their 'life'. Animals could be viewed as undergoing a large number of transformations as they supply primary and secondary products. For example, when alive, cattle may supply traction which could be used to plough and transform the land. In later life they may be slaughtered for meat, at which point part of it becomes food, and the bones or horns may become the raw material for an artefact. When these are removed from the animal, the meanings and agency of its parts are transformed. Therefore, when we are examining ABGs we are not viewing the original animal, but the results of a transformation process enacted upon it. In studying such transformation zooarchaeologists are well placed as biological data can offer an advantage when constructing biographies. In effect, the biological nature of animals, compared to other forms of material culture, offers us a baseline, upon which we can view the humanly created

transformations. Therefore, any alteration to the morphology of animal remains has been caused either by specific human or non-human taphonomic actions. Such actions can result in markers upon the osteological material. We can start to build up a picture of the events which have led to the deposition of the faunal remains, a biography of the deposit.

It is probably safe to assume that the majority of ABGs recorded in this study have at some point been affected by human agency. Most do not consist of complete skeletons but are partial skeletons. To be deposited in this state they must have undergone some form of disarticulation, either naturally or by human hand. Therefore, it is the taphonomic process that has created the ABG. To identify what was involved requires further investigation of the bones to look for evidence such as butchery marks. The formation of the ABG begins with the death of its constituting animal. Death may either be due to human hand, or natural causes such as old age, disease or accident. An animal may die naturally within an archaeological feature by simply falling into it. Although such pitfall victims are often smaller mammals and amphibians, a number of larger animals have also been interpreted as pitfall victims (Morris 2011). An animal that dies naturally may also be subjected to a form of human influence. A diseased animal may be buried to stop a disease spreading, as in the modern cases of stock afflicted with BSE and Foot and Mouth disease. Alternatively, non-diseased animals may also be buried whole due to socio-cultural reasons. With such instant burial we would expect a complete ABG to be formed, as no biostratinomic factors such as gnawing would have affected it. However, this does not mean that a complete ABG will be encountered by the archaeologist, as post-burial taphonomic effects such as slumpage and intercutting may result in the separation of the bones. Fortunately, such effects can be visible archaeologically and therefore taken into account, assuming they are reported. If an animal is subject to human agency in the form of butchery and/or biostratinomic effects we could expect a range of deposits to be formed on a sliding scale from a complete ABG to none at all (Figure 2.4). This is not to assume that the butchery taking place is purely for 'functional' reasons as Hill (1995, p. 59) points out:

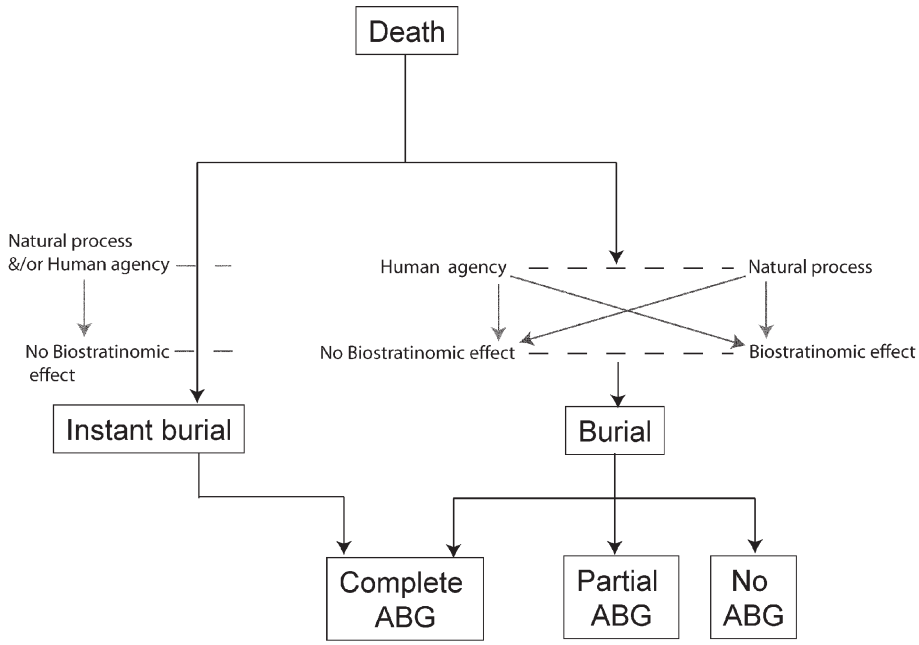

Figure 2.4: Basic model of an ABGs creation.

