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Crafters of kingship: smiths, elite power, and gender in early medieval Europe

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In the earliest centuries of the Middle Ages, skilled metalsmiths were greatly valued by cult leaders who required impressive objects to maintain social links and the loyalty of their retainers. Despite their clear importance, smiths were peripheral characters operating on the fringes of elite communities. Such treatment may reflect an attempt to limit the influence of metalworkers, whose craft was seen as supernatural and who themselves were probably spiritual figureheads; archaeological evidence associates smiths and their tools in symbolic processes of creation and destruction, not only of objects but also of buildings and monuments. The Church clearly appropriated these indigenous practices, although conversion eventually saw the pre-eminence of the sacred smith and their practice wane. Anthropological study provides numerous comparators for skilled crafters acting as supernatural leaders, and also suggests that as part of their marginal identity, smiths may have been perceived as a distinct gender.

The legend of Weland the Smith, comprehensively detailed in the thirteenth-century Poetic Edda, is the most celebrated account of early medieval metalworkers and their craft. The central component of the story is Weland's capture by King Nithad, his hamstringing, and then imprisonment on a lake island where he is obliged to act as royal goldsmith. Weland exacts a cruel revenge for his confinement and forced labour, which includes the rape and impregnation of the king's daughter Beadohild, and the murder of his sons. The smith eventually escapes his island prison, using wings he has fashioned himself, and relates his various offences to the king (Fig 1).[2] Weland and his multifaceted legend have provided a significant focus for scholars from various disciplines, deployed to shed light on themes as diverse as metalworking technology to the role and status of women in early medieval societies.[3] It is the conflicted portrayal of Weland as embodying valuable yet malevolent power that academics have most emphasised, however, with several arguing that it reflects a perception of early medieval smiths more generally. Indeed, the contradictory status of metalworkers has become something of a trope, referenced by numerous studies working

on pre-literate and historic societies alike.[4] Early medieval research has proved no exception to the trend, although the social and cosmological significance of metalworkers and their craft has yet to be fully realised. Research has instead typically asserted that smiths were simply seen as 'magical' by contemporaries,[5] an oversimplification which papers over diversity in the status, ability, and lived experience of artisans and the potential for these factors to change over time.

This paper seeks to correct this outlook by constructing a profile of early medieval metalworkers who lived and worked among elite communities. Through a combination of archaeological, literary and anthropological evidence, a far clearer picture of the status of metalworkers operating in the upper echelons of society can be reached. It will be shown that in early post-Roman Europe, leading artisans had the significant responsibility of producing goods used in reciprocal gift-giving, a system which established and maintained power relations among societies practising cultic forms of rulership. Tied so closely to the constitution of such networks, smiths too were seen as spiritual figureheads; their tools are found in association with symbolic processes of building and monument closure, for example, indicating a role for artisans as universal orchestrators of creative and destructive rites that extended beyond their industrial specialism. In spite of their clear import, smiths were peripheral characters in courtly life who occupied workshops on the edge of residences and were interred within graves dug in liminal places. The paradox of the 'elevated yet ostracised' status of skilled craftspeople is not unique to the period, but is a phenomenon discernible among a number of pre-industrial societies around the world. This paper closes with a consideration of these parallels, but not before exploring the changing status and identity of early medieval metalworkers, from their positions among early cult leadership through the process of conversion.

SMITHS IN LANGUAGE, LAW, AND LITERATURE

The study of early medieval metalcraft benefits from a growing range of approaches, providing an increasingly solid platform for analysis of technique, technology and artistic style.[6] But as the insight gleaned about the objects themselves continues to impress, our understanding of the individuals who created them could hardly stand in starker contrast. Direct accounts of metalworkers are limited, as underscored by Elizabeth Coatsworth and Michael Pinder in their impressive study of Anglo-Saxon goldsmiths. Synthesising a range of

evidence, the pair note how little insight is given by any single source, as well as the difficulty of distinguishing between types of smith in written accounts.[7] Such complications are illustrated by the OE term *smið* itself, as it is debatable whether it was restricted to describing a metalworker, or instead represented a catch-all phrase denoting makers in general — a warrior, for instance, could be called a *gryrnsmið* 'grief-maker' or a poet *hleahtorsmið* 'maker of laughter'.[8] While skilled crafters are prominent in heroic literature, other sources venerate makers of more prosaic objects. The value of ferrous metalworking, for instance, is summarised in Ælfric's Colloquy, where the importance of the products of the blacksmith are acclaimed, even though the smith himself is depicted as a buffoon.[9]

If characterising artisanal activity through written sources can be considered at best challenging, it is arguably more difficult still to discriminate types of smithcraft through archaeological evidence. Even at indisputably high-status sites, finds profiles suggest that the production of precious and prosaic goods took place in the same spaces, potentially by the same crafters. Burials accompanied by metalworking tools paint a similar picture, such as that at Tattersall Thorpe in Lincolnshire, where implements for both ferrous and non-ferrous crafting were interred alongside the individual.[10] It seems, therefore, that in some circumstances even those artificers commissioned with creating the most ostentatious artefacts could still be drawn into manufacturing the iron apparatus integral to everyday life. These not insubstantial limitations aside, it would be erroneous to suggest either that early medieval smiths were a homogenous group, or that the identity of metalworkers is undetectable altogether.

Perhaps the most fundamental distinction between an average craftsperson and those operating in the orbit of royal authorities lay in the distinction between gift and commodity, and the role of the former in the construction and consolidation of elite power during the earliest medieval centuries. Beyond representing simply economic transactions, gifts in the early medieval world were primarily given to create and maintain social links. Whereas commodities are often alienable and leave little meaningful relationship when transacted, gifts are imbued with the lasting memory of the maker and subsequent conveyers and beneficiaries.[11] In early medieval communities, where lordly authority was chiefly cemented through reciprocal giving of gifts, skilled smiths were the most important of agents, creating the objects through which royal favour was bequeathed and maintained. Although it has been recognised that precious gifts would have been charged with immense

meaning, less emphasis has been placed on the clearly elevated place that this process must have bestowed upon the makers themselves.

The potentially special status of smiths is alluded to in early legal codes such as that of Æðelberht, where the king's smith was not assigned a *wergild* but a *leodgyld*, a term with implications of leadership or nobility.[12] High status is also evident in early written sources from Wales, where a smith is named as a witness in one of the late 7th-century Llandaff charters.[13] By the later medieval period some Welsh smiths and smithies were the special preserve of the king and his retinue, whereas others were the responsibility of the wider community, conditions which may have existed in earlier centuries.[14] In Ireland, legal tracts are clearer in their distinction between blacksmiths (*gobae*) and workers of precious metals (*cerd*), although in common with other regions of Europe, artisans of all types are depicted in conflicting terms.[15] Irish law codes represent an unusually rich written resource for the period and demonstrate, for instance, that unlike the rest of the population, craftspeople were allowed to move between kingdoms and were offered protection when doing so.[16] Only major monastic centres seem to have sustained resident artisans in Ireland and, while most lesser sites featured permanent workshops, it is unlikely that they were utilised year-round.[17]

The extensive and detailed character of Irish hagiographies provides a further crucial resource, with some referencing practices and conditions that have otherwise gone unrecorded. The mechanics by which secular labourers came to work for monastic communities, for example, is alluded to in The Life of Fionnchú of Brigown, which details how the saint chose to establish his church at a pre-existing metalworking site, renaming it 'hill of the smiths' in the process.[18] Other literary accounts show how metalworking was seen as of fundamental import to the foundations of royal power too; in the 12th-century prose tale *Echtra Mac nEchach Muigmedóin*, a smith who is described as both sage and seer is given the task of judging Níall Noígíallach and his brothers' fitness for kingship by conducting a trial by fire; after torching his own forge with the group inside, the smith interprets the object that each brother has chosen to save as reflective of their leadership qualities.[19] Although often recorded in later documents, such texts demonstrate how the expert hand of the metalworker clearly lay at the very locus of elite power relations. Conversely, it is worth considering whether abuse of this position represented a challenge to often delicately-positioned royal authorities, and if this explains why, in spite of their

utility, crafters repeatedly surface as marginal characters. In short, strategies of exclusion alienated the intrinsic authority of smiths from their product.

