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Trial Issue
2023

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On the interpretation of a challenging inscription from King's Somborne, Hampshire

JOHN HINES AND ELISABETH OKASHA

Abstract

An Anglo-Saxon silver strap-end, found in 2019, is a common artefact-type but, unusually, this one also contains an inscribed runic text utilising the relatively common Old English maker formula 'N made this.' However one graph, obscured by deterioration on the surface of the metal, as well as by idiosyncrasies in the orthography, poses intriguing challenges to interpretation. We discuss various possibilities and alternative suggestions, and report on a technologically-aided attempt to uncover a crucial rune that is obscured by corrosion.

Keywords

There are perspectives from which the inscribed silver strap-end found at King's Somborne, just 2 km south of Stockbridge in Hampshire (Figs. 1–2) might be seen as a rather run-of-the-mill and unstartling find. Strap-ends (ornamental belt-terminals) of the 8th to 10th centuries AD are particularly numerous metal-detector finds: as of mid-October 2023, the number of records produced by a search on "Anglo-Saxon strap-end" in the Portable Antiquities Scheme database (The Portable Antiquities Scheme Website) is approaching 2,000. The inscription, presented and discussed below, represents the standard maker formula '*N* made this.' In terms of runography and onomastics, however, this specimen poses tantalizing challenges which are discussed in this joint article in the form of alternative suggestions concerning how we might decipher an otherwise unidentifiable and therefore almost certainly bungled or garbled personal name in the subject position, and the grammatical and lexical status of the object noun phrase referring to the artefact that the inscription is on. Archaeologically—and especially as an inscribed object—this new find adds to an emerging set of items that provide a new field of evidence for the understanding of runic literacy in southern England in the Middle Anglo-Saxon Period.

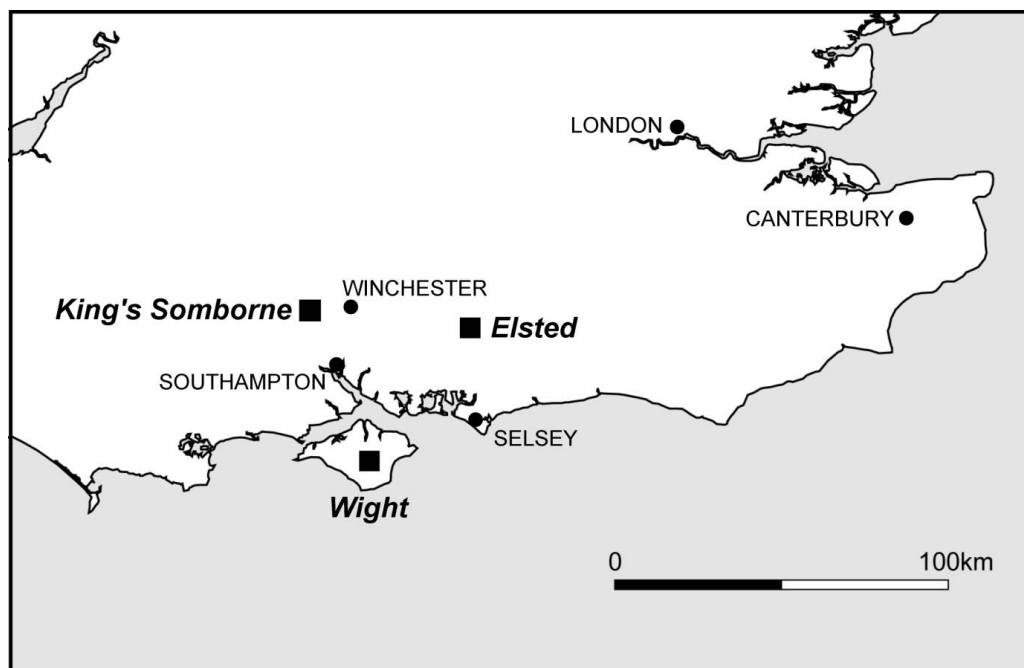Fig. 1   The King's Somborne strap-end. Photographed by John Hines.

Fig. 2   The find location with other sites referred to in the text and major sites of the Middle Anglo-Saxon Period. Drawn by John Hines.

