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Chapter 6

Warm air and glowing pyres: Cremating bodies in the Late Neolithic of mainland Scotland

Kenneth Brophy, Gavin MacGregor and Gordon Noble

'Who were these people?'
(Gibson 2016)

INTRODUCTION

Cremation is a process that has a dramatic and transformative effect on the body, and not just the body of the deceased. Neolithic cremation would have been a transformative process for *everyone* involved and it is easy for this to be overlooked in the detailed study of the technical aspects of cremation as a process, or the wider social significance of the emergence of this new funerary practice. In order to move from processes to participants, in this paper we will draw on evidence from recent fieldwork in Scotland, both excavation and experimental work that has helped to shed light on various aspects of prehistoric cremation. We will focus on the impact on the bodies of those participating in cremation, both the dead and the living, from the corpse of the deceased to participants in the process to spectators. Downes (1999, 19) has called cremation a 'spectacle and a journey', and it is in this spirit which we wish to consider Late Neolithic cremation in Scotland.

Although cremation has for some time been regarded as a significant component of Irish Neolithic mortuary practice (*e.g.* Malone 2001, 138–40; Cooney 2014; 2016; Willis *et al.* 2016, 353), this process has only recently been recognised as a noteworthy element of Late Neolithic funerary rites in Britain (for reviews of current evidence, see Parker Pearson *et al.*, 2009; Noble & Brophy 2015, 2017). In fact, cremation only emerged towards the end of the fourth millennium cal BC (Parker Pearson 2012), at around the same time as several other innovations associated with new flat-bottomed pottery styles, and thus cremation is increasingly considered as part of the so-called Grooved Ware complex (*cf.* Sheridan 2004; Bradley 2007, 94ff; Thomas 2010). In this context, cremation has been viewed as one element of an innovative ideological package of new practices, monuments and material culture suggesting cremation was not just physically transformative, but was actively embedded within processes of social transformation. The relative rarity of cremation, and an association with major monuments and monument complexes across mainland Britain, including Stonehenge, Dorchester-on-Thames, Llandygái (English: Llandegai), Duggleby

Howe, Forteviot and Balfarg-Balbirnie, has also led to suggestions that those being cremated were representatives of an emergent elite of important families (Parker Pearson *et al.* 2009; Noble & Brophy 2017) or perhaps represented a new class of religious specialists (Parker Pearson 2012). Two of us (Noble & Brophy 2017) have also argued that the practice of cremation and the development of cremation cemeteries may have been crucial activities in the establishment of major monumental centres of the third millennium cal BC, adding to the potency and wider social implications of this novel mortuary rite, and the necessity for *remembering* the resting places of cremated remains and perhaps also the individuals treated in this way in death.

Such grand narratives are significant, but here we would like to narrow the focus a little and think about a different set of questions related to what cremation does to the bodies of those on and around the pyre, and what this might have meant to people in the Late Neolithic. The destruction of the body in a raging conflagration, reducing bone to fragments and dust, would presumably have been an awesome and memorable innovation when first encountered. It has recently been argued that inhumation and cremation practices were not perhaps as different from one another as they have traditionally been regarded within Neolithic studies (*cf.* Williams 2004; Cooney 2016; Gibson 2016) and thus cremation was neither wholly unfamiliar nor entirely new in some respects. Lengthy rulebound mortuary rites, the breakdown and disarticulation of the human body in a public location, and the fragmentation and manipulation of human remains are to an extent common to both inhumation and cremation. Yet there must have been distinctive elements of cremation that made it compatible with emergent ideologies at the end of the fourth millennium: for instance, access to human remains of ancestors would have been mediated differently from what had come before (Sørensen & Bille 2008), while cremation may well have been associated with new views of what happened to an individual after death and the role the body played in any afterlife. We would further argue that there are clear and distinctive differences between Early Neolithic mortuary rites and Late Neolithic cremations, the pyre itself and the dramatic visceral extremes of cremation and the impact this had on the bodies of all involved. This leads to us to pose a question: what role did the innovation of the pyre play within ideological and social change in the Middle to Late Neolithic of Britain?