Indications of both the threat posed by expert artisans who abused their power, and the segregation afforded them, certainly abound in documentary and literary tracts. In the Weland narrative, for instance, the skills of the eponymous hero render him worthy of kidnap, yet the king has the smith maimed and imprisoned in isolation in an attempt to restrict his movements. Significantly, the written sources reflect that habits of social exclusion were not limited to geography, but hint that they also extended to the ambivalent gender profiles conferred upon metalworkers. The Old English medical charm *Wið færstice*[20], for instance, outlines how *ælfe smiðas* forge 'wælspera' ('slaughter-spears'), which are subsequently seized by *hægtessan* (warrior-women) to cause stabbing pains in humans.[21] Despite producing the offensive spears, it is significant that the smiths in the narrative are dispossessed of their weapons by women, a sequence of symbolic castration heightened by the contrast of the workers with the powerful and dominant *hægtessan*. Alaric Hall views this juxtaposition as a clear transgression of everyday Anglo-Saxon gender norms, where weapon bearing was typically associated with masculinity.[22] A comparable scene is outlined in the opening stansas of *Völundarkviða*, where Weland himself is seduced by one of three *meyiar* (maidens), for whom the protagonist forges a ring which ultimately leads to his downfall.[23] Sequences of female powers outwitting leading males is a common feature of Norse mythology,[24] but in *Völundarkviða* the emasculation of Weland is emphasised further when his sword is taken from him. Weland's neck is also described as '*hvítr*', a term for white/bright usually restricted to describing female beauty.[25]

A theme common to both *Wið færstice* and *Völundarkviða*, therefore, is one of smiths undergoing emasculating experiences through removal of personal weaponry, in acts appearing to subvert gender norms. It has been argued that these reversals represent part of a more widespread literary device, whereby the otherworldliness of Weland and other *ælfe* was accentuated by their effeminacy.[26] Yet, the possibility that such texts project a genuine notion of ambiguous gender is substantiated by evidence such as a gold solidus from Schweindorf, Germany. Dependent on the interpretation of the runic inscription, the text on the coin may be read *wela[n]du*; dated 575—625, it represents a remarkably early example of the legendary smith's name. The appellation comprises a compound of OE **weil* — 'skill, trick or ruse'— and **handuz* — 'hand'. Beyond the apt name, particularly intriguing

is the mixed gender of the two components, the latter element being feminine. Some have suggested that the original appellation has been generalised and the original name forgotten,[27] but with the evidence from *Wið færstice* and *Völundarkviða* in mind, it is likely that the mixed composition of Welund is genuine.

Obscure gendering is allied in many sources with the theme of reproduction, as creativity in craftwork seems to inhibit the ability of artisans to procreate. In Norse mythology, for example, metal crafters are habitually portrayed as dwarfs who, for social rather than biological reasons, are unable to reproduce and live lonely lives in exclusively male communities.[28] The evidence from these disparate sources, then, gives the impression that early medieval smithcraft was not always confined to recognised gender roles, and even raises the possibility that smiths were seen as a distinct gender entirely. The implications of these dynamics will be explored below, but it is first necessary to scrutinise the archaeological evidence in order to assess the changing status of metalworkers over the course of the early medieval period. Turning first to contexts of production, case studies from high-status settlements reveal how physical setting helped to shape identity, mediating the position of smith as a valued but peripheral agent who occupied the interface of society and landscape. Although much of what is surveyed in this research relates to metalworkers in the upper spheres of society, it is highly likely that these phenomena applied to artisans specialising in other materials.[29] Similarly, the scope of this study is largely limited to England and Scandinavia, but it is anticipated that the dynamics described will be identifiable to those investigating other areas of early medieval Europe.

SMITHS IN CONTEXTS OF PRODUCTION

An indicator that literary narratives preserve something of a lived reality — that metalworkers were marginalised through social and physical segregation — is discernible in the archaeology of numerous elite settlements across north-west Europe. While practical considerations such as the noise, smell, and risk of fire could have played a part in the positioning of forges within high-status centres, it should be recognised that such factors did not always dissuade lower-status communities incorporating iron smithies into the very heart of their settlements. At the small rural site of Bjørkum, Norway, for instance, structures occupied by whole families were also home to a number of subsistence practices, apparently undertaken by a variety of genders and age groups. The evidence from a piece of

chewed birch tar gum reveals that children were present, perhaps at the same time as metalworking, weaving and other activities were taking place.[30] Likewise, at Wharram Percy, North Yorkshire, smithing between the seventh and ninth centuries was seemingly incorporated into zones of habitation.[31]

In sharp contrast to the structuring of space on lower status rural settlements, within elite residences metalworkers occupied a distinct position. An example of this type of configuration comes from the palatial site of Yeavering, situated on a distinctive ridge of the Cheviot Hills in Northumberland.[32] Thanks to detailed excavation, the built environment of Yeavering is relatively well understood, with phases orientated around late prehistoric monuments articulating an evolving geography of cult. Reuse of earlier features extended beyond the central area of monumental buildings, where a space was carefully chosen for the performance of smithcraft. Situated approximately 200m south-east of the great enclosure, excavations of a Neolithic henge by Anthony Harding identified a series of shallow pits filled with early medieval metalworking debris, including crucible fragments and slag (Fig 2).[33] There has been some caution whether this corpus is proof that the henge was utilised as a workshop, but given the appropriation of existing monuments elsewhere in the Yeavering landscape, it seems most likely that it too was integrated into the ritual geography of the palatial complex.[34] The smiths of Yeavering, who would have most likely travelled with the itinerant royal court, thus worked in a location associated with the ancestral past, occupying a liminal space, but one which still lay within the sphere of elite influence. Such positioning allowed artisans to be called upon for important commissions when required, yet also rendered them as walk-on players in the broader stage of royal life.

The placing of forges on the outer orbit of elite space is detectable at numerous other early medieval centres in Europe, but it is most clearly visible at sites in Scandinavia. The best understood of these is Lake Tissø in Denmark, a high-status complex extending approximately 50 hectares along the western bank of the lake shore. Excavation has identified two consecutively occupied high-status compounds, termed 'manors' by investigators, and parts of an extensive market area, with activity commencing in the mid-sixth century.[35] The earliest 'manor' at Tissø was roughly four times the size of contemporary Danish farms, and was destroyed through burning around the year 650.[36] Following a hiatus of 50 or so years, a second elite complex was established approximately 600 metres to the south of the first, around AD 700 (Fig 3). Utilised until the 11th century,

the new compound underwent four reorganisations during its lifetime, in all but the last phase delineated by a fenced enclosure separating it from the surrounding market and workshops. In an arrangement that would be repeated over several centuries, the precinct comprised a central hall with an attached paddock within which sat a small structure, interpreted as a cult building. The only other consistently occurring structure, situated at the far northern end of the complex, was a forge producing a combination of iron and non-ferrous goods. Subsequent phases saw a recalibration of some buildings, but the three components of hall, cult building, and forge were maintained for almost 250 years. The finds recovered from Tissø indicate elite consumption across all periods, with a high percentage of tin-plated and gilded objects, and a large proportion of weaponry mostly recovered from the central compound.[37]

It is with some justification that Tissø has been interpreted as a royal site, perhaps used seasonally as part of a peripatetic network of residences. At the heart of activity lay the elite complex, with the prestigious hall (*hov*) serving as the venue for ritual reception and feasting, attached to which was a compound with a cult building (*hørg*), where amulets, jewellery and sacrifices were offered.[38] Through a series of deeply symbolic ceremonies, the compound was the space in which relations with kin, king and gods were negotiated; the crucible where indistinguishable royal and religious power was situated. Within this milieu lay a forge, in which worked a smith responsible for producing objects to be bestowed upon loyal retainers or offered in sacrifice. As *the* fundamental crafter of power, the artisan was reserved a place in the compound; yet the positioning of the forge — on the periphery of the complex — speaks of a person or people who were not entirely incorporated into elite life. Potential comparators to the arrangement identified at Tissø are visible at sites such as Gudme in Denmark and Gamla Uppsala in Sweden, although in these instances it is jewellery production that seems to have been given prominence.[39] The enduring integrity of these built environments is symptomatic of a cosmological ordering of space, whereby *hov*, *hørg*, and smithy were intrinsically linked. Indeed, this correlation is echoed in the later writings of Snorri Sturluson, who states that the only other building accompanying the temple of the gods (Gladsheim) on Asgard was a forge, in which the first tools of smithcraft were miraculously created so that the gods could shape the world. The forge as a concept was therefore not only bound to the divine authority of lordship, but also understood as the place where creation itself was realised.[40]

More extensive investigation of such sites will confirm the positioning of workshops within the scope, yet at the borders, of elite life, an opposition that is discernible in a final example presented here. The earliest surviving reference to a church at Glastonbury, Somerset, is provided by a charter of Cenwalh (AD 643x674), although there is debate whether an even earlier 'British' foundation existed. It is difficult to determine the size and character of this nascent complex, but a recent project led by Roberta Gilchrist identified at least one large timber-built structure dating from the 6th century on the site of the later abbey. Slight though the evidence is, it appears that the earliest monastic community at Glastonbury was situated in much the same location as its successor; on a peninsula of land projecting into the Somerset Levels. Comparison with contemporary foundations suggests that clerics would have been sustained by places yielding a mixed farming surplus as well as settlements charged with more specific production.[41] Located beyond the immediate environs of the religious precinct, the iconic summit of Glastonbury Tor was the surprising location of one such specialised site, geared towards the output of metalwork (Fig 4).