> "...ritual would have used the same technologies and practices as mundane (butchery etc). As such ritual draws from and reproduces the same generative principles as other social practices".

In classical Greece the same vocabulary encompassed both butchery and sacrifice (Gilhus 2006, p. 115). Therefore, the techniques used for the disarticulation of an animals leg for 'ritual' purposes is the same as the disarticulation of the leg for meat processing. The reasons for the actions may be very different, but the actions and practices used for the processes are the same.

The starting point of a biography of animals is therefore an investigation of the transformations that occurred during their life history. However, as Joy (2009) suggests, the biography of an object should not be restricted to its birth, life and death, rather it is comprised of the sum of the relationships it constitutes. It is by investigating and theorising transformations we can start to reveal the possible relationships animals and ABGs constitute.

Ritual killings

The biographical approach allows us to develop a life history of an ABG deposit and thus enables the interpretation of events behind a deposition. For example, if we consider the remains found within the Iron Age inhumation at Kirkburn (Yorkshire) a number of transformative processes can be theorised. Excavations in the late 1980's recovered a number of Iron Age burials of the Arras tradition dating to approximately 300–200BC. One particular gave (K5) consisted of a chariot burial, but also contained two ABGs. The inhumation was of a 25–35 year old male, the wheels of the chariot had been dismantled, with the body laid at the junction between them. Copper alloy horse equipment and other objects were deposited in the grave; an iron mail coat had also been laid over the inhumation (Figure 2.5). Two partial pig ABGs were also present. The main deposit consisted of a head, upper and lower forelimb positioned close to the head of the inhumation. The other consisted of an upper and lower forelimb placed close to the inhumation's knees, on top of the mail coat. It is probable that the pig remains all came from the same animal as both the right and left forelimbs are present. In total 25 pig elements were recovered, with tooth wear and epiphyseal fusion indicating they came from a sub-adult animal. Knife marks were also present on the upper front limbs, indicating they may have been defleshed before deposition (Legge 1991).

Similar ABGs were recovered from other Arras culture inhumations. Cunliffe (2005, p. 548) sees these as food offerings, or in the case of the pigs heads, offerings for the spirit of the deceased. Legge (1991) suggests the defleshing of some elements may indicate the offerings are more symbolic. However if we consider the biography of the ABG and the events behind its creation a more detailed picture is given. During the construction of

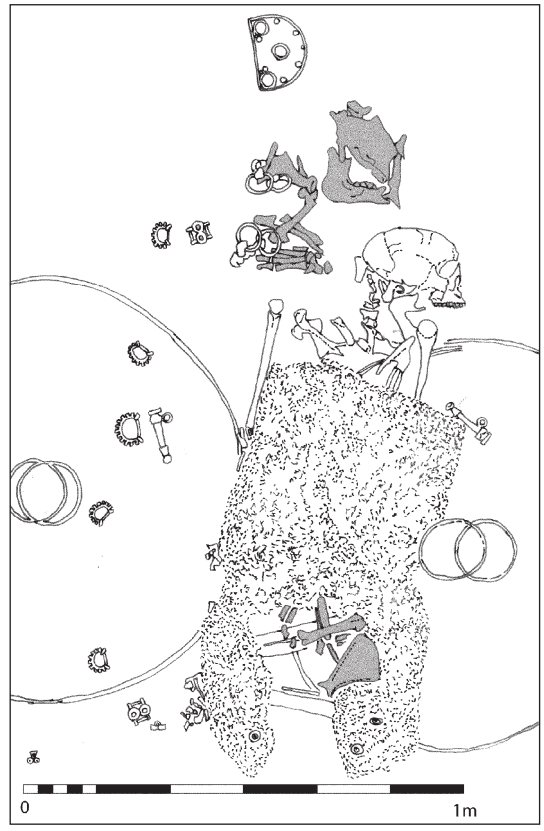

Figure 2.5: Plan of the Kirburn grave 5 inhumation. Pig elements are highlighted grey (altered from Stead 1991, figure 127).