This paper will consider two forms of evidence to explore the implications of cremation practices in the Late Neolithic in Scotland, although the observations and conclusions have wider geographical application. Firstly, the discovery and excavation in 2009 of a cremation cemetery within an extensive monument complex of the third millennium cal BC at Forteviot, Perth and Kinross (work undertaken by Noble and Brophy) where at least 18 individuals were buried will be discussed within the context of what was already known about Neolithic cremations in Scotland. Although we do not have evidence for pyre locations here, the treatment of human remains post-pyre is contingent on there having been a pyre, and sheds light on various aspects of cremation preparation, and aftermath. Secondly, experimental pyre firing undertaken on the island of Arran, North Ayrshire, in 2014 (work undertaken by MacGregor and Brophy) will be recounted with some observations made about the visceral impact cremation can have on spectators, not usually a focus of experimental cremations. This 'Build N Burn' experiment was designed

to explore the impact of the pyre on the bodies of the observers, not the dead (Brophy *et al.* 2016; 2017).

NEOLITHIC CREMATIONS IN SCOTLAND: A BRIEF OVERVIEW

Before considering the results of the Forteviot and Arran fieldwork, it is worth contextualising these with a brief review of what is known about Neolithic cremation practice in Scotland. The emergence of cremation appears to have been in the Early Neolithic, although evidence such as the charring of bones cannot always be attributed to the cremation of individuals on the pyre, and even then, instances remain rare (*cf.* Vyner 1986; Fowler 2010; Gibson 2016). For instance, 'cremation' may initially have occurred as a secondary consequence of the burning down of timber mortuary structures that contained or supported partially defleshed corpses (Kinnes 1992) or due to fires associated with tomb architectural elements (Fowler 2010, 10–11). Cremation as we more normally understand it in a prehistoric context appears to have become more commonplace towards the end of the fourth millennium cal BC. Recent reviews of the evidence from Britain (Parker Pearson *et al.* 2009; Noble & Brophy 2015; 2017; Gibson 2016) have identified that several monuments and monument complexes with extended periods of usage from the Early Neolithic through to the Bronze Age, from Stonehenge, Wiltshire to Duggleby Howe barrow, North Yorkshire to Cairnpapple Hill, West Lothian, were associated with the deposition of multiple cremation deposits in primary contexts, early in the life of the monument(s) or even before monumentality began. Reviews of Late Neolithic cremations were prompted by key recent discoveries at Forteviot (Noble & Brophy 2011a; 2015 and see below), and the radiocarbon dating of legacy cremated bone assemblages at Stonehenge (Parker Pearson *et al.* 2009; Parker Pearson 2012; Willis *et al.* 2016). At this stage it is worth noting that there is no sense that cremation was a dominant rite in Late Neolithic Britain and indeed appears to have formed only a small component of a broader range of strategies for dealing with the dead (*cf.* Jones 2008; Gibson 2016); the very rareness of cremation may have added to its impact.

The extent and frequency of cremation practice across Scotland is still not fully understood. Discoveries dating to the Early Neolithic are uncommon (Kinnes 1985; Barclay 2003; Fowler 2010, 10), with small but un-dated quantities of cremated bone found underlying mounds at Lochhill long cairn, Dumfries and Galloway (Masters 1973) and Pitnacree round barrow, Perth and Kinross (Coles & Simpson 1965; Sheridan 2010a) being rare examples. Scorched bones were found within the chambers at some Caithness chambered tombs such as Tulloch of Assery A, Highland (Davidson & Henshall 1991, 63), perhaps related to de-fleshing strategies played out within such monuments (Noble 2006, 136). Towards the end of the fourth millennium cremation appears to have become more commonplace relatively speaking and the deposition of cremated bone occurred in a wider range of contexts. For instance, cremated human bone was found within a pit cut into a ditch at Holly Road, Leven, Fife (Lewis & Terry 2004). Although at the time of excavation this was believed to be Bronze Age, subsequent dating places this deposit much earlier, to 3370–2930 cal BC, while a sample of bone retrieved from a Bronze Age cist at the same site was shown to be residual, dating to the middle centuries of the fourth millennium cal BC (ScARF 2012, section 3.3.1.2). Cremation burials, or token deposits of

cremated human bone, have also been found within pits at sites associated with Grooved Ware and timber structures such as Raigmore, Highland (Simpson 1996), Beckton Farm, Dumfries and Galloway (Pollard 1997) and Balfarg Riding School, Fife (Barclay & Russell-White 1993), while cremation appears to have been practiced in association with palisaded enclosures such as Dunragit, Dumfries and Galloway (Thomas 2015), Forteviot (see below) and Meldon Bridge, Scottish Borders (Speak & Burgess 1999). Associations with megaliths are also apparent: one of two cremation deposits associated with a standing stone socket at Orwell, Angus, produced a date of *4180±35 BP (SUERC-18309, 2890–2630 cal BC at 2σ*: Ritchie 1974, 27–9; ScARF 2012, section 3.3.1.3.).