Excavations by Philip Rahtz between 1964-66 on the upper plateau of the tor identified a sequence of activity from the prehistoric to modern periods, with one phase firmly dated to the sixth century.[42] During this period, two adolescents were buried in the northern part of the site, both in shallow graves in supine positions with heads to the south. Elsewhere a series of timber buildings— perhaps as many as five, one of which had been burnt *in situ* — provided shelter for metalworking hearths. Two crucible fragments with traces of bronze residue confirm that metal was being produced, and an occupation layer containing great densities of charcoal, animal bone and fossil ammonites extended across much of the area. Also dated to the 6th century was a carefully-constructed cairn, comprised of stone blocks, many of which had been burnt red by exposure to heat. The scale and impressive composition of the cairn raised hopes among excavators that it marked an important grave, but it covered instead an iron ferrule, burnt wood-ash, and a small fissure. The monument had been built over a natural hollow which contained further quantities of animal bone and ammonites, Roman tile and a series of bronze and iron objects including a lamp or crucible holder, and several ferrules, perhaps from spears.[43] It is significant that spears, especially when interred in burials, have been cited by archaeologists as among the most prominent signifiers of male gender in the Early Anglo-Saxon period.[44] The deposition of the ferrules in the Glastonbury Tor cairn seems to subvert this construct—

the objects and their symbolism conceivably 'killed' through procedures of burning and burial, potentially de-gendering the individual with which it was associated. It is possible too that the cairn may have been some form of surrogate monument, with grave goods buried despite the absence of an individual to inter.[45]

In addition to the excavated features, recovered artefacts from the tor also hint at activity of a ceremonial kind. Throughout the excavation, substantial quantities of fossil ammonites (*Grammoceras*) were found, most densely within a natural hollow on the eastern part of the platform. Although he raised the possibility of artificial deposition, Rahtz eventually rationalised the deposit as the product of weathering.[46] *Grammoceras* occur infrequently in Midford Sand Strata, however, and their accumulation in fissures not parallel to the bedding plane also shows they are not the product of geological action.[47] A more plausible explanation lies in the apotropaic properties ascribed to fossils in the early medieval period, attested by their occurrence in graves, especially in conversion-period England. Echinoids, for instance, were known across Europe as 'thunder-stones' and used as protection against thunder and lightning.[48] It is plausible to view the Glastonbury ammonites in a similar light, collected as protective amulets by those climbing the exposed summit to visit the forges. In a tradition first recorded by William Camden, the ammonites of the Whitby cliffs were seen by locals as coiled snakes, petrified by the miraculous prayer of St Hild.[49] While it is impossible to demonstrate that the same conviction was held in 6th-century Glastonbury, the apparent association of smiths with snakes in the early medieval period is significant. The Old English poem *Deor* relates how Weland experienced pain inflicted by snakes or worms, and in Norse literature Reginn the smith is depicted either as brother of a dragon, or as a dragon himself.[50] The presence of the *Grammoceras* surrounding the network of hearths and forges could thus have added to an existing association of smiths with serpents, consolidating their malign and otherworldly status for those who ascended the hilltop. The deposition of the fossils in a natural hollow cannot be dismissed as pure coincidence either, given the later association of hollows and fissures with the underworld.[51]

The 6th-century complex on Glastonbury Tor was originally seen as having either a defensive or 'religious' purpose, although neither view is consistent with the excavated material.[52] The tor is more suitably interpreted as a specialised place of ceremonial metal production; an isolated smithy-hermitage possibly dependent on an early church. The lone

6th-century building at the abbey was partly dated by recovery of the same imported ceramics which were also found on the tor, hinting at a relationship between the two sites.[53] Although it is not definite that the earliest structures at the abbey relate to a religious foundation, their exposure allows a working conceptual framework for the tor to be proposed. At one kilometre from the monastery, the tor was undoubtedly on the edge of Glastonbury's peninsula, yet probably still lay within its sacred core. Crucially, the tor is located within the interior of an earthwork known as Ponter's Ball, which probably delineated the spiritual and legal jurisdiction of the church (Fig 5). The date of the construction of Ponter's Ball is presently unknown, but it cuts off the isthmus in a manner reminiscent of other early monastic foundations.[54] It is worth noting that the tor had been a focus long before the 6th century, adding to our understanding of hilltops as sacred in pre-Christian topography. Hilltops seemed to have derived their importance as places that were at once peripheral yet accessible, with steep climbs to elevated summits serving to emphasise the spiritual element of journeying to a 'special' location.[55] Indeed, the choice of the tor summit as a metalworking site is itself a highly conspicuous act; inhospitable in all but the calmest weather, the smiths and their work would have required a steady stream of visitors to sustain them. An alternative, perhaps more likely, scenario is that the complex was occupied only intermittently. Either way the choice of the tor and the evidence recovered speaks of the cultic character of metalworking, and the importance placed on incorporating this liminal place into the wider high-status landscape of Glastonbury.[56]

These case studies illustrate the distinctive productive contexts of metalworking in early medieval elite landscapes, and the way in which these arrangements were rooted in principles of social and cosmological order. Adopting places at the interface, smiths often appropriated spaces that were already imbued with memory and meaning, such as the henge at Yeavering and the tor at Glastonbury. Charged with the productive process of bringing new material beings to life, the supernatural status of smiths in settlement contexts was further consolidated by the ritualised performance of their craft. More than simply social 'others', artisans were seen as curating the border between these two worlds, occupying sites and places where the gods themselves resided. That elite metalworkers differed from other smiths is not only indicated by their living arrangements, but is also hinted at in written records which regularly depict them as supernatural beings. Such conditions blurred the boundaries between the human and inhuman, between the living

and the dead, and perhaps between genders. These themes are also recognisable when examining the depositional contexts with which early medieval smiths are associated, suggesting that metalworkers were not only tasked with creative processes but also acts of termination.

SMITHS IN CONTEXTS OF DEPOSITION

Reflecting broader trends in early medieval archaeology, attempts to distinguish the status of early medieval metalworkers have relied heavily on funerary data.[57] The centrality of smithcraft to elite power is well illustrated by the deposition of metalworking tools in 6th and 7th-century boat graves, as found at cemeteries such as Vendel and Valsgärde in Sweden.[58] An 'axe-hammer' was also deposited in the 7th-century Mound 1 ship burial at Sutton Hoo, Suffolk.[59] Located in the very base of the grave and the first object to be interred, the axe-hammer seems to be a closing deposit, the kind of which are also found in buildings of the period (see below). Distinct from this practice are the apparent graves of smiths themselves, the most celebrated of which is the late 7th-century burial from Tattershall Thorpe.[60] Interred with a range of tools for precious object and copper alloy production, David Hinton interpreted the burial as the remains of an itinerant crafter.[61] The sense that the Tattershall grave represents a marginalised character is heightened by the presence of a sheet iron bell, perhaps used as a means of signalling the crafter's whereabouts as a stranger. Consistent with the finds assemblage, the siting of the burial in an isolated fen-edge position on the periphery of the Kingdom of Lindsey also speaks of marginality, yet the perception of this artisan as an agent with a paradoxical status is underscored by the wider topographic context; the place name of adjacent Coningsby, 'the king's village', alludes to an elite focus, of which the inhumation was a satellite. [62]