the grave a young pig was chosen for slaughter. The choice of pig must have been significant, as only pig remains are found as ABGs in Arras culture burials (Morris 2008b, p. 139). Pig remains are poorly represented in faunal assemblages from this region during the Iron Age, with cattle and sheep/goat providing the vast majority of the meat consumed (Hambleton 1999, p. 47). The pig would have been killed, most probably following the same methods as slaughter for 'everyday' consumption. However, we do not know if the act of slaughter would have had ritualistic meaning attached. The carcass would then have been skinned and eviscerated. Further processing would have taken place to remove the pig's head and forelimbs. What we do not know is what happened to the rest of the carcass? Slaughter of such an animal may have been a relatively rare event and the meat from it may not have been wasted. Therefore, most of animal would have been transformed into food for the living and after consumption the axial and hind limbs may have been disposed of as 'normal' rubbish. However, the head and forelimbs were kept apart. Butchery marks on the upper forelimbs indicate that some of the meat may have been stripped from them. This meat may have been consumed with the rest of the animal, or possibly in a separate event linked to the construction of the grave. Eventually, the elements were carefully placed within the grave, their position on top of the iron coat indicating they were some of the last elements to enter the grave. As suggested the elements may symbolically represent food for the deceased. However, considering that the rest of the animal was consumed, perhaps these represent the deceased's share of a feasting event linked to the creation of the grave. Funerary activity is as much about the living as the dead, with events incorporating the creation and modification of social connections (Metcalf and Huntington 1991; Oestigaard and Goldhahn 2006). Therefore, if we consider the life history of the deposit it undergoes a number of different transformations from a living domestic animal to food suitable for the living, food for the dead and possible 'waste'. These transformations allow a greater insight into the activities and possible meanings behind such a deposit.

One aspect that is unclear from the above examination is whether this ABG represents a 'ritual killing'. The identification of how an animal was killed is not normally possible. On occasion, killing blows such a pole-axe marks will be present in the 'normal' faunal assemblage (Rixson 2000, p. 233). Of the ABGs recorded for study, 107 (6%) of the domestic mammals had butchery marks present. However, there are a number of factors we need to take into account. Firstly, there is the almost universal absence of reports that explicitly record that butchery marks are not present. We therefore have to assume that butchery marks will be reported, if present. This seems unlikely, as many reports do not even give basic body part information for ABGs. We must also consider the possibility that any carcass processing may not have left butchery marks on the bones of the ABG as it is possible for an experienced butcher to process a carcass and leave no marks. If we examine a non-ABG faunal assemblage such as the one from Greyhound Yard, Dorchester (Maltby 1993), only 26% of the cattle, 7% of the sheep/goat and 11% of the pig bones have butchery marks present, even though the carcasses of these species were intensively processed. Of the 107 ABGs with butchery only two had marks present which authors suggested killed the animal. A complete cow from the Bronze Age Crab Farm site has marks on the skull which were interpreted as being made when the animal was killed (Locker 1992). A partial dog ABG from Romano-British Silchester Insula IX, pit 2674, has cleaver marks to the skull and trunk, indicating a possible killing blow and subsequent carcass dismemberment (Clark 2006).

As mentioned above, we certainly have literal, iconographic and ethnographic evidence for ritual killing. Yet it appears unlikely that the majority of such events will leave specific evidence upon the osteological material. There are exceptions, such as the cut marks on the ventral surface of the atlas and axis at Gamla suggestive of *kosher* ritual slaughter (Cope 2004) and the nature of the horse 'burials' at the Marvelé burial ground, Lithuania (Bertašius and Daugnora 2001). However, as discussed above, the majority of 'ritual' killings

would have used the same methodologies as 'normal' slaughter. Also, the sacrifice of an animal does not mean its remains will be treated differently to those animals killed just for consumption, for example in Rome the meat from public sacrifices was sold at market (Garnsey 1999, p. 134). Therefore, archaeologically it would be very difficult for us to distinguish between faunal remains from sacrificed and non-sacrificed animals, indeed in some societies there may have been no such division.

Perhaps we also need to consider what we mean by 'ritual' killing. For example, let us consider another ABG recovered from a Romano-British grave at Arlington Avenue. Grave 4381 contained the inhumation of an adult female and dates from AD 150 to 325. A complete juvenile female dog (sexed by the absence of a baculum) was recovered by the left side of the inhumation's knee, it is interpreted as a possible companion offering (Maltby 2002). As the dog is juvenile with no sign of trauma, we could assume that it was killed for inclusion in the grave, perhaps it belonged to the deceased. Could we consider the slaughter of the animal a 'ritual' killing? As with the example from Kirburn is the killing of the animal the important factor or the product of the transformation? Discussion of 'ritual' killing often leads to, and conjures, images of sacrifice. Yet the variable nature of the archaeological and historical record suggests that ritual killing should be viewed as a *polythetic* concept encompassing a multiplicity of phenomena, with overlapping family resemblances but no fixed criteria.