As well as these single deposits, largely indications of one-off cremations or the token deposition of human remains, a few cremation cemeteries were established in mainland Scotland more or less at the same time as similar cemeteries were also emerging in the south of Britain, that is around or just before 3000 cal BC. At Cairnpapple Hill, West Lothian, a series of eight cremated bone deposits were found in an arc of stone-sockets, none representing complete individuals, and two associated with bone pins (Piggott 1948). These were initially interpreted as Bronze Age (Barclay 1999) but more recent radiocarbon dating suggests these deposits dated to *3350–3020 cal BC (95% confidence; SUERC-25561: 4470±35 BP*; Sheridan *et al.* 2009) and thus pre-date the henge. A collection of cremation burials at Balbirnie stone circle, Fife, found within the stone sockets (Ritchie 1974), also dates to the latter centuries of the fourth millennium (Gibson 2010, 63); all the individuals here that have thus far been sexed were female (Gibson 2016), which accords with emerging evidence about the gender balance identified at the Stonehenge Late Neolithic cremation cemetery (Willis *et al.* 2016).

This is not a long list of examples, and it is a fair question to ask how common cremation really was in the Neolithic period in Scotland. The evidence is gradually increasing in quantity and quality, largely due to the examination of legacy collections of cremated bone found at Neolithic monuments, and similar exercises in the future may well reveal further examples which had previously been believed to be Bronze Age (as has been the case at many of the sites mentioned above and, initially, at Forteviot). Furthermore, the presence of complete and partial deposits of cremated individuals in pits, ditches and standing stone sockets is perhaps unsurprising; these are repositories that both protect fragile cremated remains but also enhance their chance of being discovered by archaeologists. What if cremated remains were placed in other contexts, such as unmarked pits (Brophy & Noble 2011), thrown into watery places or simply left to blow in the wind? Therefore, we may well not have a representative sample of material, and it is sobering to reflect that what we do have represents the remains of a few dozen individuals at most for a period of 500–700 years across all of Scotland. But we do have enough to suggest that although cremation was a relatively rare, and novel, process, nonetheless if was a significant innovation with local and regional implications.

THE FORTEVIOT CREMATION CEMETERY

It is within this rather sparse context that the identification of a Late Neolithic cremation cemetery at Forteviot in 2009 was so significant. This discovery was made during excavations within a henge monument (known as Forteviot Henge 1) as part of the Strathearn Environs

and Royal Forteviot (SERF) Project (Driscoll *et al*. 2010). Forteviot is an extensive ceremonial monument complex which was discovered as cropmarks on a terrace on the south side of the River Earn. Excavations were carried out there between 2007 and 2010 with eight trenches opened in all (Noble & Brophy 2011a; Brophy & Noble forthcoming).

The complex is dominated and framed by a massive Late Neolithic palisaded enclosure, some 265m in diameter, and defined by a succession of huge oak posts (up to 1m in diameter and 6m to 8m in length) which were probably free-standing, possibly set into a low earthen bank. This monument would have been entered via a long but narrow entrance avenue, and at least one living tree formed a component of the boundary (Noble & Brophy 2011b). Excavations also focused on two henge monuments, one within the palisaded enclosure (Henge 1), and one outwith (Henge 2), as well as timber circle surrounding Henge 1 and a double-ditched timber-fenced enclosure outside the palisaded enclosure which was probably Bronze Age and contained a triple cist and fallen standing stone (James & Gondek 2010). Bayesian modelling of dates from the earthwork and timber enclosures surrounding the cemetery location suggest the palisaded enclosure was constructed in the 28th to 25th centuries cal BC, the timber circle between 26th and 24th centuries cal BC, and Henge 1, which was also associated with Beaker sherds, the 23rd to 22nd centuries cal BC (Hamilton in Noble & Brophy 2015, 167).

