The development of the Pictish symbol system: inscribing identity beyond the edges of Empire

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Introduction

The origins and evolution of writing was one of the most critical developments in world history, with a range of dramatic transformations in human society ascribed to literacy (Innes 1998: 3). Writing can instigate a revolution in the forms and possibilities of communication and has been directly linked to state formation in many social contexts and time periods across the world (Baines 1995: 471; Goody 1968: 4; Papdopoulos 2016: 1252; Postgate et al. 1995: 459). In northern Europe the alphabetic systems of the Greeks and Etruscan and Roman derivatives in the west inspired new forms of writing with vernacular scripts developing on the fringes of the Roman Empire in the first millennium AD. These included the runic system of Scandinavia and north Germany and the ogham alphabet of Ireland and western Britain (e.g. Barnes 2012; Findell 2014; Swift 1997). Both of these scripts were used across early medieval Britain and Ireland, but the most common and monumental form of communication that survives from northern Britain is the lesser understood Pictish symbol system. Strong arguments have been made in recent years for the symbol system being a script, albeit un-deciphered (Samson 1992; Forsyth 1997; Lee et al. 2010). Debates on its origins and dating have taken place for over a century and this article outlines a new programme of radiocarbon dating and Bayesian modelling on a range of new sites and objects that have produced a new and more robust chronology for the development of the symbol system, with an earlier origin proposed than many scholars had previously countenanced.

The Picts and their symbols

The Picts are first mentioned in AD 297 in a Latin panegyric (Panegyrici Latini VIII, 20, 4-5) written in praise of a late Roman Emperor and the Latin term Picti was then used in late Roman sources throughout the fourth century in the context of attacks on the Roman frontier (Fraser 2009: 43). In a post-Roman context, the Picts are referenced in early medieval Latin and vernacular sources by their neighbors, with the
only historical sources that can be attributed to the Picts themselves a problematic set of king-lists contained in much later medieval manuscripts (Woolf 2007). The archaeological evidence for the Picts also presents some difficulties: there is a lack of settlements compared with a rich Iron Age record, and poor artefact chronologies (Driscoll 2011; Foster 2014). However, the so-called Pictish symbol stones represent an iconic element of the archaeological record – sculptured stones carved with a distinctive group of symbols, some abstract, others naturalistic, for example the striking animal designs or recognizable objects such as mirrors, and combs (Henderson and Henderson 2004: 167). The symbol stones have long been identified as Pictish because their distribution closely matches the extent of the Pictish kingdoms as reconstructed from the limited historical sources and from place-names (Wainwright 1955b: 43) (Figure 1).

There are over 200 stone monuments with symbols known from eastern and northern Scotland (RCAHMS 2008) – approximately two-thirds are incised symbol-stones and the other third are Christian cross-slabs (Figure 2). The symbols also occasionally appear on metalwork, bone and other portable objects. There has been little agreement about the number and range of symbols, but around 30 core symbols have been suggested (Samson 1992: 37; Forsyth 1997: 87). There have been repeated attempts to decipher the meaning of the symbols since the nineteenth century (Table 1), with wide-ranging interpretations, including icons of pagan or Christian religion (e.g. Earl of Southesk 1893; Allen and Anderson 1903), symbols of rank or tribal identity (Diack 1944; Henderson 1967; Thomas 1963), symbols of marriage alliances (Jackson 1984), memorials to the dead (Driscoll 1988; Laing and Laing 1984; Mack 2007), as well as countless ‘fringe’ ideas and speculation.

