

Ritual feasting in Iron Age Ireland

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Introduction

When Sir William Petty wrote his economic appraisal of Ireland in 1672 it was at a time when the old Gaelic political and social structures, in which cattle were measured as the primary form of wealth, had all but disappeared. He noted in the context of the native Irish diet that 'as for flesh, they seldom eat it, notwithstanding the great plenty thereof, unless it be of the smaller animals, because it is inconvenient for one of the families to kill a beef, which they have no convenience to save. So 'tis easier for them to have a hen or a rabbit, than a piece of beef of equal substance' (Hull 1899, 191). This is a very telling observation because it shows that if one did not have a market economy, a social system for distributing meat or a method of preserving meat, the carcass of a bovine was simply too large to serve as an immediate and efficient source for the consumption of meat on a domestic scale.

The killing of large animals in temperate and warmer climates invariably necessitated the consumption of a large quantity of meat during a short period of time. The slaughter of a bovine, for instance, could result in the production of nearly 200kg of edible meat (McCormick 2002a). Even a sheep can produce a considerable amount of meat, the primitive Soay breed producing a dressed carcass of nearly 10kg (McCormick 2006, 165). Such circumstances necessitate the development of social institutions that can facilitate the efficient consumption of large quantities of meat. In medieval Ireland a system known as *coe* provided such a facility. This was a legal obligation to provide 'winter hospitality for [a] lord' (Kelly 1988, 30), but it also applied to high-ranking clerics, doctors and judges (O'Sullivan 2004, 63). Freeman were obliged to provide food, shelter and entertainment for a lord and his retinue for a specified amount of time during the year. The length of stay was usually three days and three nights (*ibid.*, 212). The number of people that a lord could bring with him depended on the rank of the freeman. A seventh/eighth-century law stipulates that an *aire tuiseo* could bring a retinue of 60 persons (Kelly 1988, 30), but much larger retinues are recorded in later medieval sources (O'Sullivan 2004, 53). The carcasses of

large animals tend to be hierarchical in terms of the quality of meat from different parts of the carcass. Formalised feasting, therefore, needs to be inclusive in terms of the rank of the participants. This is clearly demonstrated in the Irish evidence. The later medieval description of a feast held at Tara, hosted by the king, indicates that a cross-section of society was present (McCormick 2002a, 27–8). Most importantly, however, the layout of the feast indicated in the Book of Leinster and the Yellow Book of Lecan shows that particular joints were equated with persons of appropriate rank. Thus the king and the judges were provided with tenderloin, while the 'fort builder' was given a belly piece and the wall-makers and ditch-diggers were provided with the thick part of the shoulder, i.e. inferior joints. Communal feasting, therefore, would have tended to be inclusive rather than exclusive, as persons of different status would have needed to be present to consume the meat.

Feasting in later prehistory

In the absence of documentary evidence it is impossible to ascertain the forms of social institution that would have facilitated the distribution and consumption of meat in Iron Age Ireland. Documentary evidence from outside Ireland, however, indicates that such activity usually formed part of the religious practices of early societies. In Greece, for instance, there was an 'absolute coincidence of meat-eating and sacrificial practice' (Detienne 1989, 3). This meant that virtually all meat consumed in classical Greece had been 'sanctified' during the ritual of sacrifice before it was consumed. In early Mesopotamia the feeding of the gods, and consequent distribution of meat, provided the main vehicle for the consumption of meat (Scurlock 2002; 2006a; 2006b). Jha (2002, 32), in his study of cattle sacrifice and meat consumption in early India, notes that the Vedic texts suggest that animals sacrificed to the gods were the source of 'all food'. In other societies, such as China, feeding the ancestors provided an occasion for the communal distribution and consumption of meat (Chang 1977, 46). The centrality of religious practice in the distribution and

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consumption of meat in early Egypt can be appreciated from a Middle Kingdom text that suggests that the temples had a monopoly of butchers in the country (Ikram 1995, 110).

None of this comparative material throws much light on practices in late prehistoric Ireland except to suggest that it is likely that communal meat consumption too would have formed part of the religious practices of the time. We know that formalised feasting was an important institution in early Irish medieval society. There is also evidence that the transformation of sacrificial rites into the more acceptable communal feasting was part of the process of Christianisation in western Europe. There are instances in early Gaulish saints' Lives of saints performing miracles that remove the sacrificial element from occasions of feasting (Effos 2002, 9–12). The advent of Christianity essentially separated feasting from sacrifice, with blood sacrifice being replaced by representative sacrifice in the form of transubstantiation during the Mass. The biblical justification for the cessation of blood sacrifice can be found in Corinthians I, ch. 10, vv 18–21, where St Paul condemns the consumption of meat that was derived from pagan blood sacrifice.