1. A description of the find and discussion of the inscription

JOHN HINES

1.1 The artefact

The strap-end (Fig. 1) measures 41.2 x 10.5 mm and weighs 4.58 g. Preliminary alloy-composition analysis at Cardiff University indicates that the silver content of the item is in the range of 87.5–89% Ag, consistent with the fact to the eye it appears to be an artefact with a high silver content. There are also remains of niello, a black inlay produced primarily from silver, copper, and sulphur, in the incised framing lines on the face of the object. When found in January 2019 the object was correctly reported and delivered to the Finds Liaison Officer for Surrey and Hampshire, who logged it under the Portable Antiquities Scheme database number SUR-4A9C55. Its precious metal content means that it also falls under the provisions of the Treasure Act of 1996, where it has Treasure Case reference 2019T10. The present author was then invited to comment on the inscription, which identified a key question (explained more fully below) that detailed instrumental analysis might be hoped to resolve. It proved possible, as a result, to transfer the item temporarily from the British Museum to the care of the Department of Archaeology and Conservation at Cardiff University for such study in October 2019. After that work was successfully completed in January 2020, however, the onset of the Covid-19 pandemic and its many restrictions meant that the strap-end had to remain securely stored in Cardiff until late August 2021. Under the provisions of the Treasure Act, the strap-end has now been acquired by Hampshire Cultural Trust. It is currently on display in Winchester.

While, as noted, strap-ends are very familiar Middle to Late Anglo-Saxon archaeological finds, and the runic inscription on this item immediately locates the object in that cultural and chronological milieu, in several important respects the King's Somborne strap-end is really quite unusual and even unique. The shape of the item, with the concave sides for much of its length and a blunt, wedge-shaped terminal, can only be paralleled in the most general terms by a very few specimens of his rare Classes F and G in the extensive illustrated corpus of strap-ends collected in a PhD thesis by Gabor Thomas in 2000 (Thomas 2000, figs. 3.0, 3.31 and 3.32).

It is also untypical for the object to carry no cast relief, incised, or punched ornamentation other than the runic lettering and the framing lines around those. There is a larger number of comparable plain strap-ends in Thomas's corpus than counterparts in respect of shape, but the only strap-ends that are typically plain are the extremely slender specimens of Class C, where the elegant shape itself is the artistic form of the metal belt-fitting. Meanwhile silver was only regularly used for Thomas's numerous Class A strap-ends, characteristically convex not concave in outline; the great majority of all other known specimens are made from copper alloys (Thomas 2000, 154–60).

What, however, can still be considered typical of the wide population of Middle to Late Anglo-Saxon strap-ends including the King's Somborne specimen are the size and proportions of the object, and the way in which it was made to be attached to some strap. The length:width ratio of c. 4:1 is more characteristic of Thomas's Class B (strap-ends with parallel-sided shafts and zoomorphic terminals) than of Class A (convex in shape and with zoomorphic terminals, and an average length:width ratio of 3:1). It was typical for the strap-ends to be attached by means of a grooved or split terminal at the broader end (opposite to the zoomorphic terminals referred to in the definitions just quoted) through which small rivets fastened the metal mount to the leather, hide, or textile strap. The attachment end of the King's Somborne strap-end is far from complete, and the remains of the rivet holes visible there clearly show that it was repaired at least once after breaking here. In its surviving form it is no longer usable, and this could, of course, explain how it came to be lost, only to be retrieved by a hobby metal-detectorist some thirteen-hundred years later. Deliberate or accidental decommissioning, however, is a feature which it shares with the two other rune-inscribed strap-ends known to date, from Elsted in West Sussex and an unknown site on the Isle of Wight (see Fig. 2; Hines 2019). The former carries what can be identified as a female name ending in *-flæd*, although the first element of that dithematic name can neither be read nor identified conjecturally, while the text on the Isle of Wight strap-end is much more obscure. In both of those cases, however, it looks as if the items were deliberately rendered non-functional through the removal of the attachment end, which may have been done to prepare the object for curation. It is entirely plausible that the King's Somborne strap-end had been kept in the same way.

From the second half of the 7th century onwards, silver was circulating increasingly widely and regularly in southern and eastern England in the form of coinage. The coins themselves ultimately had the value of the precious metal they contained, measurable in terms of fineness and weight, rather than being cash tokens as in the modern world. We can therefore explore the contemporary value, or even 'cost,' of the King's Somborne strap-end by reference to this material. The current coinage in the area in question consisted of the relatively small and thick *sceattas* (sg. *sceat,* although often 'sceatta' in recent and current literature) down to the 760s, when this coinage was widely superseded by 'pennies' which were broader and thinner in form and also reformed to conform to a higher weight standard. It is illuminating to examine the 4.58 g of the (not quite complete) strap-end (c. 4.05 g of pure silver) in terms of how many contemporary silver coins that would correspond to.