Other notable cases of individuals buried with metalworking equipment come from Mezöband in Hungary, where tools were found in a grave dated to the 6th century,[63] and a comparably-dated assemblage was recovered from a burial in the Lombard cemetery at Poysdorf, Austria.[64] Both weapons and metalworking tools were found in a 6th-century grave at Hérouvillette, in northern France. An unusual complex in many respects, the grave goods are overwhelmingly 'Germanic' in appearance, bearing particular resemblance to objects from Kent.[65] In Norway, an impressive 37 graves with tools for blacksmithing have been identified, deposited between the 7th and 10th centuries. Similar to Hérouvillette, 33

of the Norwegian burials also possessed weapons, finds which are only rarely seen in other parts of Europe in the period.[66] The Norweigen data is also significant for the presence of females in 'smith graves', as shown by Sigurd Grieg, who identified nine graves with a combination of blacksmithing tools and objects usually associated with female burial; a later review confirmed that at least two of these interments were indeed biologically female.[67] Excavations carried out at Minehowe, Orkney, suggests that the association of females with metalworking was not an innovation of the early medieval period, but was also common in prehistoric communities. Here, a female was buried beneath the floor of an Iron Age workshop, housed within an earthen mound with a subterranean chamber which was accessed by a flight of stairs.[68]

While it is problematic to identify individuals as artisans based upon grave goods or burial location, it is clear that females in at least some early medieval communities could assume the sometimes sacred role of smith, and that such conventions had existed in parts of Europe for centuries. Indeed, scholars of prehistory have been far more confident than their early medieval counterparts in associating women with blacksmithing in particular, an idea previously overlooked on the assumption that females lacked the muscular strength to shape iron.[69] Anthropological evidence irrefutably shows women involved in smelting and smithing, although unfortunately such data is often carelessly deployed to argue the case for exclusively male industry.[70] In many instances, it is not biological sex but reproductive capacity that determines involvement or exclusion. In modern day tribes such as the African Mandigo, for example, male smiths cannot have sexual relations with their wives during production and delivery of the bloom, and likewise, menstruating females are viewed as dangerous to processing.[71] Modern osteological evaluation of smith burials is thus clearly a key priority for early medieval scholarship, with the above evidence providing every expectation that a combination of males and females will have been interred with metalworking tools.

Moving beyond the burial tableau into broader contexts of disposition, an increasingly clear correlation is emerging between metalworkers and processes of closure or 'killing'. Andrew Welton has recently quantified the frequency with which spearheads found in early Anglo-Saxon burials were annealed in the workshop before being placed in the grave, effectively reversing or 'unmaking' the original work of the object and its lifetimes of use.[72] It is intriguing to consider whether these procedures changed or eliminated the

symbolic power of the objects, especially given the importance of spears as gender signifiers.[73] In Scandinavia, a number of 10th and 11th-century smith's tool chests have been found deposited at the banks of rivers and lakes— notably transitional landscape locations— again hinting at the careful discard of objects perhaps seen as dangerous or malign.[74] While these efforts show crafters decommissioning objects, what has hitherto gone unrecognised is that such obligations also extended to structural elements in the landscape. At Rhynie in Aberdeenshire, for instance, a pair of tongs was found within the ditch of an enclosure, seemingly placed during a closing rite in the 6th century.[75] A symbol stone from the same site depicts a bearded figure, the 'Rhynie Man', carrying what has previously been seen as a poleaxe (Fig 6).[76] The object that the individual bears, however, resembles a metalworking hammer and is similar to types depicted in early medieval illustrations (Fig 7). Elsewhere at Rhynie another symbol stone, the Craw Stane, delineated the entranceway to a system of enclosures, and it is now tempting to view the Rhynie Man in the same vein, demarcating the physical and conceptual space of the crafters within the complex.[77]

More frequently it appears that elite buildings were the subject of ritualised closure, signified by careful placement of tools or precious metalwork at the base of negative features, especially post-holes. A triangular-shaped forge-stone, for example, was found within the base of a post hole at the second high-status hall at Borg in Vestvågøy, Norway.[78] The hall was closed in the 10th century, but the recovery of three foil *gullgubbe* render it the likely space for ritualised elite ceremony.[79] An analogous sequence is emerging from the contemporary ring-fortress of Borgring in Zealand, Denmark, through investigations ongoing at the time of writing. Excavation of a gatehouse at the site has located a large toolbox containing iron objects mostly for carpentry, placed in a post-hole following a burning event.[80] Initial suggestions are that the gatehouse may have served as a workshop, but the lack of hearths and huge size of the structure argues against this model. Instead, the earliest gatehouse at Borgring seems to have been used for domestic or other purposes, after which it was closed through deliberate burning and deposition of the toolbox; a second gatehouse was then constructed.

The identification of carpentry tools at Borgring is significant, hinting that other artisans were involved in the ritual closure of buildings. Indeed, carpentry tools are a consistent feature of hoards deposited in late-Saxon buildings (see below), and perhaps

here we are seeing the woodworker as well as the metalsmith decommissioning structures which they themselves had created. Burning episodes certainly form a consistent element of building closure where metalwork was deposited, as at Glastonbury where the 6th-century workshop—originally seen as accidentally burnt—can now be re-evaluated as having followed the same observance. The structure on the tor was strikingly clean of metalworking slag or residue, apart from two crucible fragments which had once again been inserted into a feature, albeit this time utilising a natural fissure rather than a post-hole.[81] Explanation for why communities went to such lengths when vacating their lived space may lie in the idea that, in a similar manner to portable objects, buildings and settlements were perceived as animate beings with lifecycles of their own. In the same way as the death of an individual required marking, such cosmologies may have required structures to undergo a similar rite, with offerings assuming a comparable function to grave-goods.[82]

It must be stressed, however, that it was not only tools that were used during ritual acts of closure, and Helena Hamerow has noted how a range of objects, including ceramics and human remains, were placed in features on early Anglo-Saxon settlements.[83] Hamerow reasons that some deposits may have been related to a fertility cult, an intriguing idea given the interpretation here of metalworkers as agents of creation. While the placement of closing items was therefore not unusual, the correspondence of metalworking and woodworking tools with unequivocally high-status structures indicates distinct practice, and one embodying the intimate relationship between skilled maker and elite. If the lifecycle of early medieval settlements was bound with the lives of their households or individuals, as has been suggested for the Bronze Age by Joanna Brück, then the correspondence between tools and high-status buildings, especially halls, is extremely significant.[84] In such a framework, the person most responsible for producing and consolidating elite authority through their craft may likewise have been tasked with terminating that same power through the formal closing of the hall, perhaps on the death of a leading individual or at the end of a lineage. The decommissioning of not only artefacts but also buildings and monuments reveals that the smith’s power was not circumscribed to the workshop, but that crafters were responsible for creation and termination of lifecycles and memory in a more holistic sense. The enactment of such roles consolidates further the premise that artisans were sacerdotal characters, orchestrating processes of life and death. Moving through the medieval period, the way in which sacred smiths were incorporated into new expressions of

authority and ideology is complex. What follows is a hypothetical agenda explaining trajectories of practice and perception which account, in some part, for the continued paradoxical status of smiths which is discernible in written sources into the later medieval period.

SAINTS AND SINNERS: SMITHS IN A CHANGING WORLD

This paper has so far concentrated on the identity and status of artificers living in societies where their sacerdotal role formed part of a broader cosmology. In particular, we have seen how the productive and depositional practices of smiths were incorporated into the ceremonies which helped create, consolidate, and terminate elite authority. The importance of precious metalworkers in mediating power through systems of reciprocal gift exchange is doubtless the main rationale for the mediation of their unique status; ostracising smiths would have been attractive to leading personages keen to mitigate challenges to their insecure grips on social and political power. Such a scenario raises the obvious question of what happened to the elite metal smith over the course of the early medieval period, as the character of rulership underwent transformation alongside the often indistinguishable process of Christian conversion. In the past, the tacit assumption was that practices with 'pagan' overtones were rapidly extinguished, as institutionalised Christianity brought a comprehensive end to indigenous belief. More recent scholarship, though, has developed a more nuanced understanding, illustrating the diversity in both pre-conversion and Christian belief systems and the amalgamated modes of expression which resulted as thought and practice converged. It is now clear that rather than wholesale change, existing belief and ritual was commonly appropriated and reassigned new meaning within a Christian context.[85] Likewise, clerics did not overturn the structures of kinship wholesale, but rather integrated themselves into royal households and wider networks with remarkable effect.