The cremation cemetery was identified in 2009, during the excavation of the western half of the interior of Henge 1 (Fig. 6.1). The cremated remains were found in a series of nine discrete deposits, some in pits or within the socket of what appears to be a broken standing stone. Scattered cremated bone in silt layers across the henge suggest that later disturbance and truncation took place (including the insertion of a massive pit into the middle of the henge in the Early Medieval period) and thus it is likely the cemetery was more extensive when initially established (Noble & Brophy 2017). The burials were associated with eight or nine carbonised bone skewer pins, and a small pot, perhaps a charnel vessel for carrying embers to the pyre (Sheridan in Noble & Brophy 2017, 11–12). A series of radiocarbon dates demonstrate that the cemetery pre-dated the establishment of all the aforementioned circular monuments including Henge 1. Bayesian analysis of the set of dates retrieved from Forteviot show that the cemetery began in *3080–2900 cal BC* (*95% probability*; *start: Forteviot Cremation Cemetery*), and probably in *2975–2905 cal BC* (*68% probability*). The cemetery went out of use in *2885–2655 cal BC* (*95% probability*; *end: Forteviot Cremation Cemetery*), and probably in either *2880–2815 cal BC* (*63% probability*) or *2790–2755 cal BC* (*5% probability*). Thus, the cemetery was in use for a period of *25–395 years* (*95% probability*), and probably *35–180 years* (*68% probability*), amongst the earliest activity recorded at Forteviot by the SERF Project (Hamilton in Noble & Brophy 2017, 12ff). Therefore, the use of this location at Forteviot for a cremation cemetery may well have been a pivotal moment in the establishment of this as a sacred place for the next millennia (Noble & Brophy 2015; 2017). We do not, however, know where the pyres were located.

Analysis of the cremated remains (Leach 2012; Noble & Brophy 2017, 6–10) has shown that at least 18 individuals were buried here, eleven adults and seven children, although no babies or the very young were identified, and it was not possible to establish the sex of any of the individuals. There were several examples of the comingling of human remains, that is, cremated bones of more than one individual mixed within the same deposit or burial. The most common pairing was an adult with a subadult, including one burial where an adult was deposited with the finger bone of a child. It is tempting to interpret these pairings