4.58 g divided by:	
3	1.527 g
4	1.145 g
5	0.916 g

One thing that is striking here is that these figures do not correlate persuasively with the standard weights of pennies: in the range mostly of c. 1.15–1.20 g in a 'light' phase from the 760s to the mid-790s or of 1.30–1.40 g in the subsequent 'heavier' phase (Naismith 2012, 168–80). The lower figures (divided by factors of 4 and 5 respectively) do, however, correspond rather tantalizingly with weight-ranges typical of *sceattas* of the Secondary Period (now dated c. AD 710 onwards: Gannon 2013, 112–36), the heavier ones of the 'early Secondary Period' (1.00–1.20 g), the lighter of the 'mid-' and 'late Secondary Periods' (c. 720 onwards: 0.90–1.00 g and 0.80–1.00 g respectively). The West Saxon shilling was counted as 5 *sceattas* or pence. It is, of course, utterly conjectural, although not absurdly unrealistic, to imagine that a craftsman took a group of silver coins corresponding to a defined value of this amount to melt down and cast to make the strap-end; he would also have known that it was about the correct amount for his purposes in terms of the size of object he intended to manufacture. If there is any validity in that comparison,

it would direct us to a date no later than the third quarter of the 8th century for the relevant coins to have been current (although naturally, obsolete coinage might be particularly suitable for such recycling). We must note, concurrently, that the high silver content of the strap-end is much more closely in line with that of the Primary and Intermediate series of *sceattas* (of the late 7th and early 8th century) than the Secondary types (Northover 1994), or of the earlier pennies from the 760s to c. AD 840 (Naismith 2012, 161–3). There is consequently no simple correspondence between the quantity and quality of metal in this strap-end and the forms of coinage circulating from the late 7th century to the early 9th. Nevertheless the comparison is still meaningful. Although we have little clear evidence for the exchange value of a shilling around this time in ordinary transactions, one clause in King Ine of Wessex's law-code (§55) that sets the value of a ewe with a new-born lamb at one shilling does add to relevant understanding of the object.

1.2 The inscription

There are rows of runes on both faces of the strap-end, most of which are clearly legible. The direction of the by-staves show that the runes run left-to-right from the attachment end to the narrower terminal of the strap-end. This involves some diminuendo in the height of the runes from start to finish. There initially appear to be 11 distinct graphs on what we shall label side A, which appears to be the start of the inscription, and 12 on side B. Just two runes are seriously obscured by corrosion of the object. These stand back-to-back on the two sides A and B.

An initial reading suggested after microscopic visual examination of the object is as follows:

Side A: **æ i e *r* e l e *w* o r o**

1 2 3 4 5 6 7 8 9 10 11 12

Side B: **o g t æ þ i s – æ s i l**

Italicized letters in the transliteration represent proposed rather than clear readings. The dash at side B position 8 (B.8) marks the place of one fully obscured rune.

To the naked eye, rune A:4, transliterated *r* above, appears to be an **m** rune. Under the microscope, however, it can be seen that there is no full length crossing

stave ascending from mid-left-hand upright stave to the top of its right-hand counterpart as there should be, while the descending stave from top left to lower right is cut through an S-shaped curve and continues as the lower part of the right-hand vertical stave in formally exactly the same manner as A.10 **r**. An upper continuation of the right-hand vertical stave has been deliberately cut in to take this stave to full height. What appears to be the right-hand section of the ascending crossing stave is in fact much less firmly cut than the definite segments of the rune, and so might not be part of the inscription at all. Identification as **r** therefore initially appeared more valid than **m**, even though that makes it difficult to explain the upwards continuation of the right-hand vertical stave. A bind-rune **r͡i** is conceivable, but there are no other bind-runes in the inscription, and this is a very awkward combination to have inscribed in such a way.