The evidence relating to royal crafters in part matches this broader understanding — smiths were important individuals within entourages, and neither their position nor practice seems to have been immediately dismantled by emerging Christian institutions. It must be remembered that metalwork was a highly valued commodity, production of which was fundamental in creating self-sufficient religious communities. The rise of metalworking saints can be seen in this context, as leading ecclesiastics filled the long-established shoes of

sacred crafter.[86] Eligius, Bishop of Noyon-Tournai and eminent goldsmith, is perhaps the best known of these early saints, but in Ireland too there are numerous references to prominent clerics with crafting abilities. It is notable that three bishops, including Conlaed, the first Bishop of Kildare, were regarded as the great goldsmiths of Ireland, although again there are hints that this phenomenon was not limited to male clerics; Saint Gobnaid, for example, derives her name from *gabha* 'smith', and evidence for extensive metal production has been recovered from her foundation at Ballyvourney, Cork.[87] The proliferation of clerical smiths demonstrate how the sacred, marginalised, and perhaps figuratively castrated modes of artisanal lifestyle were easily appropriated by those pursuing modes of spiritually-inspired isolation and celibacy. Accordingly, we see continuity in the Church's initial approach to the topography of smithcraft, as anchorite-smiths persisted in occupying the periphery of high-status society and landscape. The colophon that once covered the Lindisfarne Gospels provides a case in point, recorded as the work of Billfrith the anchorite who 'forged ornaments…and adorned it with gold and gems'.[88] Archaeological interventions also associate hermits with metalworking, such as the evidence for craft identified at the possible site of Guthlac's anchorage at Crowland, Lincolnshire.[89]

Persisting practice is equally visible in the geography of deposition, as illustrated by Bede's account of an errant smith who suffered divine judgement. Bede dedicates an entire chapter to the artisan who 'resided in a noble monastery' but was 'much addicted to drunkenness…and more used to stop in his workhouse day and night, than to go to church to sing and pray, and hear the word of life…'. According to Bede, upon falling sick the smith was exposed to the eternal perdition awaiting him, and having failed to repent, 'died without having received the saving viaticum, and his body was buried *in the remotest part of the monastery* (author's emphasis)'.[90] Inspecting this passage superficially, one might assume that the monks of Jarrow chose an isolated spot for burial, as the deceased brother had clearly been damned. Given the evidence presented above, however, more plausible is that Bede is placing a veneer of Christian understanding onto an enduring facet of indigenous practice, whereby smiths were deviants who required burial in liminal locations. The idea that smiths continued to be the subject of deviant burial practice is also reflected in the life of Saint Brendan. In a cycle that also occurs in the Life of St Columba, Brendan and his fellowship bury a smith at sea after he dies from a sudden illness.[91]

The association of smiths and their tools with closing rites, particularly of buildings, similarly did not cease over the course of the conversion. Excavations at Bishopstone in East Sussex identified a hoard of metal dating to the 10th century, buried within a structure that occupied the nucleus of buildings at the heart of a late-Saxon estate centre. In comparable fashion to the contemporary deposit at Borg, the Bishopstone objects were carefully placed within a posthole at the base of the building, which was in all likelihood a cellared, free-standing tower.[92] Bishopstone is not an isolated example; a late-Saxon iron hoard is perhaps related to structures at the poorly-understood site at Crayke, North Yorkshire, and at the contemporary settlement of Springfield Lyons, Essex, iron objects were found within a wooden tower.[93] Although not securely associated with contemporary buildings, similar assemblages have also been identified at Asby Winderwath in Cumbria and at Flixborough, Lincolnshire, where a deposit of twelve carpenters' tools was found together with a bell and two cultivation objects.[94] Smithing structures at Faccombe Netherton in Hampshire were closed with a more costly offering; a gold-filled crucible having been carefully placed on a bed of charcoal within a pit. [95] More impressive still is the gold filigree panel placed within a post-hole at Lowpark, County Mayo, Ireland, apparently bringing to an end an enclosure used for metalworking in the 10th century.[96]

A correlation between churches dedicated to Eligius and important early medieval estate centres hints that specialised metalworking dependencies, similar to that outlined at Glastonbury, may have been commonplace. The monastic and royal focus of Sockburn, North Yorkshire, for instance, was probably served by an industrial site at nearby Great Smeaton (smið-tun)[97] the parish church of which is dedicated to Eligius. In Northumberland, a chapel of Eligius in the shadow of the prehistoric enclosure of Spindleston Heugh lies only 3km to the west of the royal site at Bamburgh. In other instances, Eligius is associated with entire landscapes which were marked by older traditions of votive deposition. The best exemplar comes from the Witham Valley in Lincolnshire, where elaborate offerings were made from the prehistoric period, especially along the raised causeways which once traversed the wetland.[98] Located at the heart of this area, the Premonstratensian abbey of Barlings was served by a chapel dedicated to Eligius from at least 1409-10, although it has been argued to be an older foundation and was perhaps dependent on the preeminent church at nearby Bardney.[99] In addition to demarcating a possible site of industry, then, the smithing saint may also have been chosen as an apt patron for a landscape boasting a

prominent past of ritualised deposition. It is thus clear that the power of the smith, and their central role in indigenous practices of closure was remembered for some time, and remains detectable in the history and archaeology of nominally Christian contexts.

As the quantity of documentary and literary sources increases, so too do accounts of smiths involved with supernatural or divine events. In his Life of St Swithun, for instance, Aelfric tells of a ghostly meeting between the deceased saint and a smith, who is urged to transfer Swithun's corpse from burial ground to church.[100] Likewise, the 12th-century Waltham Chronicle details the miraculous discovery of the Montacute Cross on St Michael's Hill, Somerset; the recovery of a black flint crucifix or rood made only after the local blacksmith experienced a series of dreams in which the devil told him where to dig.[101] Both of these narratives are part of a wider corpus of later literature wherein the smith is portrayed in a supernatural light able to mediate with the dead. Produced in a Christian milieu, these accounts expose a lingering social memory, that the spiritual power of metalworkers at one time allowed them to intercede with the ancestors.

In spite of such legacies, the emerging forms of rulership which accompanied the growing establishment of the Church saw the symbolic potency and economic primacy of smithcraft wane. As individuals with spiritual authority who orchestrated important ceremonial duties, precious metalworkers presented a problem for the clergy; the creative process of smithcraft, bringing into being objects with a perceived life of their own, naturally conflicted with the doctrine of a single omnipotent creator God. Rather than retaining their status as custodians of ritual practice, there are clear indications that, over time, the Church sought to actively integrate smiths into the increasingly regimented mores of monastic life. It was this concern that led to the declaration at the synod of Aachen in 816 that crafters were to 'be instructed to perform their work…in the future within the confines of the monastery, and not without, *as was the custom in the past* (author's emphasis).[102] This very conscious effort at integration demonstrates the importance of smithcraft to monastic independence, but also a desire to assimilate these once marginal characters into the Christian sphere. The idea that the power of the artisan could still be misused persisted nonetheless, and is reflected in the polarised stories of workers as either models of disciplined piety, or as wayward and selfish individuals lured by the object of their craft (Fig 8).[103]

There can therefore be little doubt that the status of metalworkers underwent significant change over the course of the medieval period, partly as a consequence of new ideology, but also due to a transformation in the economic fabric of kingship. Schemes of tribute exploitation and gift exchange could only support elites up to a certain point, and those overseeing rapid territorial expansion required new ways of sustaining their authority. Not only did the Church offer royalty the attractive prospect of being seen as divinely appointed, it also allowed them to shift the basis of their economic power to agricultural extraction. Kings remained important figureheads who bestowed elaborate gifts upon their retainers, but increasingly, the production and consolidation of their power was achieved through possession of land.[104] Alongside this economic transformation, the ideological understanding of smithcraft also changed. The performance of ritual acts for the benefit of political authority was no longer tenable in the new world view, nor was the belief in the supernatural reproductive power of the artisan. Instead, the Christian God now offered the concept of an ultimate creative force, and one which provided a conduit through which lords derived power. Associated with a lingering social memory of their former authority, skilled smiths remained to an extent a mistrusted and maligned group, and the forge viewed as a place where the devil could be foolhardily embraced or wisely exorcised.[105] The materiality of power had been gradually but lastingly altered, however, ensuring the waning significance of the elite smith who, while still valued and occasionally revered, was never again the primary crafter of kingship.