It is extremely difficult to identify sacrifice, the feeding of the gods or the dead, or the resultant feasting in the archaeological record. Highly ornate late Bronze Age and Iron Age objects associated with food preparation imply that food preparation and consumption transcended the purely functional (Fitzpatrick, this volume). They are also likely to have had a religious function. Hartog (1989) notes that the knife, skewer and cauldron were 'indispensable instruments of sacrifice' in Greek ritual, while the flesh-hook too was used for removing the boiled meat from the cauldron during the sacrificial feast (Durard 1989, 102).

Ritual feasting with associated sacrifice often takes place within specially designated areas which can be clearly differentiated from ordinary domestic structures. Thus, in the classical world, the sanctuary with the sacrificial altar located in front of the temple was a standard and easily recognised architectural form. In other cultures such activity did not occur in any formalised area. Herodotus (4:59) noted that the Scythians 'prayed to their gods by offering them sacrifices, but that this cult involved neither the making of statues, the use of altars, or the building of temples' (Hartog 1989, 171). In Ireland, however, excavations at Navan Fort (Waterman 1997) and Dún Ailinne (Johnston and Wailes 2007) have produced evidence for large structures that are clearly of a ceremonial nature. In

both instances the main structures were regarded by the excavators as being of a ritualistic rather than a domestic nature. These were large regional ceremonial sites, the focus of periodic assemblies and religious activity, both of which have produced animal bone assemblages.

It is difficult to identify ritual—or, indeed, non-ritual—feasting on the basis of the discarded food debris. In terms of element distribution and butchery breakage, the bone debris from a ceremonial site may differ little from the bone assemblage from a medieval town. In some instances, however, there can be evidence for deliberate deposition, as opposed to informal dumping, of animal bones, which can be interpreted as being indicative of ritualistic activity. For instance, ritual animal slaughter and communal feasting still occur on saints' days in modern rural Greece (Georgourdi 1989). The animals are slaughtered outside the church, either during or after Mass, as sacrifices to the local saints. The meat is then cooked in large cauldrons in the vicinity of the church, and after the meals the bones 'are thrown on the roofs, where they are safe from dogs but are accessible to birds, the noble creatures of God' (*ibid.*, 190). Dogs are considered unclean. A comparable practice can be seen at Neolithic Kilshane, Co. Dublin (Fitzgerald 2006, 33–5), where the cattle bones were deliberately deposited and apparently quickly covered in the enclosure ditch so that they were not accessible to carnivores. There are no gnawing marks on the large assemblage of cattle bones from the site (McCormick, in preparation). At the causeway enclosure at Windmill Hill, Wiltshire, many of the bones seem to have been tied up in bundles before they were deposited in the enclosure ditches (Whittle *et al.* 1999, 357) and these deposits were easily identifiable as being of an unusual nature. Mount (1994) has argued that the faunal remains of the late Neolithic/early Bronze Age deposits in front of the passage tomb mound at Newgrange, Co. Meath, are a reflection of ceremonial feasting, and suggests that deliberate bone deposition can be identified in parts of the site. Greek sacrifice entailed the burning of some of the bones, wrapped in fat, of the sacrificed animal. Caches of these bones, associated with vessels used in feasting, have been identified in deposits in Mycenaean temples (Isaakidou *et al.* 2002; Stocker and Davis 2004). Unlike ordinary food debris, however, the bones were not broken for the extraction of marrow.

In most incidences, however, faunal assemblages do not provide clear indicators of ceremonial feasting. An alternative approach for identifying ritualistic practices is to

Table 1—Fragments and minimum numbers of individuals (MNI) from Iron Age sites (Crabtree 1990; McCormick 1997; 2002b). Note: The sample from Tara was too small to allow reliable calculation of MNI values. Percentage values are presented within brackets.