The top of rune A:8 is hidden by corrosion products. What is visible clearly shows a single upright main stave with a right-angled pocket to the right. This could be either **þ** (as B:5) or **w** (as A:8). The difference between the two would be determined by whether or not the top of the pocket and the top of the main stave meet at the same point (**w**) or the main stave continues to rise beyond that junction. If A:8 is the same height as A:7 and A:9 then **w** appears likely here; there is, however, space within the frame line for the main stave to rise sufficiently to form a clear **þ**. The reading *w* is proposed here also because that would allow us to identify a familiar word in the text.

Rune A:11, **o**, is considerably abraded, incomplete and faint. Nonetheless, under the microscope the central part of an **o** rune formed in the same way as rune B:1 is quite satisfactorily to be seen.

The only problematic graph on Side B is B:8, which is all but totally obscured by corrosion. Under the microscope, what appears to be the very top and bottom of one or more staves can be seen.

Curious forms are the **s** runes at B:7 and B:10, which are reversed (back-to-front) from the usual way in which this rune is presented.

A plausible reading of the sequence thus proposed from A:8 to B:7, **woro/ogtæþis**, (where / marks the line break) is as normalized Old English *worhte þis*: 'made this.' The presence of the consonant **g** where **h** might be expected is not at all problematic, using a rune that can represent a voiced velar fricative for what

should have been an unvoiced velar fricative. The introduction of a so-called svarabhakti or parasite vowel **o** in the consonant cluster *rh* is genuinely common. The proposed reading here postulates that the parasite vowel was repeated at the start of side B from the end of side A, either to mark the continuation of the text or as an accidental dittography.

If the middle two words of the inscription mean 'made this' then we would expect a subject (in the nominative case) to precede **woro/ogtæ** and an object in the accusative case to follow it. As first transliterated, in the subject position we have the sequence **æie*r*ele**. *þis* is the accusative singular of the neuter form of the demonstrative article 'this' in Old English. If the invisible rune at B:8 is **n**, then **þisnæ** could be a precise spelling of standard Old English *þisne*, the masculine accusative singular of that article. **sil** is a possible spelling of a contracted form of the neuter noun that would normally be *sigel*, meaning a piece of jewellery and thus appropriate to a silver strap-end; however it is then a challenge to determine or even conjecture what might have preceded that root as a two-letter prefix ending in *-æ*. Although *sigel* has a feminine side-form *sigle*, there is no recorded instance of this noun having passed into a masculine declension (cf. Hines 2020, 82–5, for more on the complex history of this lexeme as a Latin loanword in the Germanic languages). The only known Old English noun to end in the sequence *-æsil*, later *-æsel*, is the word for 'hazel,' a masculine noun.

We would expect the opening of the inscription to have either a personal name, or possibly some form of title or other clear identifier of the maker of the artefact and its inscription. **æie*r*ele**, or indeed a conceivable **æie*m*ele**, are not immediately identifiable with known names or nouns. Old English has no diphthongal sequence *æi*, and perhaps especially if the **g** rune is used for what should have been *h* in *worohtæ*, the most likely interpretation is that this sequence represents what would normally be *æg*, with a palatalized *g* that had become the semi-vowel [j]. *Agir* is in fact a recorded Germanic name-element, and probably represented in Old English by the one *Egera* who appears in the list of witnesses to a charter of King Ceadwalla of Wessex of the late 7th century (Förstemann 1900, cols. 41–2; Redin 1919, 95; S 233: this charter text is generally considered to be a 12th-century compilation of authentic earlier material). The final sequence **ele**, however, could only regularly

be explained as a diminutive in -*el* from -*il*, while the final -*e* rather than -*a* would suggest a feminine variant.

Fig. 3   How runic **h** might be written to appear as **æi**: a diagram. Drawn by the author.

That is one line of analysis which might yield a genuine name form here, but it is very contrived. An alternative, which may also seem extraordinary but cannot be overlooked, is provided by the fact that we have one securely attested although etymologically inexplicable and certainly not common Old English masculine name ending in -*emele*, *Hemele* (Redin 1919, 149; PASE, sn. HEMELE; cf. OHG *Hemilo*: Förstemann 1900, col. 744). An opening with initial vowels **æi** could not be reconciled with that, but the actual graphic forms of those runes side-by-side are practically identical with the double-barred **h** of the Old English *fuþorc*— albeit with the second vertical main stave to the right separated from the crossing by-staves (Fig. 3). It is abnormal to have an **æ** rune with the two by-staves around the middle of an upright main stave as appears to be the case at A:1 as initially read. At position B:4 we clearly have a 'correctly' formed **æ** with the upper by-stave joined to the top of the main stave (B:9 **æ** appears to be the same in form, but that is not entirely clear). It is possible, then, to conjecture that the inscription on the King's Somborne strap-end (or even just the spelling of this name) had been cut following an exemplar by someone with an imperfect understanding of the runic alphabet who produced two (near-)standard runes in the place of one. That is undoubtedly imaginative, but limited competency of such a kind may be evident in some of the other problems and peculiarities of the inscription. At what we shall still refer to as position A:4, this also implies that the suggested *r* was intended to be **m** after all, and the adaptations visible were undertaken to make the rune look like that to the naked eye. For these reasons, I propose that Hemele is the masculine personal name of the subject of the verb *worohtæ* in this inscription.