Conclusion

This paper has briefly discussed the nature of a specific deposit type, associated bone groups. It has shown how the composition of such animal remains varies both between and within different British archaeological time periods. This type of deposit was examined because it was often utilised in the exploration of social zooarchaeological issues. However, during such conjecture it is important to recognise that ABG deposits are, in fact, an archaeological construct, an artificial category applied to archaeological material. People in past societies did not go out and deposit an ABG. They carried out a number of acts and the associated agency resulted in the deposition of animal remains in variable states of association. Dependent upon the post-depositional taphonomic processes they undergo, such deposits may then survive and be recovered by archaeologists, who categorise them as ABGs, animal burials, special animal deposits, etc. This is one of the factors that have lead to the use of meta-level interpretations of these deposits.

However, through the adoption of a biographical approach to ABGs, we can start to examine the differences in their composition, which in turn leads us to explore the differences in activity and associated agency involved in their formation. We must also consider that the biographies of individual objects are unique and biographical analysis should be confined to the scale of the individual object (Holtorf 2002). However, multiple biographies can start to point towards social patterns.

The adoption of such an approach leads us away from considering these deposits within a single time-frame, but rather as the end result of a series of intertwined events and human actions. Therefore, one ABG deposit may have undergone a number of transformations and changes in social meaning through its life history. This can further help our investigation of the 'ritual' killing of animals, by showing that such events may be just the starting transformative process rather than a standalone activity.

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References

Aristotle, Politics. Translation by Rackham, H. (1967) Loeb Classical Library, London, Heinemann

Bell, C. (1992) Ritual Theory, Ritual Practice. Oxford, Oxford University Press.

Bell, C. (1997) Ritual Perspectives and Dimensions. Oxford, Oxford University Press.

Bertašius, M. and Daugnora, L. (2001) Viking age horse graves from Kaunas region (middle Lithuania). International journal of Osteoarchaeology 11, 387–399.

Bourdillon, J. and Andrews, P. (1997) The animal bone. In. P. Andrews (ed.) Excavations at Hamwic Volume 2: Excavations at Six Dials, 242–245. London, Council for British Archaeology Research Report 109.

Bradley, R. (2003) A life less ordinary: the ritualization of the domestic sphere in later prehistoric Europe. Cambridge Archaeology Journal 13:1 (1), 5–23.

Bradley, R. (2005) Ritual and Domestic Life in Prehistoric Europe. London, Routledge.

Brewster, T. C. M. (1980) The Excavation of Garton and Wetwang Slacks. Malton, The East Riding Archaeological Research Committee Prehistoric Excavation Reports No.2.

Brück, J. (1999) Ritual and rationality: some problems of interpretation in European archaeology. European Journal of Archaeology 2 (3), 313–344.

Buckland-Wright, J. C. (1987) The animal bones. In. C. S. Green (ed.) Excavations at Poundbury, Dorchester, Dorset 1966–1982. Vol 1: The Settlements, 129–132, 4:A1–D14. Dorchester, Dorset Natural History and Archaeological Society. Monograph Series No 7.

Clark, K. (2006) The dog assemblage. In. M. Fulford, A. Clarke and H. Eckardt (eds.) Life and Labour in Late Roman Silchester. Excavations in Insula IX since 1997, 189–195. London, Britannia Monograph Series No. 22.

Clay, R. (1925) An inhabited site of La Tene 1 data on Swalowcliffe Down. Wiltshire Archaeological and Natural History Magazine 43, 59–93.

Cope, C. (2004) The butchery patterns of Gamla and Yodefat: beginning the search for kosher practices. In. S. J. O'day, W. Van Neer and A. Ervynck (eds.) Behaviour Behind Bones. The zooarchaeology of Ritual, Religion, Status and Identity, 25–33. Oxford, Oxbow Books.

Cunliffe, B. (2005) Iron Age Communities in Britain (4th Edition). London, Routledge.

Dobres, M. A. (1999) Technology's links and chaıˆnes: the processual unfolding of technique and technician. In. M. A. Dobres and C. R. Hoffman (eds.) The Social Dynamics of Technology: Practice, Politics and World Views, 124–146. Washington, DC, Smithsonian Institution Press.

Douglas, M. (1990) The pangolin revisited: a new approach to animal symbolism. In. R. Willis (ed.) Signifying Animals: Human meaning in the Natural World, 25–36. London, Routledge.