	<i>Navan</i>		<i>Dún Ailinne</i>		<i>Tara (Cuttings 1 and 2)</i>	
	<i>Frag.</i>	<i>MNI</i>	<i>Frag.</i>	<i>MNI</i>	<i>Frag.</i>	<i>MNI</i>
Cattle	795 (30.1)	29 (27.9)	2411 (54.4)	66 (42.0)	189 (47.6)	-
Pig	1573 (59.5)	62 (59.6)	1582 (35.7)	56 (35.7)	89 (22.4)	-
Sheep/goat	221 (8.4)	7 (6.7)	327 (7.4)	25 (15.9)	55 (13.9)	-
Horse	21 (0.8)	1 (1.0)	108 (2.4)	10 (6.4)	22 (5.5)	-
Dog	1 (-)	1 (1.0)	3 (0.1)	?	38 (9.6)	-
Red deer	29 (1.1)	2 (1.9)	3 (0.1)	?	2 (0.5)	-
Dog/wolf	1 (-)	1 (1.0)	-	-	-	-
Fox	-	-	-	-	2 (0.5)	-
Barbary ape	1 (-)	1 (1.0)	-	-	-	-

try and establish whether there is anything unusual about the assemblages present on sites that themselves suggest ceremonial rather than purely domestic activity. The present study will consider the faunal evidence from Navan Fort, Co. Armagh, Tara, Co. Meath, and Dún Ailinne, Co. Kildare, all of which are regarded as Iron Age regional ceremonial centres. There is, however, a basic problem with this line of enquiry. The most obvious approach would be to compare the assemblages from these sites with material from contemporary purely domestic sites. Unfortunately, such sites are extremely rare in Iron Age Ireland, and none have produced faunal assemblages that could be used for this purpose. Even without comparable material, however, there is still the potential to identify unusual activity from an assemblage. The overall distribution of animal bone from the three sites is shown in Table 1.

Dún Ailinne

The faunal assemblage derived from the centre of the enclosure; many of the bones were associated with large ceremonial wooden buildings, but the largest sample came from a low mound containing much burnt stone that marked the end of Iron Age occupation on the site. There is no evidence to show that the material is other than discarded food refuse and there is no significant over- or under-representation of specific meat joints. These observations can also be applied to the material from Navan Fort and Tara. The distribution of species from the site is not unusual when compared with material from other Irish prehistoric or early

medieval sites (McCormick 2007; McCormick and Murray 2007). The age slaughter pattern of cattle, however, shows that a large number of young calves were killed.

In early studies of the assemblage, Crabtree (1985; 1990) provided an economic interpretation for the assemblage, arguing that it was indicative of a dairying economy. More recently, however, Crabtree (2004; 2007) has modified her interpretation, moving away from a purely economic interpretation to a more ritualistic approach. She noted that in her earlier work she 'took it for granted that subsistence economy (including animal husbandry) lay at the core of ancient human societies, and that religious and ritual activities were, at best, epiphenomenal . . . I viewed ritual feasting as a functional outgrowth of early Irish subsistence practices' (Crabtree 2004, 64). Latterly, she regarded ritual feasting as a central activity in early cultures, and the meat consumed at such feasts was 'unlikely to have been part of the regular diet of Irish Iron Age farmers' (*ibid.*, 64). In her view, therefore, it is no longer necessary to provide a purely economic reason for the killing of young calves at Dún Ailinne. Veal was simply an appropriate food for some ritual feasts. The assumption of ritual feasting also forces one to reinterpret the source of the meat consumed. Crabtree (2007, 169) concludes that 'the cattle were probably not procured from a single large herd. It is more reasonable to assume that these cattle were drawn from a number of different herds throughout Leinster'.

Prehistoric feasting is very likely to have been accompanied by sacrificial slaughter. The spectacle of the sacrifice would have given the ceremony much more drama and meaning than simply bringing prepared joints of meat