    To read the end of the inscription in full and so to establish what the object noun phrase to *worohtæ* is, we needed to find some way of removing or looking through the corrosion — hoping that the decay has not passed right through the

body of the strap-end and removed all the detail. As noted above, the demonstrative article in the accusative case could be either *þis* (neuter) or *þisnæ* (masculine), and from what can be seen from the surface the latter is possible, although the final **sil** can be considered more likely to represent a Latin loanword of neuter grammatical gender.

Professional cleaning of the object could have been an option to remove the corrosion and reveal the surface; however it is an intrusive process which removes material and might do so without achieving the desired result. The internal condition of the object, namely how deeply the corrosion lies, could be assessed non-intrusively by X-radiography, and indeed it could be hoped that that process might itself reveal the original graph through the corrosion and so yield the information desired to complete the reading. Fortunately, special permission was obtained for this analysis to be carried out in the Department of Archaeology and Conservation at Cardiff University.

The analytical studies were carried out to the highest curatorial standards by Madeline McLeod, an MSc Conservation student, under the supervision of Phil Parkes, Reader in Conservation, and in consultation with myself. It was discovered, happily, that the body of the strap-end is largely sound; nevertheless disentangling the obscured areas of the runic inscription was still far from easy. Ultimately, however, both Madeline McLeod and myself were fully satisfied that it can be determined that the obscured graph is **g** (see Fig. 4), and so the final word is a neuter noun *gæsil* — a noun that has not previously been recorded in Old English. In fact, once this reading has been made, it is indeed possible to construe the tiny fragments of the rune visible around and partly through the corrosion as the remains of a **g** rune.
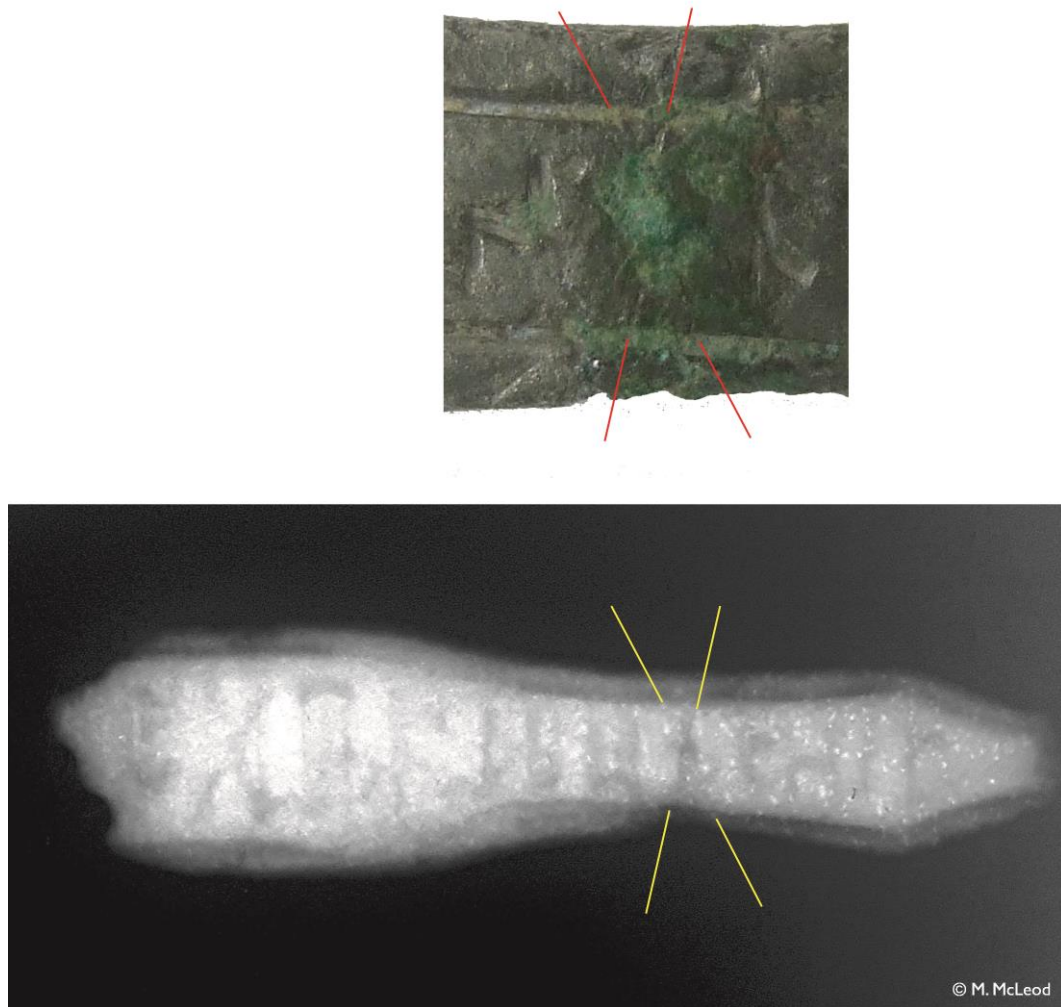
Fig. 4   Macro-photograph of the area of corrosion where **g** is read and x-ray image of this side, with arrows to draw the eye to the proposed crossing staves of the **g** rune. Photograph (a) by the author (b) by Madeline McLeod.