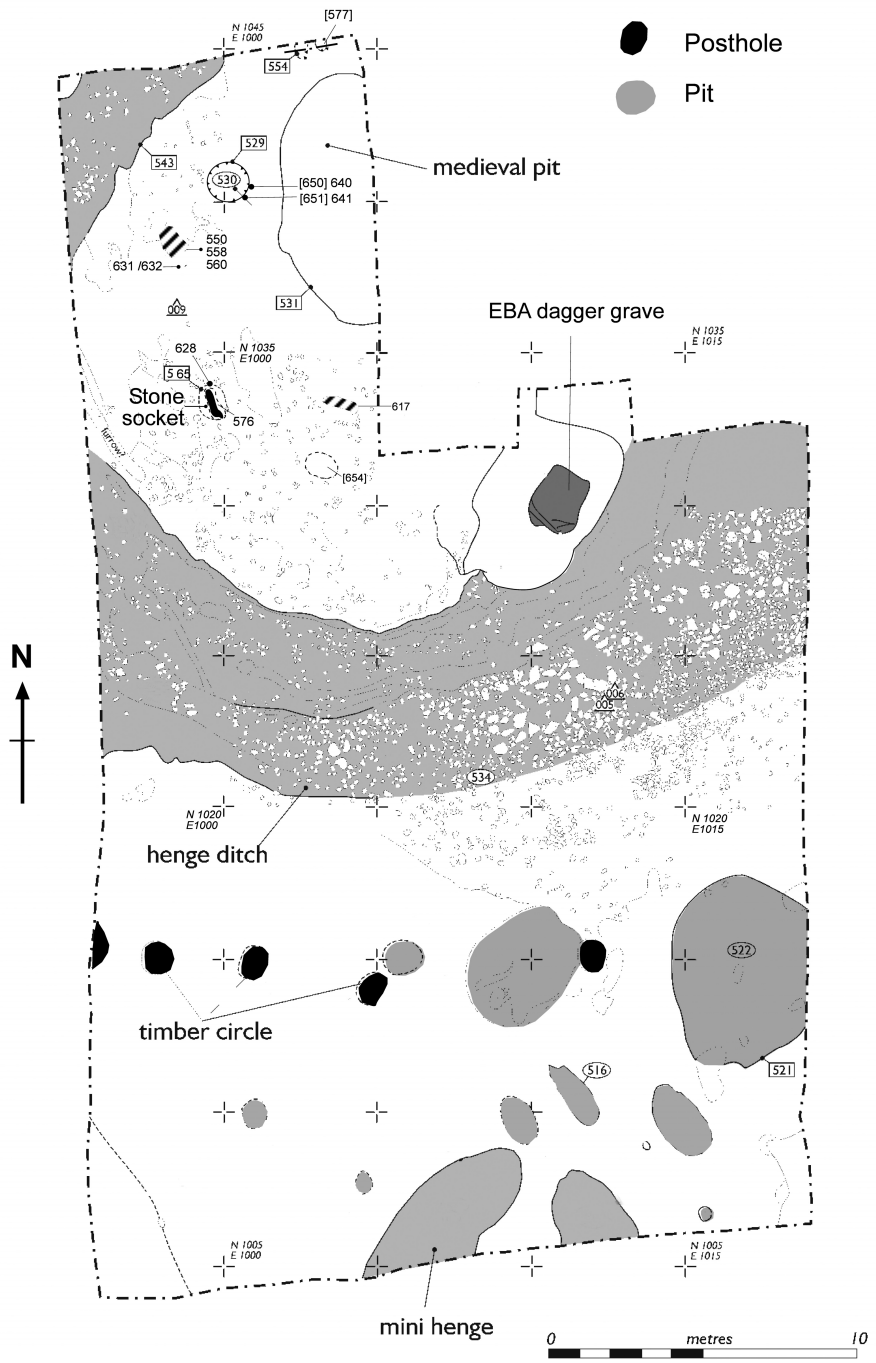

Fig 6.1: Plan of the Forteviot cremation cemetery. The arc of features within the henge interior including the stone socket (565) is where the cremated remains were found (drawn by Lorraine McEwan and Alison Sandison).

as parent and child although we have no way of telling this for sure. The cremated bone was fired to a high degree of 'pyre efficiency' which means that pyres were maintained for some time to a high temperature to burn off all soft tissue from the bodies (Leach 2012; and see McKinley 1995 for a similar pattern at Stonehenge), and the remains then carefully gathered and placed in organic containers (Fig. 6.2). Differential surface wear on some bone fragments suggest they were curated before final burial. Despite truncation and disturbance, this is the largest collection of Neolithic cremations found in Scotland to date.

Fig 6.2: Excavation of one of the discrete circular cremation deposits at Forteviot (photo: SERF Project).

The care taken treating the dead at Forteviot was matched by the care taken to remember this location, perhaps initially with one or more standing stones, and later a mound or some other kind of marker. The cemetery location was subsequently enclosed by a large Late Neolithic palisaded enclosure, then a timber circle, and then the Chalcolithic Henge 1, suggesting an ongoing obsession with enclosing this place again and again (Noble & Brophy 2011a; Brophy & Noble 2012). Remarkably, the henge ditch appeared to follow an arc of pits which contained the cremated remains and standing stone. In other words, the act of establishing a cremation cemetery at Forteviot appears to have set a chain of events in motion that continued, with reference to the cemetery, for centuries. A similar pattern can be identified at the closely contemporary cremation cemetery identified at Stonehenge. Here, cremated human remains recovered from the so-called Aubrey Holes have been dated to the Late Neolithic, and Parker Pearson *et al.* (2009, 23) have suggested through extrapolation that between 150 and 240 individuals were buried here over a period of 500 years. As with Forteviot, cremation activities appear to have helped to establish this place as significant enough for subsequent expansions and embellishments running on into the Bronze Age. Other cremation cemeteries in Britain appear to flourish from around the same time, or slightly earlier, from deposition at multiple foci at Dorchester-on-Thames, Oxfordshire (Atkinson *et al.* 1951; Whittle *et al.* 1992) to being part of a complex sequence of burial, deposition and mound building at Duggleby Howe barrow (Gibson & Bayliss 2010). Therefore, although evidence from British sites remains rare (and far less common than Neolithic cremations from Ireland), a growing body of data suggests cremation was present at certain high-status locations and likely of great significance.

Bearing this in mind, how did cremation change the way bodies were treated and perceived in the Neolithic, and how did this relate to social change in Scotland (and indeed Britain) around the end of the fourth millennium?