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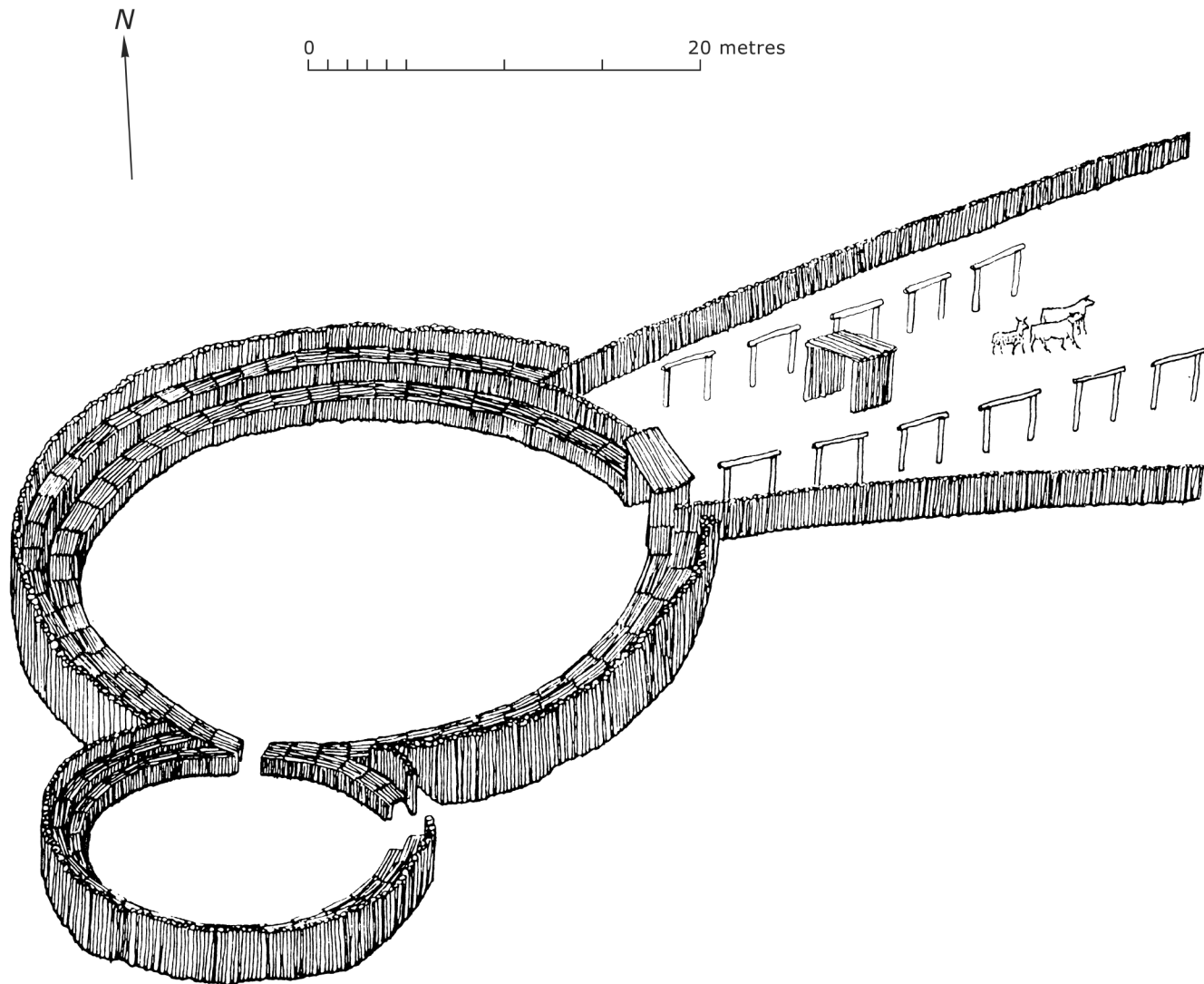


Fig. 1—Suggested reconstruction of Dún Ailinne structure (Johnston and Wailles 2007, 16).

to the site for communal feasting. Crabtree (2007, 169) notes that there was no evidence for charring marks near the ends of the bones, a feature that is indicative of roasting. This implies that the meat was boiled, presumably in large cauldrons. Boiling was the preferred method of cooking sacrificed animals among the Scythians (Hartog 1989, 177) and the Greeks, with Durard (1989, 103) explaining that 'tough, freshly-killed meat . . . is barely edible if not boiled'. Boiling, therefore, could imply that the animals were killed immediately before cooking, as one would expect in ritual sacrifice. Furthermore, a procession of the sacrificial animal and the human participants was often an integral part of

early sacrificial ceremony (Burkert 1983, 3–4). In other instances, 'it was the custom in Greece to allow animals consecrated to the gods to wander freely within the temple enclosures' before sacrifice (Detienne 1989, 9). The large wooden circular enclosures of the Rose Phase at Dún Ailinne, with its elaborate processional avenue (Fig. 1, Rose Phase reconstruction), would have been extremely suitable for similar ceremonies.