Current consensus suggests that the symbol system was a form of script, albeit undeciphered, and part of broader northern European trends of experimentation with writing at the fringes of the Roman Empire. The roots of this research lie with Samson (1992) who saw the common pairing of symbols as key to interpretation, arguing that the symbols did not work in isolation, but that the recurrent symbol pairs worked together to represent personal names – perhaps two elements of a di-thematic name, i.e. the symbols represented a written version of a language rather than abstract ideas. Forsyth (1997) also identified symbol pairs as ‘the fundamental syntax’ of the Pictish symbol system, and more recent work applying statistical analysis has
supported the interpretation of the symbols as a written language (Lee 2010; Lee et al. 2010; though see Sproat 2010). A naming system is also suggested by some specific monuments, for example, on the back of a cross-slab from Dunfallandy, Perthshire, two seated figures and a mounted individual are shown with symbol pairs directly next to them, and the close juxtaposition of symbols with human figures can also be identified on other monuments (Figure 3) (Allen and Anderson 1903: 38; Stevenson 1955: 123). While the symbols are likely to have communicated names, as is common in the runic and ogham systems, the Pictish symbols were not an alphabetic script and this has perhaps contributed to the ‘othering’ of the Picts (See Alcock 2003: 373 for latter point).

**Dating the symbol tradition**

The dating of the symbol system has always been a matter of debate. The seminal volume *The Early Christian Monuments of Scotland* set out a typological classification commonly used to the present day (Allen and Anderson 1903). The relative dates of the seventh to eighth centuries AD were given for Class I monuments (incised symbols usually on unshaped boulders) and the ninth and tenth centuries for the Christianized Class II monuments (where symbols appear with a much broader repertoire of ornament, narrative scenes and a Christian cross), a chronology that remained popular throughout the twentieth century (Table 1). Charles Thomas related certain symbols to late Iron Age art styles and consequently suggested a fifth century start date for the simpler Class I designs (Thomas 1961), a scheme followed by Laing and Laing (1984, 1993). Nonetheless, dating has remained controversial and there has been no direct dating that conclusively showed the symbol system dated earlier than the late sixth or early seventh century (Clarke and Heald 2008). The suggestions of earlier dating were based entirely on art historical analysis as opposed to absolute or closely contextualized dating.

**Establishing a new chronology**

The major problem in establishing a definitive chronology has been the difficulties in obtaining absolute dates. Stone monuments are problematic to date and it has been necessary to rely on contextual dating, such as dates from human remains found in association with the Class I symbol stone at Dairy Park, Dunrobin, Sutherland (Close-Brooks 1980). This was found during ploughing in 1977, directly above a burial cairn
covering an extended inhumation (Close-Brooks 1980: 328). Two radiocarbon dates were obtained at the time of the excavation suggesting a later first millennium AD date for the burial, but the determinations were of low precision (Table 2).

One symbol-bearing object has been directly dated previously: an ox phalange bearing two symbols, a crescent and V-rod and a mirror case, from the Broch of Burrian, Orkney, which provided a radiocarbon date of cal AD 570–655 for the bone upon which the carvings were made (95% probability [UB-6923]; Clarke and Heald 2008). Few other organic objects are available for direct dating, but an ox phalange decorated with a crescent and V-rod and rectangular symbol was found at the multi-period settlement at Pool, Sanday, Orkney (Hunter et al. 2007: 509), and was sampled for radiocarbon dating in Spring 2017 at the behest of the University of Aberdeen Northern Picts project, along with the other dates reported here (Figure 4) (Table 3). Given the lack of absolute dates, any opportunity to add to the corpus of dated examples is important, and new fieldwork by the Northern Picts project has also targeted sites in eastern Scotland where contextual dating evidence for the symbol system was possible.

The fairly simple designs found in caves and occasionally in other contexts, such as the stone 'plaques' found at a coastal site at Dunnicaer, Aberdeenshire, have been suggested as the earliest examples of the symbol system (e.g. Alcock 1996; 2003: 372; Henderson and Henderson 2004: 171) (Figure 5). Recent fieldwork at Dunnicaer explored the context of the symbol stones found there. Dunnicaer is located on a precipitous sea stack near another stack site at Dunnottar which appears in a seventh century annalistic account as the site of a siege, suggesting an important power centre (Fraser 2009: 214). The symbol stones were discovered from 1819 onwards when stone was removed from the stack for building material. In 1832 a group of youths found a low stone wall on the stack and threw a number of stones into the sea (Thomas 1858). Few people had visited Dunnicaer since the nineteenth century, but three seasons of fieldwork in 2015–17 have identified the remains of this wall as a rampart which survives on the southern and western edges of the stack (Figure 6). Few stones survived from the rampart, but excavation identified a number of facing stones and slots dug for timber beams. The fieldwork has demonstrated that Dunnicaer was a promontory fort (and this was Thomas’s interpretation in 1858) with a timber-laced rampart and other enclosing works of the kind known from the Iron
Age and first millennium AD around the coasts of Scotland (Alcock (1996) interpreted the site as the focus of pre-Christian cult, but without any excavation of the site). The recent work has shown that the stack was in fact much larger, with most of the site lost to erosion. Inside the rampart, contemporary buildings and hearths, many partly falling into the sea have been identified (Figure 6). Finds included Roman Samian and coarseware, glass and a lead weight; all rare imports this far north of the frontier, along with burnishing stones for metalworking.