The reading *gæsil* can be accounted for as a neuter noun formed from the root *sigillum* borrowed from Vulgar Latin as *sil* with the perfective prefix that is *ge-* in Standard Old English. This is a common prefix for Old English nouns; it can be semantically very light, but its use does imply that this object so named is not just an item of jewellery but one that somehow finishes or completes an object: which indeed is what a belt-terminal or strap-end does. A close parallel may be the noun *gebæte*, *gebætel* for a bridle-bit.

A revised transliteration of the text may therefore be:

Side A: **h e *m* e l e *w* o r o**

1/2 3 4 5 6 7 8 9 10 11

Side B: **o g t æ þ i s g æ s i l**

1 2 3 4 5 6 7 8 9 10 11 12

I interpret this text as what should read *Hemele worohtæ þis gæsil*, or, edited into normalized Old English, *Hemele worhte þis gesil*: 'Hemele made this strap-end.' (A variant of the verb showing metathesis of the *or* sequence is *wrohte.*) This short and otherwise mundane text thus apparently adds a new term to the Old English lexicon. Contextually, the exceptional nature of the object and the fact that it carries only this inscription where the overwhelming majority of contemporary strap-ends in this cultural zone typically have decoration on one face, and a very few are inscribed on the back, imply that this unusual product was made as some sort of badge or display of Hemele's craftsmanship. In fact it appears to have been a display of his limited literate competency at the same time. But that does not diminish the implications in respect of the relatively common use of runic literacy in southern England.

1.3 Dating the inscription

The idiosyncratic character of the King's Somborne strap-end means that we are in no position to date it at all precisely on the typological grounds that may be available for archaeological artefacts. It is in fact difficult to determine relatively narrow dates for 8th- or 9th-century strap-ends unless they are retrieved from separately datable contexts, or carry particularly distinctive decoration. The Elsted (West Sussex) strap-end is datable on such grounds to the 9th century by reference to the foliate ornament on its face (Hines 2019, 291). Our best dating evidence in the present case therefore seems to be by linguistic criteria, in which case the one significant feature should be the preservation of unstressed /æ/ in *worohtæ* and *gæsil*. This is usually taken to be characteristic of 8th-century spelling of Old English south of the Northumbrian dialect area, with raising to /e/ or even levelling

to /ə/ characteristic of the 9th century and later (Waxenberger 2006). It is important to note too, that this suggests a possibly earlier date for the King's Somborne strap-end and its inscription than for the Elsted strap-end, and indeed for that from the Isle of Wight, the closest parallels to which also appear to be of the 9th and even 10th centuries rather than earlier (Hines 2019, 297; Thomas 2000, 205).