Navan Fort

If cattle, and in particular veal, were the preferred ceremonial

animals at Dún Ailinne, this was certainly not the case at Navan Fort. Pig, instead, was the dominant species present. Pig dominance is extremely unusual in faunal assemblages in prehistoric Britain and (post-Mesolithic) Ireland and does not occur on early medieval Irish sites (McCormick and Murray 2007). The only reliable post-Mesolithic faunal assemblages to indicate a clear pig dominance are late Neolithic/early Bronze Age Newgrange and Durrington Walls, Wiltshire, England (Alberalla and Serjeantson 2002). It has already been noted that Mount (1994) argued that the Newgrange evidence represents ritual feasting, and the causewayed enclosure at Durrington Walls is regarded as a ceremonial centre rather than a purely domestic settlement (Whittle *et al.* 1999, 381–90). The consumption of pigs in large quantities on prehistoric sites is generally associated with ceremonial sites rather than ordinary domestic contexts. McCormick (1997, 118) adds support to this hypothesis when he argues that the unusual dominance of pig at Navan could not simply be a result of environmental conditions, i.e. a dominance of forest in the vicinity of Navan Fort. Cattle dominated the assemblage in nearby Bronze Age Haughey's Fort, and Weir (1987) has shown that pollen evidence indicates no expansion of forest in the area between the two settlements during the period. The pig dominance must therefore be a result of social or religious factors. It is interesting that the high incidence of pig conforms with later mythological literature, such as *Scéla Mucce Meic Dathó* (Thurneysen 1935), where pork is the preferred meat of the Irish royal feast. Indeed, one Middle Irish tract specifies that pork was consumed at a royal feast at Emain Macha (Navan Fort) hosted by the legendary King Conchobhar (O'Sullivan 2004, 92).

There was a clear difference in the distribution of species between Navan and Dún Ailinne. How can one explain differences in species distribution if one is not invoking environmental or economic factors as an explanation? It may well be that different tribes regarded certain animals as having a cultic status and these species perhaps assumed a greater importance in their ceremonies. Evidence from other cultures can indicate that particular gods had different preferences as far as sacrificial diet was concerned. In the case of Mesopotamian sacrifice, Scurlock (2002, 393) notes that 'Gods could have their little quirks; Šakkan refused to eat mutton, Ningublaga, beef and Belet-seri, poultry. Ereškgal might accept a sheep or goat, but never ox-meat or fowl'. In Rome the sacrifice of horse was restricted to Mars, the god of war (Pascal 1981). The choice of animals could also be

related to their sex or colour. In Rome male animals were offered to gods and females to goddesses; animals sacrificed to Juno and Jupiter were white, while black animals were sacrificed to gods of the underworld (Gilhus 2006, 115). Additionally, different animals were associated with different deities in the 'Celtic' world (Green 1986, 167–99). In reality, however, one would have expected a whole range of domesticated animals to have been sacrificed and consumed in ceremonial feasting. Jameson (1988, 93), for instance, noted that in classical antiquity cattle were the predominant sacrificial animal depicted in myth and art. His study of the faunal remains from sanctuaries and financial accounts from townships (*demes*) in Attica, however, indicated that a great variety of animals were sacrificed but that the majority tended to be sheep and goat. He concludes that 'the choice between cattle and sheep was essentially a matter of cost and availability' (*ibid.*, 94). It would be unwise, therefore, to attempt to explain the distribution of species chosen at Dún Ailinne and Navan Fort purely on the basis of ceremonial or religious considerations; underlying economic factors are also likely to have been important.

Tara

The faunal assemblage from Tara was much smaller than those from the two sites already considered. In terms of the distribution of the main domesticated species, the pattern is closer to Dún Ailinne than Navan (Table 1). Cattle dominate, followed by pig, with sheep in third place. The assemblage came from the ditch of Ráith na Ríg in the immediate vicinity of the Mound of the Hostages (Roche 2002). Two aspects of the assemblage are unusual. The Tara material contains higher incidences of dog and horse bones than the two other sites. Dog remains comprise 9.6% of the Tara fragment, compared with 0.7% in the case of Navan and 0.04% in the case of Dún Ailinne. Horse remains comprise 5.5% at Tara compared with 0.8% at Navan and 2.4% at Dún Ailinne. The incidences of both species at Tara are also much higher than has been noted on any other Irish prehistoric site (McCormick 2007) with the single exception of the King's Stables near Navan Fort. At this site, which can be best described as a late Bronze Age ritual pool, dog comprised 31% of the total fragments, although none are recorded as having displayed cut marks (Penn 1977, 58).