Other contextual excavations have been carried out from 2012–17 at Rhynie, also in Aberdeenshire. The excavations focused on an enclosure complex surrounding one in situ Pictish symbol-stone, the Craw Stane, and the findspots of two others (Noble et al. 2013). The Craw Stane is a large sandstone monolith carved with a salmon and ‘Pictish beast’ symbol pair. The excavations have shown that the Craw Stane stood at the entrance of a high status fortified site with imports from the Mediterranean and continental Europe (Noble et al. 2013) (Figure 7). A few metres from the Craw Stane, a stone socket, likely to be for another Pictish stone, was identified during excavations in 2015. This may have been the socket for the Rhynie Man stone found downslope during ploughing in 1978.

**Radiocarbon dating and chronological modelling**

Radiocarbon dating and Bayesian modelling can provide refined and robust chronologies for the sites and objects highlighted above and can also help provide clearer chronologies for previously investigated sites or samples (Buck et al. 1996). Dating of the symbol decorated ox phalange from Pool has provided a date of cal AD 410–570 (95% probability [SUERC-73735]; 1570 ±33 BP) (cal AD 420–540; 68% probability). A bone pin from Pool, incised with another set of symbols (Figure 4), in this case a double-disc and Z-rod, was found in a settlement layer (phase 6.4), the date of which can be constrained by including the dates from the settlement layers above and below (Table 3). Modelling estimates that phase 6.4 dates to cal AD 325–645 (95% probability; GU-224), and probably cal AD 425–575 (68% probability), broadly contemporary with the directly dated ox phalange. The human remains from Dairy Park have also been re-dated by the Northern Picts project with the results showing that this burial, found in association with a symbol stone, is likely to dates to cal AD 565–640 (95% probability [SUERC- 76203]; 1465 ±17 BP) (cal AD 575–625; 68%...
probability) broadly contemporary with the direct date from the Broch of Burrian ox phalange.

From Dunnicaer, single-entity, short-lived roundwood charcoal recovered from the rampart and settlement features of the promontory fort (Table 4) has been incorporated into a Bayesian model in an unordered group to provide an overall site chronology (Bronk Ramsey 1995; 1998; 2001; 2009; Hamilton and Kenney 2015; Reimer et al. 2013; Stuiver and Reimer 1993). The model shows good agreement (Amodel=84), and estimates a start date of cal AD 55–235 cal AD for Dunnicaer (95% probability; Figure 8; \textit{start: Dunnicaer}), and probably cal AD 130–220 (68% probability). The activity ended at the latest in cal AD 270–470 (95% probability; Figure 8; \textit{end: Dunnicaer}), and probably cal AD 345–425 (68% probability) (Table 4). This broad chronology is supported by the artefactual evidence, which suggests a second to fourth century AD date for the use of the site. There are four dates that can be specifically related to the rampart with which the symbol stones were associated (Table 4). Using the latest probability from this group (calculated in the model by the Last parameter in OxCal), suggests the wall was constructed in cal AD 250–400 (95% probability; Figure 8; \textit{build: timber wall}), and probably in cal AD 285–350 (68% probability).