CURATORS OF THE LIMINAL: SMITHCRAFT AND GENDER

In writing a biography of early medieval metalworking, this paper has portrayed smiths as fringe characters among elite communities, especially before the changes in practice and ideology eventually initiated by the Church. While back-projection of sources is no doubt problematic, later written accounts complement this outlook and enrich the spiritual and supernatural facets of smithcraft which can only be inferred from the archaeological evidence. While funerary data suggests that production was undertaken by both sexes, literary sources present metalworking as lying outside of established gender roles. Intriguingly, such characteristics are not the preserve only of early medieval smiths, but are recognised by anthropologists as common among pre-industrial societies. A particularly illuminating parallel is that of the ‘two-spirit’ people or ‘changing ones’ of native

North American communities, first described by European settlers, and whose existence was recorded until the end of the 19th century. Approximately 150 tribes are recorded as having recognised changing ones and, although the term is regrettably broad-brush and paints over plurality in practice, some consistent characteristics are discernible.[106] Assumed by individuals of either sex, changing ones represented a distinct gender and were highly skilled craftspeople who were honoured for their abilities. Often inhibited from taking part in the everyday gender-specific practices of the community, changing ones instead led important ceremonial activities such as performing burial rituals and giving names to new-born infants. Such functions have led anthropologists to argue that changing ones held sacerdotal status, acting as intermediaries between the sexes, between the living and supernatural worlds, and between gods and humans. As such, they were viewed as 'curators of the liminal', spiritual figureheads under whose stewardship society was structured and reproduced. Changing ones were also marginal agents despite the leading roles they performed and status they held, who often existed on the periphery of their communities.[107]

If the analogy between North American native and early medieval societies seems fanciful, it is important to recognise that a case for something like 'changing ones' existing in Anglo-Saxon England has already been made on the basis of furnished burials.[108] Recognising the considerable distinctions between North American and early medieval contexts, some traits of changing ones nevertheless strongly resemble those of artisans recognised by this research. For early medieval smiths too, skill in crafting was only one aspect of a more holistic and complex identity—as sacred and specially-gendered curators of liminality. Like all social values, this identity was embedded in practice, and it was through repeated practice that it was constructed, negotiated and maintained.[109] The gendered role of smith was therefore not only a social or economic marker, but was signalled through distinctive behaviours, such as differential places of occupation and distinctive burial rites, the kind of which have been identified by the present study.[110] The profundity with which gender and gender relations are connected to space and place has been appreciated for some time, resulting in the cultural production and reproduction of real-world and imagined geographies.[111] The same process is clearly detectable in the peripheral positioning of elite metalworkers in both settlement and burial contexts, settings that were a physical manifestation of marginality. In seeking to answer the lingering

question as to 'why' smiths were afforded this special treatment, it is worth citing Gordene MacKenzie, who asserts that gender is 'one of the most effective means of social control'.[112] Although further work in this vein is no doubt necessary, it is possible that the unusual gendering of early medieval metalworking, and perhaps metalworkers, was therefore another form of social control, and a further attempt to limit the perceived power of crafters by their communities.

CONCLUSION

This paper has shed new light on metalworkers in the courts of early medieval Europe, the dynamics by which their modes of practice shaped their lived experience, and their place within society. Situated at the fulcrum of elite power relations, metalworkers were key participants in ceremonies which consolidated royal authority, and were responsible for symbolically ending that same sovereignty via rituals of termination. The significance of metalcraft, however, imparted to smiths immense influence, which if misused represented a potential threat to leaders. It seems likely, therefore, that artisans were projected as peripheral agents in order to negate this power. They were conspicuously situated on borders in life and death, occupying space between the real and supernatural worlds, and beyond established gender norms. Initially, clerics adopted the role and practice of sacred crafter with enthusiasm, but the earlier supernatural aspects of smithcraft eventually fell into decline. The changing place of prominent crafters nevertheless provides a valuable prism through which the evolving constitution of early medieval elite power, its ideology and materiality, can be pictured. Neither a comprehensive account of the technologies of smithcraft nor a meticulous discussion of metallurgy has been attempted by this paper, but rather a broad range of evidence has been utilised and a framework of understanding, based upon landscape context, offered. It is hoped that future research will combine such thinking with more traditional typological and functional analyses, as it is only then that a more complete appreciation of these hugely important individuals will be reached.

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ILLUSTRATIONS

FIG 1
Detail of the Franks Casket depicting the legend of Weland the Smith. This intricately-constructed panel, carved from whalebone, represents the earliest known portrayal of the story. © *Trustees of the British Museum*.

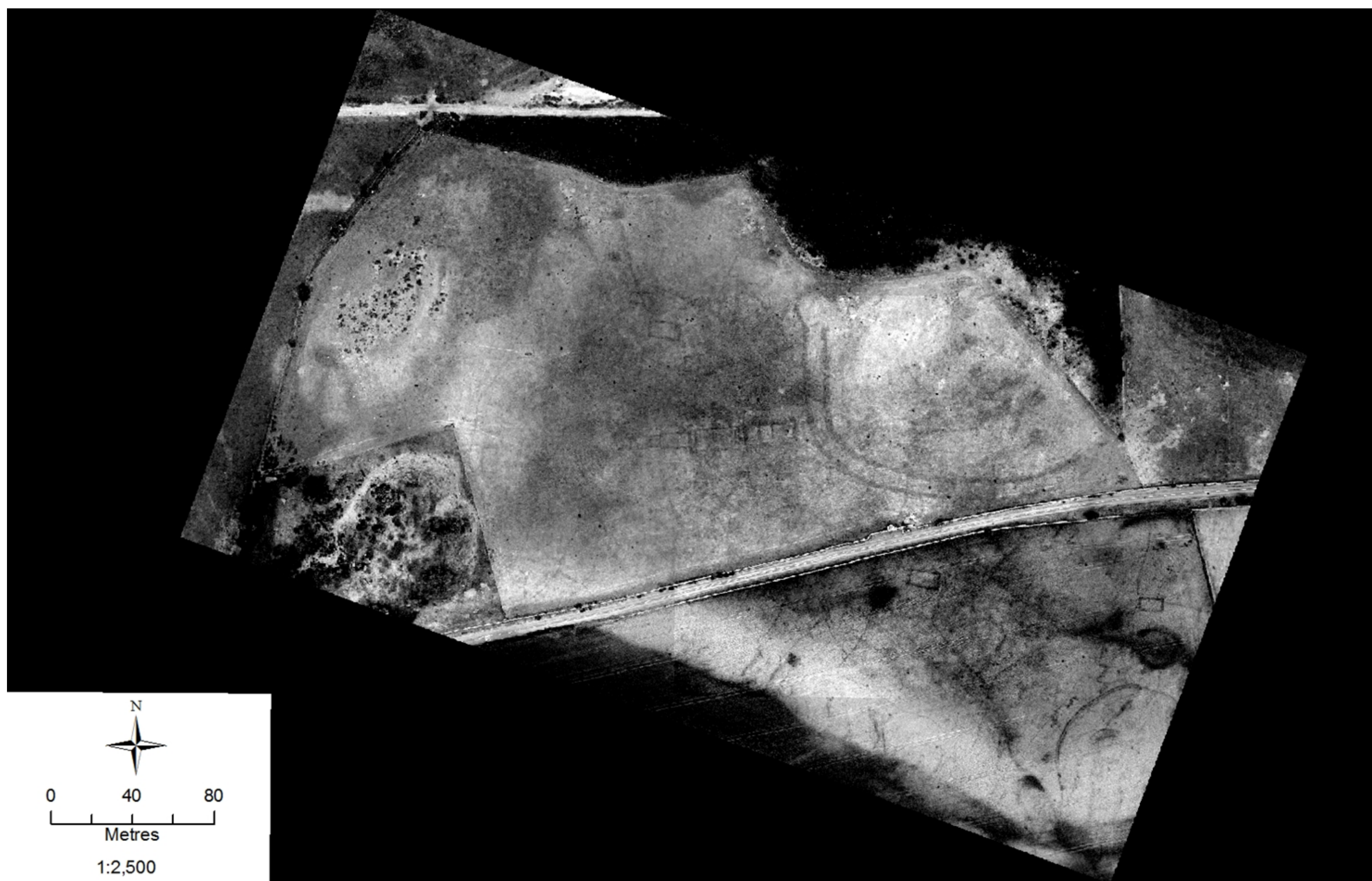

FIG 2
Aerial View of the early medieval palatial site of Yeavering, Northumberland. The monumental halls and Great Enclosure are visible in the northern part of the site. The henge is the darkly-coloured feature to the south of the road, at the far right of the image. *The Environment Agency © The Gefrin Trust, and with thanks to Sarah Semple*.