A dog pelvis from Tara displayed knife marks that were consistent with the dismemberment of a leg rather than the

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skinning of the animal (McCormick 2002b, 107, fig. 3). This implies that dog flesh was being consumed. Bhreathnach (2002, 118–19) believes that the high incidence of dog at Tara was a reflection of ceremonial activity. She considers the dog to have been a cultic animal in Roman Britain, noting its association with the gods Nodons and Apollo Cunomaglus, and with healing water cults. Medieval Irish literature provided a further context for the eating of flesh in ceremonial contexts. In the tenth-century Cormac's Glossary there is a description of a poet, or perhaps a druid (*filid*), consuming dog flesh as part of a ritual that would produce revelations from the pagan gods. It records that 'The poet chews a piece of the flesh of a red pig, or of a dog or cat, and places it afterwards on the flagstone behind the door, and sings an incantation on it and offers it to the idol-gods and afterwards calls his idols to him . . . and what he seeks is then revealed to him' (Ó hÓgáin 1999, 79).

Mounds were frequently used as royal inauguration sites in medieval Ireland (Fitzpatrick 2001, 360), and it is tempting to identify the Mound of the Hostages as being the inauguration site at Tara, as argued by Warner (1988, 57). If this is the case, it could provide an explanation for the horse bone assemblage in the adjacent ditch (McCormick 2002b, 106–7). The butchered and cooked horse bones from this ditch could be a reflection of the ritual slaughter and consumption of horseflesh described by Geraldus Cambrensis at the end of the twelfth century AD. The description is curious, to say the least, and worth quoting in full (O'Meara 1982, 110).

'There is in the northern and farther part of Ulster, namely the Kenelcunill [Tyrconnell], a certain people which is accustomed to appoint its king with a rite altogether outlandish and abominable. When the people in that land had been gathered together in one place, a white mare is brought forward into the middle of the assembly. He who is to be inaugurated, not as a chief, but as a beast, not as a king, but as an outlaw, has bestial intercourse with her before all, professing himself to be a beast also. The mare is then killed immediately, cut up in pieces, and boiled in water. A bath is prepared for the man afterwards by all his people, and all, he and they, eat of the meat of the mare which is brought to them. He quaffs and drinks of the broth in which he is bathed, not in any cup, or using his hand, but just dipping his mouth into it around him. When this unrighteous rite has been carried out, his kingship and dominion have been conferred.'

Doherty (2005, 17–24) has shown how this inauguration ceremony shows clear parallels with the horse sacrifice that occurred during Indian kingship inauguration rites (*āsvamedha*). Both rites contain a sexual element, although in the Indian *āsvamedha* the encounter is between the queen and a stallion: 'the stallion was smothered to death, whereupon the *mahiṣī* or chief queen symbolically cohabited with it under covers, while the entourage engaged in obscene banter' (Puhvel 1970, 161). This element of both the Irish and Indian rites can be seen as a ritualistic method of ensuring fertility for a kingdom.

Conclusion

It is extremely difficult to identify ceremonial feasting or associated sacrifice from the archaeological record in the absence of documentary sources. Furthermore, there has been a tendency for zooarchaeologists to eschew ritualistic interpretations because their framework for thinking tends to derive from economic and biological models. Consideration of documented evidence dealing with feasting and its close association with ritualised animal slaughter, however, will inevitably lead to the conclusion that such activities must have played an important role in most early societies. It is likely that the meat of larger animals was mainly eaten on special occasions and that societies would have devised religious institutions that would have facilitated such consumption.

The large, regional ceremonial royal sites of Iron Age Ireland seem to have been the focus of occasional assembly rather than permanent domestic habitation. Such assemblies would have been an occasion of communal feasting, and it is difficult to believe that this would have lacked a religious component. There was no efficient mechanism for consuming the meat of large domesticates on a domestic scale, and examination of documented religious practices in early societies clearly shows that religion facilitated the distribution and consumption of meat. The faunal evidence from Dún Ailinne, Navan and Tara all show traits that can be regarded as unusual, do not seem to reflect everyday behaviour, and can therefore be regarded as being of a ritualistic nature. This way of considering faunal remains hopefully provides a context for the interpretation of Iron Age artefacts associated with food preparation and consumption.