A total of 35 radiocarbon dates are available for the enclosure complex at Rhynie, from all phases and major structural components including the feature that is likely to have been the socket for a Pictish stone. The chronological model and dates for Rhynie are presented in detail in Noble et al. (forthcoming), with the modelled probabilities summarized here. The model estimates that activity at Rhynie began in cal AD 330–390 (95% probability; Figure 8; \textit{start: Rhynie}), and probably in cal AD 355–380 (68% probability). Dated activity ended in cal AD 480–570 (95% probability; Figure 8; \textit{end: Rhynie}), and probably in cal AD 510–560 (68% probability). The material culture typologies strongly supports the radiocarbon ranges, with no evidence for use of the site after the mid-sixth century AD.

**Pictish symbols: the origins of the system?**

Of course, none of the dates modelled here can directly date the act of carving, simply the associated settlement layers, materials, and contexts such as burial, associated with the monuments or objects carved with the symbols. The dates from Dunnicaer
cannot directly date the carved stones that were found on the stack, but the antiquarian accounts make it clear that they were found in association with a wall built along the edge of the stack. Indeed, several of the Dunnicaer symbol stones have been interpreted as ‘plaques’ that were suitable for being set into a rampart (e.g. Alcock and Alcock 1992: 282; Alcock 1996, 2003). The stone wall mentioned during discovery, and into which plaques are likely to have been set at Dunnicaer, was re-identified during the recent fieldwork and dated to cal AD 285–350. None of the other dated activity on the stack significantly diverges from the construction date for the rampart, and the material culture comfortably fits into that bracket. While the symbol stones have been damaged by the nineteenth century circumstances of discovery and re-use, they appear to be largely intact. Dunnicaer No. 5 has carvings on both sides that may belong to different phases of carving, but there was also extensive remodelling of the site and settlement with an earlier phase of rampart and multiple overlapping dwellings. However, none of the dates or the stratigraphy suggests later activity unconnected to the fortified settlement. There is thus a strong argument for the symbol stones being contemporary with the promontory fort, which provides the best evidence to date that the carving of symbols originates in a Roman Iron Age context, in this case in association with a high-status promontory settlement.

The early dating from Dunnicaer sheds new light on other sites with similar styles of carving, such as cave sites. Carvings from Sculptor’s Cave, Covesea, Moray, with simple, small-scale designs (including a fish, crescents and V-rods, mirror-cases, a triple-oval and a ‘flower’ symbol) are similar in style to the Dunnicaer carvings. From inside the cave, other than modern finds, none of the material culture suggests activity later than the fourth century AD (an undiagnostic iron rivet has been mis-identified as ‘Viking’). There is a collection of human remains that provide evidence for decapitation in the period cal AD 220–335 (Armit et al. 2011: 276), and there is also an important assemblage of Roman coins, metalwork and pottery, with the latest coin dated AD 365 (Armit et al. 2011: 259). These dates are broadly contemporary with the construction of the wall at Dunnicaer. There are also Pictish symbols carved in a number of caves at East Wemyss, Fife. Very few in situ deposits have been found during excavations at the caves, but one cave, the Sliding Cave (which has carvings of a double-disc, serpents and a comb case) was found to have an intact floor layer (with no evidence of later use) dated to cal AD 240–390 (95% probability [NZA-20755];
1726 ±30 BP), again broadly contemporary with the dates from Dunnicaer (Gibson and Stevens 2007).

Individually, and because they are associated and not direct dates, any one of these sites would not be considered sufficient evidence to support the early dating for these simple examples of the Pictish symbol system. However, when taken together, the fact that the symbols at all three sites had previously been stylistically linked and that all three have since produced very similar chronological ranges for activities during the third-fourth century AD increases confidence in these early associated dates from the Scottish mainland. Forsyth (1997: 93) suggested that the Dunnicaer and cave symbols were ‘cursive’ and thus their form may not relate to date, but the available dating evidence suggests they are indeed early examples.

**An outline chronology and a complementary typology for Pictish symbols**

Using the range of associated and direct dates presented here, we suggest a new and more robust outline chronology for the Pictish symbols: the evidence from Dunnicaer and cave sites suggests that unelaborated carvings, generally of a smaller size and less standardized compared to the later standing stone monuments, probably originated in the third to fourth centuries AD. The larger standing stone monuments in eastern Scotland were being set up in the period from the late fourth to the early sixth century AD and the dated evidence includes a detailed chronology for Rhynie that includes dates from a probable stone socket. The dated examples from settlements in Orkney show symbol use in the most northerly parts of Pictland from as early as the fifth century AD and certainly by the early sixth century. At Dairy Park, Dunrobin, there has been doubt cast over the association between the symbol-stone and cairn (Clarke 2007: 27), but the stone was found directly over the cairn when the field was ploughed for the first time in 1977 (Close-Brooks 1980: 330). The burial has now been precisely dated to cal AD 575-625.