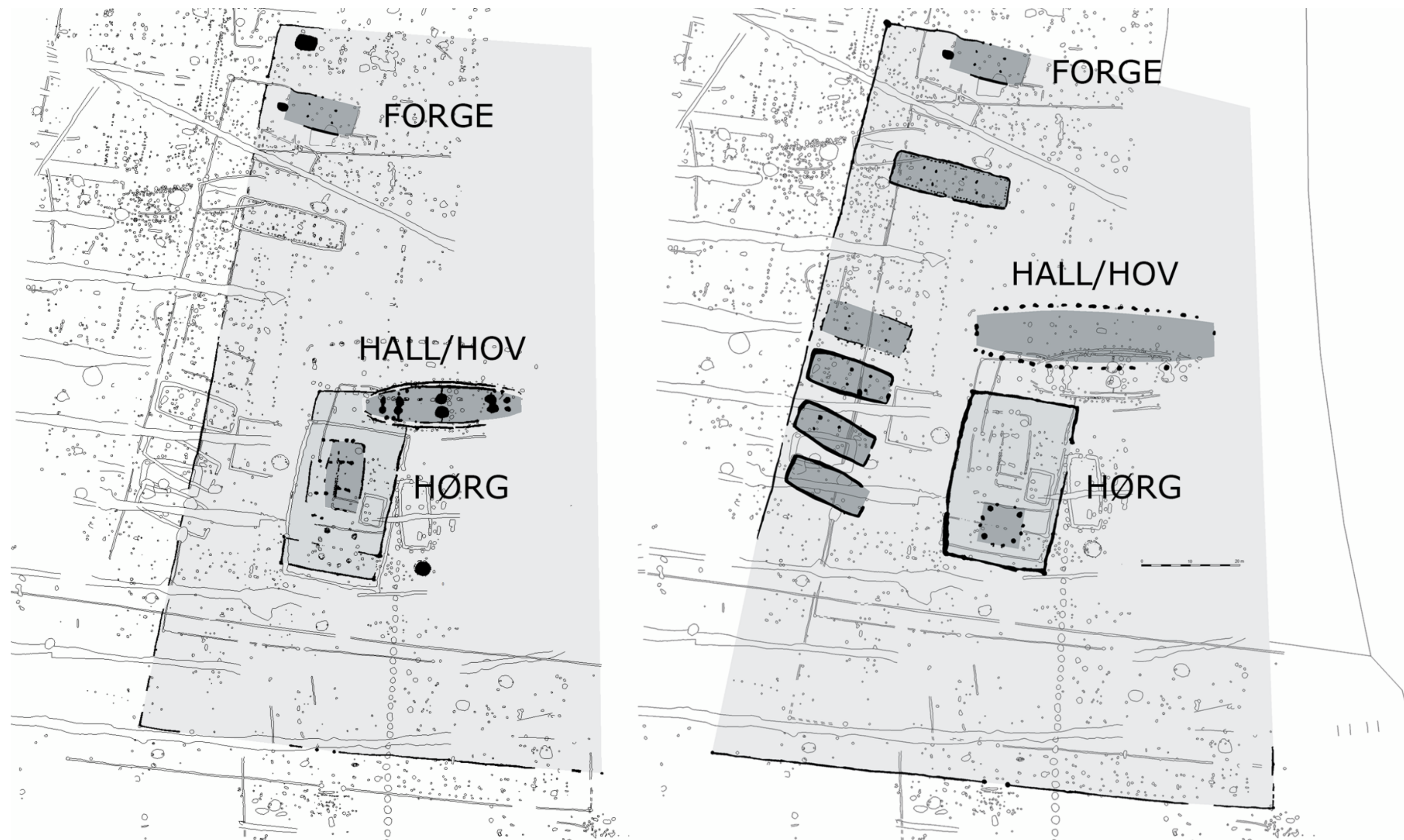

FIG 3

Phases 2 and 3 of the high-status compound at Lake Tissø. The key components of hov, hørg and forge persisted throughout several phases of reconstruction, illustrating a cosmological influence on the ordering of space. *Reproduced with kind permission of Lars Jørgensen with alterations by the author.*

FIG 4
The summit of Glastonbury Tor, Somerset. The isolated positon of the tor suggests that the metalworking undertaken here in the sixth century was deeply symbolic. *Photo by Matthew Robey. Reproduced without alteration under Creative Commons licence* https://creativecommons.org/licenses/by/2.0/legalcode.

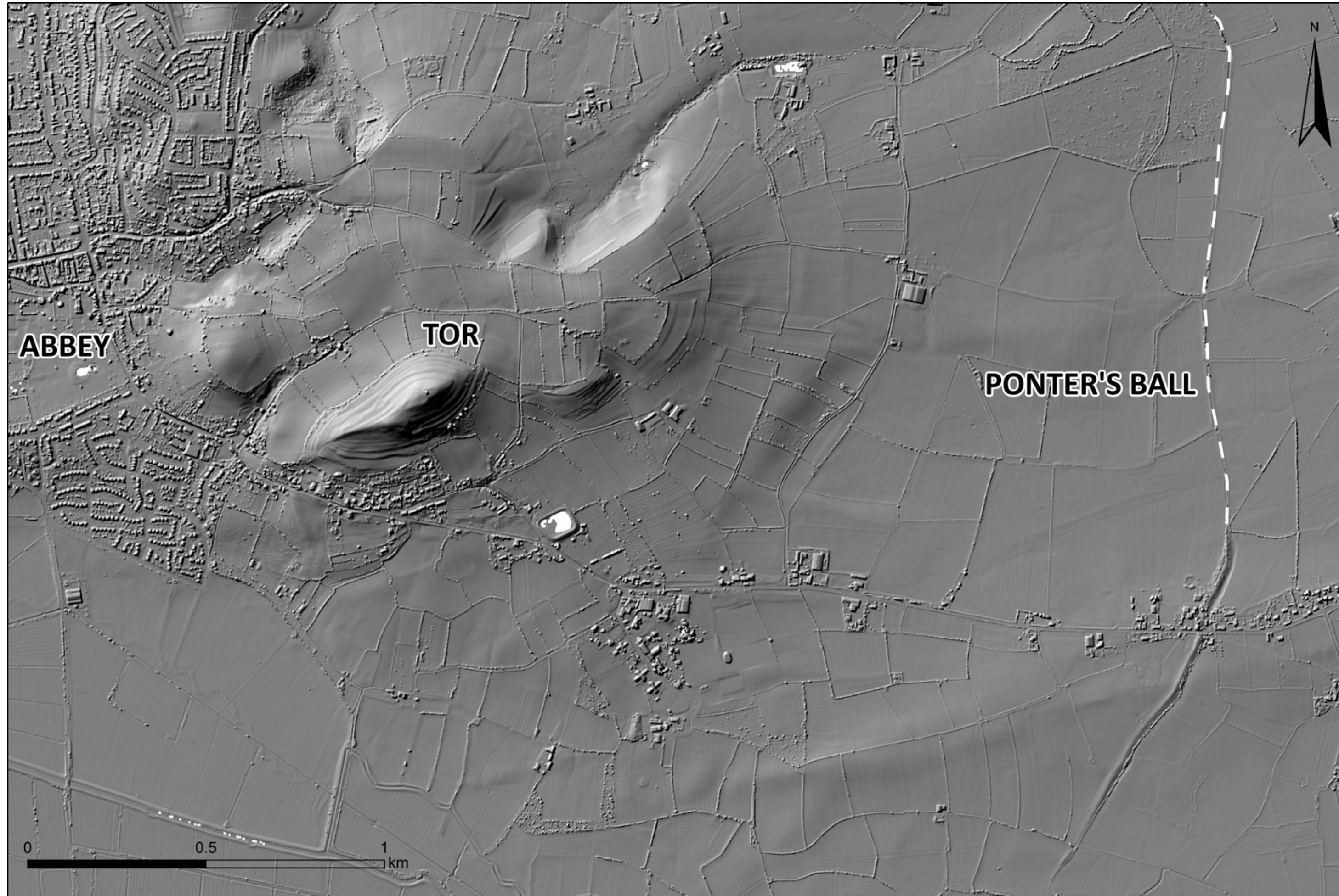

FIG 5

LiDAR image of the key sites of the Glastonbury peninsula discussed in the text. The southern section of Ponter’s Ball survives as an upstanding earthwork but is perpetuated further north in the line of a drainage ditch. It is likely that Ponter’s Ball demarcates the symbolic boundary of the early church, placing the tor on the fringes of its spiritual jurisdiction. *© Environment Agency, image produced by the author.*

FIG 6
The Pictish stone known as the Rhynie Man, found in 1978. It is likely that the bearded figure is a smith, carrying over his shoulder a hammer. *Reproduced with kind permission of Aberdeenshire Council Archaeology Service*.

FIG 7
Detail from the ninth-century Utrecht Psalter (left) and the tenth-century 'Cædmon Manuscript' (right) depicting smiths at work with hammers. The shape of the tools in both drawings resembles that carried by the Rhynie Man. *Utrecht University Library MS 32, f. 6v; Bodleian Libraries, University of Oxford, MS Junius 11, p. 54, detail*.