CREMATION AS A NOVEL PRACTICE

The process of prehistoric cremation, as identified in the archaeological record, has been studied intensively by McKinley (1997; 2013), and she has written of the various aspects of the technology of cremation. A number of stages of the treatment of the dead, from the pyre to final burial or deposition, can be traced with different degrees of confidence within the archaeological record, enough to suggest cremation offered a distinct set of new practices and decisions that offered variation or completely different experiences from earlier Neolithic mortuary practice, even if some traits are shared as noted above. Cremation for instance would have entailed novel ways of interacting with corpses, with for instance the intimacy associated with the careful gathering of fragmented and carbonised bone amidst the smoking pyre a new experience, an alternative to the collection of excarnated human remains. As Fowler (2004, 73) notes, 'the flesh was visibly relocated through immolation'; Sørensen & Bille (2008, 255) go further: 'fire is a means of destroying the dead'. This extreme reduction of the body in turn offered new opportunities for the dead to remain within easy everyday reach, incorporated within the fabric of pots for instance as bone tempering (Smith & Darvill 1990), 'curation or distribution amongst the mourners' (McKinley 2013, 150; and see Oestigaard 2009), exchanged between people or groups

(Fowler 2010, 17), or perhaps even worn as jewellery. Different ways of dealing with bodies after death may also have emerged, in the form for instance of mixed deposits of more than one individual (comingling), partial deposits of incomplete bodies or body parts, or the mixture of human and animal bone, in ways that would not have been possible or feasible with inhumations (although we do know versions of these body treatments did occur in Late Neolithic and Early Bronze Age Britain (Jones 2008; Gibson 2016)).

In discussions of the prehistoric character of cremation, moving from the archaeological record to an interpretation of the act itself, we should be cautious however. Downes (1999) notes that cremation rites in Bali were lengthy processes where the fire and the pyre were only one, rather brief, element of the rites, while Gibson (2016, 58) has more recently suggested that we should reflect carefully on imposing our concept of 'burial' on prehistoric societies at all, as 'it is becoming increasingly obvious that the treatment of human remains in the fourth to second millennia cal BC was totally alien to our own ideas'. In other words, cremation as a concept is a catch-all term that includes a series of different stages, undertaken in different locations, with perhaps a different group of actors, and leading to outcomes we should not necessarily expect to understand. Gibson's point is especially pertinent when we consider the most visible – and to us, troubling – stage of the process.

An innovation that cremation certainly brought was the very public spectacle of the body burning on top of some kind of pyre (also known as open cremation). This would have offered a very different experience to, for instance, the slow-motion decay of a corpse on an excarnation platform or laid out in the open. To our modern eyes, there is probably little that seems to be more alien than standing watching a recently deceased loved one ablaze. McKinley (2013, 155–6) notes that modern cremators and cremulators take little time to reduce a corpse to a fine white powder, and these processes take place behind closed doors. By way of contrast, those who have observed contemporary cremation rites, such as those undertaken by the Hindu Balinese, note the interactive nature of the process with big crowds including children watching on, and active management of the burning of the body, for instance prodding and moving it with sticks (Downes 1999, 22–3). The distinctiveness of the pyre and the memories that it creates therefore are perhaps the most challenging for us to understand, as well as to recognise archaeologically.

Experimental work focusing on cremation rites has tended to focus on Bronze Age and Anglo-Saxon practice, but nonetheless is informative in giving us an insight into the dramatic, dangerous and memorable nature of pyre events. Marshall (2011, 14–15) has summarised previous experimental pyre firings, as well as presenting his own experiments. He notes that experimental work has tended to focus on 'osteological investigation' although a smaller body of experimental work, including his own, has concentrated more on pyre architecture, firing logistics and the material aftermath (Marshall 2011, 14–15; and see McKinley 2013; Snoeck & Schulting 2013). A typical project of this kind was undertaken in 2009 by Alison Sheridan (2010b); she conducted the cremation of a pig and various Bronze Age-style artefacts and bone pins at the now defunct Archaeolink Prehistory Park, Aberdeenshire, to better understand taphonomic processes related to materials placed on the pyre. Marshall's (2011, 15ff) own experimental work focused on the construction of a series of pyre types, based on excavation evidence and the experiments of others, and

the monitoring and quantification of the processes before, during and after the firing of each pyre.