This outline chronology also supports a new typology (See Goldberg forthcoming). Examining the style of the symbols from the dated sites shows that relatively plain, small-scale symbols were present at Dunnicaer, Pool and the cave sites. A relatively plain, but clear, linear style is also consistent across the cluster of symbol stones at Rhynie. This contrasts with the more elaborate symbols at Dairy Park, and at a minute scale the carefully depicted internal elaboration of the crescent and v-rod found on the
ox phalange from Broch of Burrian, Orkney, both of which have dates from the late sixth or early seventh century. The typology proposes changing conventions in symbol form that may be chronologically sensitive, that are largely confirmed in light of this new dating evidence. For example, single-sided combs are only shown on Class I stones and tend to be depicted in plain liner style, whereas only double-sided combs are shown on (Class II) Christian monuments. Class I stones with double-sided combs, like Dairy Park, often accompany more elaborate carving techniques and are suggested to date closer to the Christian monuments of the seventh to eighth centuries (Goldberg forthcoming).

There also appears to be a general trend towards larger monuments through time. The double-disc symbols from Dunnicaer, for example, are amongst the smallest in the symbol stone corpus. The symbol stones from Rhynie, which only have conventional mirrors and single-sided combs, includes a stone, Rhynie No. 8, that although has been cut down, shows symbols of a scale that indicates it was always more modest monument of a similar character to the Dunnicaer plaques. Tellingly this stone has a symbol that only appears at the Sculptor’s Cave, Covesea, Moray. With the cave symbols likely to be of early date, these connections in form, size, and style of symbol use on Rhynie No. 8 bring together many of the strands of evidence used here.

Previous art-historical analysis had suggested that the most complex designs were the earliest based on the idea that there was a ‘master’ carver and symbol and that these designs tended to simplify or break down through time (Stevenson 1955: 102–3). However, the complementary absolute dating and typological scheme outlined here suggest that symbols without significant internal elaboration, of the style found on the Dunnicaer ‘plaques’ and the caves and some of the Rhynie monuments, are likely to be early, while monuments with symbols that show elaborate internal decoration are likely to be later, probably of sixth to early seventh century AD based on the complementary dating of the Broch of Burrian ox phalange and the burial at Dairy Park (Figure 9). Almost all of the symbols on Class II cross-slabs are elaborated using an international repertoire of decoration shared widely in the early Christian world, but with a particular ‘Insular’ style that shares similarities with contemporary monuments across Britain and Ireland (Henderson and Henderson 2004; Goldberg 2015). An eighth century high point for the larger cross-slabs is likely, such as those with prominent relief-carved symbols from the monastery at Portmahomack (Carver
et al. 2016: 167) and the Tarbat peninsula. A probable end date for the symbol system is during the ninth to tenth century AD ascendancy of the kingdom of Alba when a new language and new lineages began to dominate elite power in eastern and northern Scotland (Woolf 2007: 312).