FIG 8
The devil's nose is grabbed with pincers by a figure, often interpreted as Dunstan, but who seems to be dressed in female attire. Despite no evidence linking Dunstan to a surviving piece, he earned a posthumous reputation as a skilled hermit-smith. The forge continued to be perceived as a dangerous supernatural sphere, where evil required exorcism, well beyond the medieval period. *© British Library Board, Image Reference: Royal 10 E IV f. 250v*

ENDNOTES

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[2] For reproduction, translation and comprehensive analysis of *Völundarkvida* see Dronke 1997.

[3] For insight provided by the Franks Casket see Coatsworth and Pinder 2002, 183; for female role in conversion see Holloway 1990, 63-4.

[4] Research of these ideas is vast but important studies include Budd and Taylor 1995; Pistorius 1998; Barndon 2004.

[5] See for example Wright 2010; Birch 2011.

[6] Thomas 2011.

[7] Coatsworth and Pinder 2002, 1-3.

[8] Pollington et al 2010, 123. A divergent opinion is offered by Bradley (1991) who asserts that early scholars saw Joseph as a metalworker rather than a carpenter, explaining references to Christ as a smiþ or smiþes sunu.

[9] Æelfric, Abbot of Eynsham, *Ælfric's Colloquy*, 12-13 (lines 203-32), in Garmonsway.

[10] Hinton 2000.

[11] Gosden and Marshall 1999.

[12] It has been suggested that these conditions may not have been consistent across north-west Europe, and in the Frankish law-code (Lex Salica, 35:6) the penalty for killing a bonded smith was the same as that of a viticulture worker, swineherd or prostitute. See Shepherd 1998, 86; Pollington et al 2010, 124.

[13] *Lib Landavensis*, 151b; Davies 1982, 49.

[14] Butler 1987, 50-3.

[15] Scott 1990, 184-8.

[16] O'Meadhra 1987, 168.

[17] Ó Carragáin 2015, 7-8.

[18] Stokes 1890, 235; Bitel 1990, 121; Ó Carragáin 2015, 10.

[19] Scott 1990, 189.

[20] *Wið færstice* is now considered by most scholars to represent a coherent tenth-century text. For an overview see Hall 2007, 109-10.

[21] The previous misconception that the smiths of the charm aided the patient has been convincingly overturned by Doskow 1976, 324.

[22] Hall 2007, 158-9.

[23] Neckel 1962, 117.

[24] Hines 2003, 35.

[25] Hall 2007, 44-7.

[26] Hall 2007, 157-66.

[27] Looijenga 2003, 308; Pollington et al 2010, 126; the mixed gender representation of the Schweindorf solidus may not be unique. For Iron Age comparators see Green 1997.

[28] Hedeager 2002.

[29] The clearest example of this is the role played by carpenters and their tools in the closing of buildings and in burial deposition.

[30] Ramstad et al 2011, 328; Cartwright 2014, 172.

[31] Stamper and Croft 2000, 32-5.

[32] Hope-Taylor 1977.
[33] Harding 1981.
[34] Tinniswood and Harding 1991; Frodsham 2005.
[35] Hedeager 2002; Jørgensen 2003, 183; Jørgensen 2008
[36] Jørgensen 2008,77-8.
[37] Jørgensen 2008, 9.
[38] Jørgensen 2008, 79.
[39] Persson and Olofsson 2004.
[40] See Hedeager 2002, 12.
[41] Wright 2015.
[42] Rahtz 1970.
[43] Rahtz 1970, 12-19. Noteworthy is that construction of a church in the Late Saxon period destroyed horizons from the centre of the tor.
[44] Stoodley 1999.
[45] Sarah Semple (2013, 77-83) has demonstrated that spears are the most frequently-recovered weapon from prehistoric monuments in non-funerary contexts.
[46] Rahtz 1970, 16.
[47] The infrequent occurrence of *Grammoceras* in the local geology was noted by M. Curtis at the time of excavation. Rahtz 1970, 48, fn. 23.
[48] Meaney 1981; Gilchrist 2008.
[49] Skeat 1912; Kracher 2012.
[50] *Welund him be wurman, wræces cunnade*. For translation see Wilson 1976, 263-6.
[51] Semple 2013, 71-2.
[52] Rahtz 1970, 20-1.
[53] Gilchrist and Green 2016, 384-5; Peacock, 'Imported Pottery, Period I', in Rahtz 1970, 65-7; Allan, Dawson and Kent, 'Post-Roman Pottery', in Gilchrist and Green 2016, 250-3.
[54] Prehistoric and medieval ceramics have been recovered from piecemeal excavation. Neither date is secure and an early medieval provenance has already been postulated, see for example Rahtz 1970, 4-5; for a detailed discussion see Grigg 2015.
[55] Semple 2011, 745.
[56] The presence of north-south burial may support the case for seasonal occupation, as argued for the Middle Saxon inhumations at Wharram Percy. Stocker and Everson 2012, 169.
[57] Dickinson 2011, 221-5.
[58] Stolpe and Arne 1912; Arwidsson 1954.
[59] Bruce-Mitford 1983, 842.
[60] Hinton 2000.
[61] Hinton 2000, 111-112.
[62] Hinton 2000.
[63] Lebedynsky 2001.
[64] Pollington et al 2010, 135.
[65] Decaëns et al 1971.
[66] Sjøvold 1974; Jørgensen 2012, 15-16.
[67] Grieg 1920, 74; Jørgensen 2012, 5; Stig Sørensen, 2013, 219.
[68] Card et al 2005; Giles 2007, 404-5.
[69] For the role of women in Bronze Age metalworking see Stig Sørensen 2013, 219.

[70] The literature on sub-Saharan metalworking as a male industry is extensive, but a key work is that of Eugenia Herbert (1994). It is argued throughout that African ironworking consistently presents the ‘paradox of a male-dominated craft that must evoke elements of female power to succeed’ (Herbert 1994, 5).
[71] For an assessment of ethnographic evidence for metalworking see Giles 2007, 401-2.
[72] Welton 2016.
[73] Stoodley 1999, 99-107.
[74] Lund 2010, 58.
[75] Gordon Noble pers comm 2017.
[76] Noble 2016, 33-4; Dobat 2006.
[77] Noble et al 2013, 1147.
[78] The Norwegian word for forge stone *“alvstein”* is another example of the reproductive associations of metalworking, as it probably derives from Old Norse *afl*, referring to cultivation, harvest and reproduction (*Bokmålsordboka*). See Jørgensen 2012, 13.
[79] Johansen et al 2003.
[80] Persson 2016.
[81] Rahtz 1970, 19.
[82] Bradley 2005; Brück 1999, 388.
[83] Hamerow 2006; Thomas and Ottaway 2008, 383-5; deliberate deposition of single objects is not restricted to the early medieval period. For example, see Hingley 2006.
[84] Brück 1999.
[85] Thomas and Ottaway 2008, 383-4.
[86] Vierck 1974.
[87] Ó Riain 2011, 368-9.
[88] Millar 1923, 3.
[89] English Heritage 2002; Archaeological Project Services 2004.
[90] Bede, *Historia Ecclesiastica* V, 14, in Colgrave and Mynors.
[91] Stokes 1890, 257-8.
[92] Thomas and Ottaway 2008, 334-398.
[93] Sheppard 1939; Tyler and Major 2005, 127, 193.
[94] Edwards 2002; Ottaway 2009.
[95] Fairbrother 1990.
[96] Gillespie 2006. I am thankful to John Tighe for bringing this example to my attention.
[97] Smith 1928, 281
[98] Stocker and Everson 2003.
[99] Everson and Stocker 2011, 324-7, 399-401.
[100] Aelfric, Abbot of Eynsham, *Aelfric's Lives of the Saints*, i, 442, in Skeat.
[101] Watkiss and Chibnall 1994.
[102] Coatsworth and Pinder 2002, 26.
[103] The documentary sources for this division have been explored as part of an impressive work by J L Bradley. See Bradley 1987.
[104] Wright 2015.
[105] Bradley 1987, 66-82; recent phylogenetic analyses suggests ‘the smith and the devil’ is the oldest Indo-European folktale with origins as early as the Bronze Age. See Da Silva and Tehrani 2016.
[106] Fulton and Anderson 1992, 607-10; Wallis 2003, 231.
[107] Fulton and Anderson 1992.

[108] Knüsel and Ripley 2000.
[109] Gilchrist 1999, 31; Stig Sørensen 2009, 256.
[110] Gilchrist 1999, 59.
[111] Massey 1994.
[112] MacKenzie 1994, 1.