Such research activities are of course important but do not, we would argue, capture or consider the impact cremation has on those who *experience* it as participants or spectators. Marshall (2011, 15) notes that this has occasionally been the objective of public-facing experimental exercises, such as that carried out during the Festival of British Archaeology, in Cardiff, in 2009 where a pig was cremated atop a simple box pyre for the purpose of 'public education', or the experimental cremation of a pig as part of a family Midsummer celebration on a beach on the island of Bute, Argyll and Bute, in 2011 (Clarke & Duffy 2012, 65). Marshall (2011, 14) notes that such experiments are 'part of a recent trend towards mounting such events for the purposes of public 'edu-tainment', an excellent motive, but usually unmatched by scientific content'. Yet for a society who are absolutely sheltered from the reality of cremation due to the highly mechanised and clinical crematoria we use (Parker Pearson 1999, 42; Williams 2004, 271; McKinley 2013, 155) the opportunity for the public to witness a cremation pyre alight offers a rare and powerful insight into prehistoric practices and, importantly, attitudes to death and the human body, and we would argue this impact need not be accompanied by detailed scientific recording of the process itself.

The act of cremation in prehistory would have been dramatic, and these processes would have been all the more impactful when carried out with an actual dead human body on the pyre (as opposed to a pig), and not just any person, but a dead relative or friend of those watching on and participating. Williams (2004, 271) has written evocatively about the unpleasant and visceral processes that would have occurred as a body burns; he was writing about Anglo-Saxon cremations but again the same applies to prehistory and it is worth quoting at length:

> *'Firstly, the coverings of wood, bark, hides, leather or textile (if pyre material, canopies and coffins covered the body) were burnt off to reveal the body. Next, the clothing, hair, skin and fat were sequentially destroyed revealing the muscles, organs and bone. As the body was heated, the evaporation of the bodily liquids may have occurred so speedily that jets of steam sprayed from the body. Once heated, the body fat upon the clothed cadaver would perpetuate the cremation process, the corpse itself seemingly accentuating the transformation initiated by the fire. The muscles can tighten under the effects of heat followed by the charring of the muscles and organs before they were consumed by the flames. As the cremation continued, the bony frame of the body including the rib-cage and the skull was revealed, penetrated and fragmented by the fire'.*

This remarkable and troubling sequence of events demonstrates the memorable process that cremation must have been, and if as rare in the Neolithic as strongly suggested within the archaeological record, then this would have added to the affect it had on spectators. We cannot know what impact witnessing the gradual exposure of 'skeletal parts and internal organs' (Sørensen & Bille 2008, 256) would have had on a Neolithic individual, but it would have been tough to forget. The development of experimental work that can assess this kind of visceral and emotive impact (to an extent!) as opposed to simply recording things like fire temperature, duration and fuel quantities may well give us an insight into why cremation played such a significant role in place-making and the emergence of major monumental centres, as well as being a compelling element of a new ideology.

BURNING THE CIRCLE CREMATION PYRES

In 2014, two of us (Brophy and MacGregor) undertook a series of experimental pyre firings on the island of Arran, within a timber circle that we had previously constructed and partially burnt down in 2013 (Brophy *et al.* 2016; 2017). This was a public-facing event called Burning the Circle with the major objective being to create memorable fire-based experiences for the audience, accompanied by information on the nature of cremation and ceremony in Scotland's Neolithic and Bronze Age. We wanted to stage-manage the process (and cremations in prehistory were no doubt stage-managed and rulebound) in order to maximise the visual and sensory experience of watching pyres burn over a period of several hours. Therefore, the pyres were lit at dusk, accompanied by a degree of performance from a team of participants.

Four pyres were constructed (Fig. 6.3), all of which to one extent or another were based on evidence from excavations and experimental archaeology (*e.g.* Marshall 2011, 53), including a simple log pile, a framed stack and a box pyre, with a large wood pile located in the centre of our timber circle to act as a bonfire. The 'cremation' activity was also set in a location within the landscape with spectacular views, something apparent in prehistoric and contemporary practice (*cf.* Parker Pearson 1999, 50; Jonuks & Konsa 2007). Quantities of wood being used were monitored, and a series of objects were placed inside or on top of the pyres (including a dry but unfired urn pot, a supermarket-bought chicken and lithics);

Fig 6.3: Several of the different pyres after construction on Arran in 2014, built within a timber circle we erected for the previous year's Burning the Circle event (photo: Kenneth Brophy).

we felt we did not want to sacrifice a whole pig in the name of public spectacle given this had been done on several occasions before under more controlled circumstances. The fires were lit at dusk (Fig. 6.4) after a short talk about prehistoric cremation was given to the

Fig. 6.4: The pyres alight (photo: Kenneth Brophy).