Interpreting the symbols

The new dates strongly suggest that the symbols originated earlier than often countenanced and did so in a context that makes contact with the Roman world a likely factor in their origin. In the third and fourth century AD raiding, trading and diplomatic gifts and bribes shaped imperial contact and social change in eastern Scotland (Hunter 2007; Blackwell et al. 2017), and it is in this context that the idea of a written script may have emerged. In this respect, the symbols are likely to have appeared in a similar context and chronological horizon to other epigraphic systems in northwest Europe. In Scandinavia, the use of runes has been traced back to the second century AD, with their use likely influenced by the Greek alphabet and its Etruscan and Roman derivatives in the west, created by people with experience of Mediterranean language, reading and writing traditions (Odenstedt 1990: 169; Barnes 2012: 10–11; Findell 2014: 15). The dating of ogham in Ireland has been based largely on linguistic archaisms and innovations, with few inscribed objects directly dated (Swift 1997: 54). Traditional dating schemes based on epigraphic styles have suggested a fifth century start date (Jackson 1950, 1953; Nash-Williams 1950), but earlier origins in the second or third century AD have also been forwarded (Ahlqvist 1982: 8-10; Harvey 1987: 9). An ogham inscription amongst the votive offerings from the later phases of deposition at Newgrange, including a medallion of Constantine II, may be as early as the fourth century (Charles-Edwards 2013: 119). Recent radiocarbon dating of an ogham-inscribed knife-handle from the Broch of Gurness in Orkney shows that ogham was also known in the far north of Scotland by cal AD 340–540 (95% probability [SUERC-30669]; 1625±35 BP), in a phase that also includes small unelaborated symbol stones, like those from Pool. An ogham inscription from Silchester in southern England has also been dated to the fourth or fifth century in a context in which Roman inspiration is highly likely (Fulford et al. 2000: 17; See also Swift 1997: 49). Like runes and ogham, the Pictish symbols are also likely to have been created beyond the frontier in response to Roman influence, but just like Irish- and Germanic-speaking groups, the Picts did not directly adopt the
alphabet – they invented their own system, albeit non-alphabetic in origin. Nonetheless, in all three cases the script innovators imitated the literate cultures of Rome, but in ways that at least partly “proclaimed an independence” from the Mediterranean world (Barnes 2012: 11).

Whatever the origins of these epigraphic systems, the roles of runic, ogham and Pictish symbols were clearly multiple. A number of ogham inscriptions expressed lineage and others may have been memorials, but others were concerned with boundaries and landholding, and early forms of runes appear to have had a similar variety of roles (Swift 1997: 44; Barnes 2012: 11; Bhreathnach 2014, 42–4). The main purpose of Pictish symbols seems to be to communicate identities, most likely names, and where well contextualized they often appear in high-status contexts, like Rhynie, or on elite objects such as the massive silver chains or the silver plaque from Norrie’s Law (Blackwell et al. 2017: 101). The Dunnicaer site includes extremely rare Roman imports for north-east Scotland and enclosed sites are very unusual for this period. While at first glance the cave sites seem difficult to reconcile with high-status activity, the Roman material from this site is also exceptional for this period and region, and the contemporary human remains have been interpreted as the beheadings in Roman style of what may have been native elites (Armit et al 2011: 276). Given the context of use for these early dated symbols, it may be that Pictish symbols operated like early hieroglyphs in Egypt, which evolved as a public form of display concerned with prestige and high-status identities and activities (Baines 1995: 471).

Recent scholarship has suggested that Pictish ethnogenesis was brief and late, a phenomena of the seventh century AD (Fraser 2009, 43–67; Woolf 2017). However, writing has long been linked to the development of more complex societies in a variety of contexts around the world (Postgate et al. 1995: 459), and the development of the Pictish symbols from possibly as early as the third century sees to coincide with the new social and political identities evident in late Roman sources and with broad archaeological changes that happen at the same time (Hunter 2007, 42–4). The shared use of this symbolic script across eastern and northern Scotland by the fifth century is in precisely the areas that seventh and eighth century historical sources locate the Pictish kingdoms. Once introduced, the symbol system would have had important social consequences allowing names and perhaps lineages to be transmitted across space and time (Innes 1998, 3; Goody 1968: 4; Driscoll 1988) and communicated
within a distinct social milieu. This would have had particular implications for long-term memory transmission with the recording in stone of elite names perhaps helping underscore inter-generational rights and wider group identities.

**Conclusions**

Previous dating of the Pictish symbol system has largely relied on art-historical analysis, but it is only through scientific dating that more robust chronologies can be constructed. The dating and typology outlined here suggests that interaction with the Roman world is likely to have been the context for the development of the symbol system. Establishing an outline chronology through a combination of direct dating, Bayesian modelling of associated dates from archaeological excavation, and combining typological and contextual methods can help us rewrite the history of these symbolic traditions of northern Europe and understand more clearly the context of their development and use.

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