Emery, K. F. (2005) Animals from the Maya underworld: reconstructing elite Maya ritual at the Cueva de los Quetzales, Guatemala. In. S. J. O'day, W. Van Neer and A. Ervynck (eds.) Behaviour Behind Bones. The Zooarchaeology of Ritual, Religon, Status and Identity, 101–113. Oxford, Oxbow Books.

Garnsey, P. (1999) Food and Society in Classical Antiquity. Cambridge, Cambridge University Press.

Gell, A. (1998) Art and Agency. An Anthropological Theory. Oxford, Clarendon Press.

Gilhus, I. S. (2006) Animals, Gods and Humans. Changing Attitudes to Animals in Greek, Roman and early Christian Ideas. Oxford, Routledge.

Grant, A. (1984) Animal husbandry. In. B. Cunliffe (ed.) Danebury: an Iron Age Hillfort in Hampshire. Volume 2. The Excavations 1969–1978: the Finds, 496–548. London, Council for British Archaeology Research Report 52.

Green, M. J. (1992) Animals in Celtic Life and Myth. London, Routledge.

Hambleton, E. (1999) Animal Husbandry Regimes in Iron Age Britain. Oxford, British Archaeological Report British Series 282.

Handelman, D. (2006) Conceptual alternatives to 'ritual'. In. J. Kreinath, J. Snoek and M. Stausberg (eds.) Theorizing Rituals: Issues, Topics, Approaches, Concepts, 37–49. Leiden, Brill.

Hill, J. D. (1995) Ritual and Rubbish in the Iron Age of Wessex. Oxford, British Archaeological Report British Series 242.

Hodder, I. (1992) Theory and Practice in Archaeology. London, Routledge.

Holtorf, C. J. (2002) Notes on the life history of a pot sherd. Journal of Material Culture 7 (1), 49–71.

Humphrey, C. and Laidlaw, J. (1994) The Archetypal Actions of Ritual. Oxford, Clarendon Press.

Jones, A. (2002) Archaeological Theory and Scientific Practice. Cambridge, Cambridge University Press.

Joy, J. (2009) Reinvigorating object biography: reproducing the drama of object lives. World Archaeology 41 (4), 540–556.

King, J. E. (1962) Report on animal bones. In. P. Rahtz. Excavations at Shearplace Hill, Sydling St. Nicholas

Dorset, England. Proceedings of the Prehistoric Society 28, 325.

Kopytoff, I. (1986) The cultural biography of things: commoditization as process. In. A. Appadurai (ed.) The Social Life of Things: Commodities in Cultural Perspective, 64–91. Cambridge, Cambridge University Press.

Kreinath, J., Snoek, J. and Stausberg, M. (2006) Theorizing Rituals: Issues, Topics, Approaches, Concepts. Leiden, Brill.

Legge, A. J. (1991) The animal bones. In. I. M. Steed (ed.) Iron Age Cemeteries in East Yorkshire, 140–147. London, English Heritage.

Locker, A. (1992) Animal bone. In. M. Papworth (ed.) Excavation and survey of Bronze Age sites in the Badbury area, Kingston Lacy Estate. Proceedings of the Dorset Natural History and Archaeological Society 114, 56–57.

Maltby, M. (1986) Animal bones from the Iron Age and Romano-British phases of the Staple Gardens excavations, Winchester, Hampshire. English Heritage, Ancient Monuments Laboratory Report 4908.

Maltby, M. (1987) The Animal Bones from the Excavations at Owslebury, Hants. An Iron Age and Early Romano-British settlement. Ancient Monuments Laboratory Report 6/1987.

Maltby, M. (1993) Animal bones. In. P. J. Woodward, S. M. Davies and A. H. Graham (eds.) Excavations at the Old Methodist Chapel and Greyhound Yard, Dorchester, 1981–1984, 314–340. Dorchester, Dorset Natural History and Archaeological Society Monograph Series 12.

Maltby, M. (1994) The animal bone from a Romano-British well at Oakridge II, Basingstoke, Hampshire. Proceedings of the Hampshire Field Club and Archaeological Society 49, 47–76.

Maltby, M. (2002) Animal bones. In. S. M. Davis, P. S. Bellamy, M. J. Heaton and P. J. Woodward (eds.) Excavations at Alington Avenue, Fordington, Dorchester, Dorset, 1984–87, 111–116. Dorchester, Dorset Natural History and Archaeological Society Monograph 15.