References

- Alberalla, U. and Serjeantson, D. 2002 A passion for pork: meat consumption at the British Late Neolithic site of Durrington Walls. In P. Miracle and N. Milner, *Consuming passions and patterns of consumption*, 33–49. Cambridge. McDonald Institute.
- Bhreathnach, E. 2002 Observations on the occurrence of dog and horse bones at Tara. *Discovery Programme Reports* 6, 117–22.
- Burkert, W. 1983 *Homo Nectans—the anthropology of ancient Greek sacrificial ritual and myth*. California University Press.
- Chang, K.C. 1977 Ancient China. In K. C. Chang (ed.), *Food in Chinese culture: anthropological and historical source*, 23–52. Yale University Press.
- Crabtree, P. 1985 The mammalian fauna from Dún Ailinne, Co. Kildare, Ireland. *MASCA Journal* 3 (6), 179–81.
- Crabtree, P. 1990 Subsistence and ritual: the faunal remains from Dún Ailinne, Co. Kildare, Ireland. *Emania* 7, 22–5.
- Crabtree, P. 2004 Ritual feasting in the Irish Iron age: re-examining the fauna from Dún Ailinne in light of contemporary theory. In S. J. O'Day, W. Van Neer and A. Ervynck, *Behaviour behind bones: the zooarchaeology of ritual, religion, status and identity*, 62–5. Oxford. Oxbow.
- Crabtree, P. 2007 Biological remains. In S. A. Johnston and B. Wailes, *Dún Ailinne: excavations at an Irish royal site, 1968–1975*, 157–69. Philadelphia. University of Pennsylvania Museum of Archaeology and Anthropology.
- Detienne, M. 1989 Culinary practices and the spirit of sacrifice. In M. Detienne and J. P. Vernant, *The cuisine of sacrifice among the Greeks*, 1–20. University of Chicago Press.
- Doherty, C. 2005 Kingship in early medieval Ireland. In E. Bhreathnach (ed.), *The kingship and landscape of Tara*, 3–31. Dublin. Four Courts Press/Discovery Programme.
- Durard, J.L. 1989 Greek animals: towards a topology of edible bodies. In M. Detienne and J. P. Vernant, *The cuisine of sacrifice among the Greeks*, 87–105. University of Chicago Press.
- Effos, B. 2002 *Creating community with food and drink in Merovingian Gaul*. New York. Palgrave Macmillan.
- Fitzgerald, M. 2006 Archaeological discoveries in the new section of the N2 in counties Meath and Dublin. In J. O'Sullivan and M. Stanley (eds), *Settlement, industry and ritual*, 29–42. Archaeology and the National Roads Authority Monograph No. 2. Dublin. National Roads Authority.
- Fitzpatrick, E. 2001 Assembly and inauguration places of the Burkes in late medieval Connacht. In P. J. Duffy, D. Edwards and E. Fitzpatrick (eds), *Gaelic Ireland: land, lordship and settlement c. 1250–1650*, 357–74. Dublin. Four Courts Press.
- Georgourdi, S. 1989 Sanctified slaughter in modern Greece. In M. Detienne and J. P. Vernant, *The cuisine of sacrifice among the Greeks*, 183–203. University of Chicago Press.
- Gilhus, I.S. 2006 *Animals, gods and humans: changing attitudes to animals in Greek, Roman and early Christian ideas*. London. Routledge.
- Green, M. 1986 *The gods of the Celts*. Goldaming. Bramley.
- Hartog, F. 1989 Self-cooking beef and the drinks of Ares. In M. Detienne and J. P. Vernant (eds), *The cuisine of sacrifice among the Greeks*, 170–82. University of Chicago Press.
- Hull, C.H. (ed.) 1899 *The economic writings of Sir William Petty*, Vol. 1. Cambridge.
- Ikram, S. 1995 *Choice cuts: meat production in ancient Egypt*. Orientalia Lovaniensia Analecta 69. Leuven. Peeters.
- Isaakidou, V.P., Halstead, J.D. and Stocker, S. 2002 Burnt animal sacrifice at the Mycenaean 'Palace of Nestor', Pylos. *Antiquity* 76, 86–92.
- Jameson, M.H. 1988 Sacrifice and animal husbandry in classical Greece. In C. R. Whittaker (ed.), *Pastoral economies in classical antiquity*, 87–119. Proceedings of the Cambridge Philological Society, Suppl. 14. Cambridge.
- Jha, D.N. 2002 *The myth of the holy cow*. London. Verso.
- Johnston, S.A. and Wailes, B. 2007 *Dún Ailinne: excavations at an Irish royal site, 1968–1975*. Philadelphia. University of Pennsylvania Museum of Archaeology and Anthropology.
- Kelly, F. 1988 *A guide to early Irish law*. Dublin Institute for Advanced Studies.
- McCormick, F. 1997 The animal bones from Site B. In D. M. Waterman, *Excavations at Navan 1961–71* (ed. C. J. Lynn), 117–20. Belfast. The Stationery Office.
- McCormick, F. 2002a The distribution of meat in a