Fig. 6.5: The morning after: the charred remnants of one of our pyres (photo: Kenneth Brophy).

audience, and the burning pyres were then maintained for around four hours. The following morning, we photographically recorded the remnants of each pyre (Fig. 6.5) and recovered the fully fired pot which had survived the process intact (Fig. 6.6).

This experiment was watched by around 50 to 60 people, few of whom were archaeologists. As the fires were lit, and then progressed, the audience reacted in different ways to sudden flares bursting from the pyres to popping sounds emerging from the fires, with admiration, fear and fascination all evident (Brophy *et al.* 2017, 448). The proximity of the spectators to the pyres changed through the evening, starting as close as was permitted, before backing off as the fires took hold and warmed faces and hands, and then the audience gradually moved back towards the pyres as the flames died down to a glow. Team members stoked and added to the fires, moving around the flames in the dusk. The impact of the fires appeared to be enhanced by the growing darkness, with senses other than vision being stimulated. This was also a highly social event, encouraging conversations, social eating and drinking. For those us actively participating in the process – lighting and maintaining fires – it was a draining experience, physically and mentally. And none of us had an emotional stake in the cremations: there were no bodies on the pyres, no relatives to be mourned, no human remains to be treated before the pyres were lit or carefully gathered up once the fires had died down. What impact all of these factors would have had on us

Fig. 6.6: A replica pot was fired in one of our pyres and survived the experience (photo: Kenneth Brophy).

and the audience can only be speculated upon although as Gibson (2016) has warned, we should be cautious about imposing our own ideas and value systems onto such processes.

CONCLUSION: WERE MEMORIES CARRIED ON WARM AIR?

In this paper, we have argued that because cremation is an increasingly recognised element of the mortuary repertoire of Late Neolithic in Scotland (and indeed beyond) then we perhaps need to reflect more on what this means for the treatment of bodies after death, and the disposal of those remains. Evidence from excavations such as Forteviot suggest that a great deal of care must have been taken when gathering up fragmentary human remains after the fire had died out, and that bodies were being mixed after death, perhaps with some element of curation playing its part as well. The burial of body parts and token deposits, and perhaps also the retention of some bones, is also hinted at, practices evident elsewhere too. But cremation was not just all about the body of the deceased. It was also about the experiences of the living – participants preparing and tending to the fire, spectators blasted by warm air, relatives collecting recognisable body parts and objects from amidst the ashes – and about creating unforgettable memories.

Noble (2006, 58) has argued that burning down timber monuments in the Early Neolithic in Scotland (such as the timber halls) may have created flashbulb memories, 'memories … associated with a high level of recall clarity and vividness'. The concept of flashbulb memories was initially developed by Brown and Kulik (1977) who emphasised the psychological impact of shocking events on groups of people who witnessed – or even heard about – such events (to use a classic modern example, the JFK assassination). Could

it be that cremation pyres offered a Neolithic equivalent (Brophy *et al*. 2017, 443–4), binding together groups of individuals who took part or watched one or more emotionally charged and visceral cremation pyre burn? The physical impact on the Burning the Circle spectators, and the touching details of the careful bone collection strategies evident at Forteviot, both suggest to us that the physical and emotional experiences of cremation on the living may have been in their own ways substantial and transformational. This is perhaps the tipping point when wider social changes begin to impact on individual lives.

Cremation is a powerful experience, one that generates memories and impacts on the body as well as the mind. It is only by considering the impact that pyres and cremation would have had on all participants, living and dead, that we can begin to understand how its use became more commonplace (gradually) as the Neolithic went on. Downes (1999, 28) warns, 'if we do not think beyond the small grey fragments of bone we encounter as residues, we cannot do justice to the intentions and beliefs of those we study'. It is hoped that observations in this paper based on these two very different fieldwork experiences can add a contribution to the discussion of Late Neolithic bodies and in turn how this can inform our understanding of localised and wider social and ideological change in the context of the beliefs and actions of people in Late Neolithic Scotland and beyond.

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