Maltby, M. (2010) Pits and wells. In. J. Morris and M. Maltby (eds.) Integrating Social and Environmental Archaeologies; Reconsidering Deposition, 24–32. Oxford, British Archaeological Reports, International Series 2077.

Maltby, M. (2010b) Feeding a Roman Town: Environmental Evidence from Excavations in Winchester, 1972–1985. Winchester, Winchester Museums and English Heritage.

Metcalf, P. and Huntington, R. (1991) Celebrations of Death. Cambridge, Cambridge University Press.

Morris, B. (2000) Animals and Ancestors: An Ethnography. London, Berg Publishers.

Morris, J. (2008a) Associated bone groups; one archaeologist's rubbish is another's ritual deposition. In. O. Davis, N. Sharples and K. Waddington (eds.) Changing Perspectives on the First Millenium BC, 83–98. Oxford, Oxbow Books.

Morris, J. (2008b) Re-examining Associated Bone Groups from Southern England and Yorkshire, *c.* 4000BC to AD1550, Bournemouth University, PhD Thesis.

Morris, J. (2009) Report on the animal remains from Bridge House dairies, Mildenhall. Unpublished report for Archaeological Solutions Ltd.

Morris, J. (2010a) Associated bone groups: beyond the Iron Age. In. J. Morris and M. Maltby (eds.) Integrating Social and Environmental Archaeologies; Reconsidering Deposition, 12–23. Oxford, British Archaeological Reports, British Series.

Morris, J. (2010b) The composition and interpretation of associated bone groups from Wessex. In. D. Campana, A. Choyke, P. Crabtree, S. Defrance and J. Lev-Tov (eds.) Anthropological Approaches to Zooarchaeology: Colonialism, Complexity and Animal Transformations, 261–271. Oxford, Oxbow Books.

Morris, J. (2011) Investigating Animal Burials; ritual, mundane and beyond. Oxford, British Archaeological Reports, British Series 535.

Morris, J. (in prep) The problem with ritual. In. J. Morris and C. Randall (eds.) Ritual in Context: Explaining Ritual Complexity in Archaeology, Oxford, Oxbow Books.

O'Connor, T. P. (1988) Bones from the General Accident Site, Tanner Row. The Archaeology of York 15/5. York, Council for British Archaeology.

O'Connor, T. P. (1989) Bones from Anglo-Scandinavian Levels at 16–22 Coppergate. The Archaeology of York 15/3. York, Council for British Archaeology.

Oestigaard, T. and Goldhahn, J. (2006) From the dead to the living: Death as transactions and re-negotiations. Norwegian Archaeological Review 39 (1), 27–48.

Pluskowski, A. (2002) Hares with crossbows and rabbit bones: intergrating physical and conceptual studies of Medieval fauna. Archaeological Review from Cambridge 18, 153–182.

Rixson, D. (2000) The History of Meat Trading. Nottingham, Nottingham University Press.

Schiffer, M. B. (1983) Towards the identification of formation processes. American Antiquity 48 (4), 675–706.

Schiffer, M. B. (1987) Formation Processes of the Archaeological Record. Albuquerque, University of New Mexico Press.

Schiffer, M. B. (2005) The devil is in the details: the cascade model of invention processes. American Antiquity 70 (3), 485–502.

Skibo, J. M. and Schiffer, M. B. (2001) Understanding artefact variability and change: a behavioural framework. In. M. B. Schiffer (ed.) Anthropological Perspectives on Technology, 139–149. Albuquerque, University of New Mexico Press.

Smith, K. (2006) Guides, Guards and Gifts to the Gods: Domesticated Dogs in Art and Archaeology of Iron Age and Roman Britain. Oxford, British Archaeology Reports British Series 422.

Snoek, J. (2006) Defining 'Rituals'. In. J. Kreinath, J. Snoek and M. Stausberg (eds.) Theorizing Rituals. Issues, Topics, Approaches, Concepts, 3–14. Leiden, Brill.

Stead, I. M. (1991) Iron Age Cemeteries in East Yorkshire. London, English Heritage.

Thomas, J. (1996) Time, Culture, and Identity: An Interpretive Archaeology. London, Routledge.

Wheeler, R. E. M. (1943) Maiden Castle, Dorset. London, Report of the Research Committee of the Society of Antiquaries 12.

Woodward, P. and Woodward, A. (2004) Dedicating the town: urban foundation deposits in Roman Britain. World Archaeology 36 (1), 68–86.