RELICS OF OLD DECENCY

- hierarchical society: the Irish evidence. In P. Miracle and N. Milner, *Consuming passions and patterns of consumption*, 25–31. Cambridge. McDonald Institute.
- McCormick, F. 2002b The animal bones from Tara. *Discovery Programme Reports* 6, 103–16.
- McCormick, F. 2006 Animal bone. In I. Armit, *Anatomy of an Iron Age wheelhouse*, 161–72. Edinburgh. Society of Antiquaries.
- McCormick, F. 2007 Mammal bones from prehistoric Irish sites. In E. M. Murphy and N. J. Whitehouse (eds), *Environmental archaeology in Ireland*, 77–101. Oxford. Oxbow.
- McCormick, F. (in prep.) The animal bones from Kilshane, Co. Dublin.
- McCormick, F. and Murray, E.V. 2007 *Knowth and the zooarchaeology of Early Christian Ireland*. Dublin. Royal Irish Academy.
- Mount, C. 1994 Aspects of ritual deposition in the Late Neolithic and Beaker periods at Newgrange, Co. Meath. *Proceedings of the Prehistoric Society* 60, 433–43.
- Ó hÓgáin, D. 1999 *The sacred isles: belief and religion in pre-Christian Ireland*. Cork. Collins.
- O'Meara, J.J. (ed.) 1982 *The history and topography of Ireland by Gerald of Wales*. Harmondsworth. Penguin.
- O'Sullivan, C. 2004 *Hospitality in medieval Ireland*. Dublin. Four Courts Press.
- Pascal, C.B. 1981 October horse. *Harvard Studies of Classical Philology* 85, 261–91.
- Penn, C. 1977 An osteological analysis of the animal remains from the King's Stables. In C. J. Lynn, 'Trial excavations at the King's Stables, Tray Townland, Co. Armagh'. *Ulster Journal of Archaeology* 40, 58–9.
- Puhvel, J. 1970 Aspects of equine functionality. In J. Puhvel (ed.), *Myth and law among the Indo-Europeans*, 157–72. California University Press.
- Roche, H. 2002 Excavations at Ráith na Rí, Co. Meath. *Discovery Programme Reports* 6, 19–82.
- Scurlock, J. 2002 Animals in ancient Mesopotamian religion. In B. J. Collins, *A history of the animal world in the ancient Near East*, 361–403. Leiden. Brill.
- Scurlock, J. 2006a The techniques of the sacrifice of animals in ancient Israel and ancient Mesopotamia: new insights through comparison, part 1. *Andrews University Seminary Studies* 44 (1), 13–49.
- Scurlock, J. 2006b The techniques of the sacrifice of animals in ancient Israel and ancient Mesopotamia: new insights through comparison, part 2. *Andrews University Seminary Studies* 44 (2), 241–64.
- Stocker, S.R. and Davis, J.L. 2004 Animal sacrifice, archives and feasting at the palace of Nestor. *Hesperia* 73, 179–95.
- Thurneysen, R. 1935 *Scéla Mucce Meic Dathó*. Medieval and Modern Irish Series VI. Dublin. The Stationery Office.
- Warner, R.B. 1998 The archaeology of early historic Irish kingship. In S. T. Driscoll and M. R. Níeke (eds), *Power and politics in early medieval Britain and Ireland*, 47–68. Edinburgh University Press.
- Waterman, D.M. 1997 *Excavations at Navan Fort 1961–71* (ed. C. J. Lynn). Northern Ireland Archaeological Monographs 1. Belfast. The Stationery Office.
- Weir, D. 1987 Palynology and the environmental history of the Navan period. *Emania* 3, 34–43.
- Whittle, A., Pollard, J. and Grigson, C. 1999 *The harmony of symbols: the Windmill Hill enclosure*. Oxford. Oxbow.