2. Response to John Hines's argument

ELISABETH OKASHA

Important note: I have not examined the object myself but have only worked from photographic images, including copies of the x-ray images, all kindly supplied by John Hines, and from the images publicly available on PAS.

None of this response should be in any way interpreted as adverse criticism of John Hines's interesting paper, but merely as a way of moving forward the discussion and of suggesting further lines of enquiry.

I start with the initial reading suggested by Hines: **æ i e r e l e ẇ o r o o g t æ þ i s . æ s i l**, that is, with word-spacing added, *æierele woroogtæ þis[n]æ sil*. Although, as noted above, I was kindly supplied with photographic copies of the x-ray images, I remain unconvinced by the suggested restoration of an original **g** rune beneath the corrosion, preferring the reading **n**.

Thus, in normalised Old English spelling, I suggest that the text reads: *æierele wrohte þisne sil*. As Hines notes, the spellings of *wrohte* with a *g* for *h* and a parasite vowel in the consonant group *rh* are not infrequent in runic texts. Moreover, the spelling of final *-æ* for *-e* can be readily paralleled in many words occurring in runic inscriptions, as can the doubling of vowels; compare, for example, the runic text on the Mortain casket which reads *good helpe æadan þiiosne ciismeel gewarahtæ*: 'God help Æadan [who] made this *ciismeel*' (Page 1999, 162–3). Hines makes the interesting suggestion that the doubled **o** in the middle of *woroogtæ* may, however, have been inserted to show the continuation of the text on to the second side of the strap-end.

This text, then, is an example of a standard Old English maker formula, appearing on several inscribed objects, but not, as far as I know, on any other strap-end. There is, for example, the text on the Brussels cross reading *drahmal me worhte*, and that on the Kirkheaton runic stone reading *eoh worohtæ* (Okasha 1994, 76). The first word in both these examples, and in many others, is a personal name, usually taken to be that of the artisan. Thus the interpretation suggested by Hines that the first word on the King's Somborne strap-end is a personal name is almost certainly correct.

He takes this personal name as a form of *hemele*, a recorded Old High German name. However common this name may be in Old High German texts, it is certainly not well-recorded from Anglo-Saxon England. Indeed, as far as I can find, it occurs only once, in the ninth-century genealogies in Cotton MS Vespasian B 6 (Sweet, 1885, 168, line 39). It does not seem to occur in other manuscript texts, nor in other inscriptions, nor in *Domesday Book*, nor on coins (von Feilitzen 1937, Smart 1992, Sweet 1885).

Thus I read the name as *æierele* and suggest that it is Old English, a form of *Æþelmæl or Æþelmær. The spelling of the first element is little problem: for instance, in *Domesday Book*, the first name-element *æþel-* occurs with a variety of spellings, *ai-*, *ei-*, *aiel-*, etc. (von Feilitzen 1937, 182).

The second element *-rele* is more problematic. I suggest that it is an error for *-mele* or *-mere*. As a first name-element *mæl-*, of originally Irish origin, is quite well recorded, including with the spelling *mel-* (Smart 1992, 87; von Feilitzen 1937, 323), but it is not recorded as a second name-element. Similarly, the common Old English noun *mæl* 'mark, time' occurs readily as the second element of compound nouns (*fotmælum*, *edmæle*, etc.), but not as a second element of personal names.

However there is a well-recorded personal name Æþelmær. The most obvious solution seems to me to read the personal name on the strap-end as a garbled spelling of this fairly common name. This name occurs with a variety of spellings, for example *æimær*, *aimar*, although admittedly it is rare with a final vowel except in oblique cases (von Feilitzen 1937, 184–5; Smart 1992, 33–4).

The text continues *þis[n]æ sil* As noted above, I cannot confirm from the images I have seen that the bracketed letter is actually a **g** rune, and a reading with

an **n** rune makes perfect sense: *þis[n]æ* is then a form of the demonstrative *þis* 'this' in the masculine accusative singular form *þisnæ* for *þisne*.

The final word is, in my opinion, not a 'new' Old English word but a form of either of the well-recorded Old English words *sigil*, *sigl* 'buckle, gem' or *sigle* 'collar.' Semantically speaking, the former seems more probable, and the spelling *sil* for *sigl* is recorded. In either case the noun *sigl* 'buckle' would here be used for 'strap-end': I am unaware of a separate specific word for 'strap-end' in Old English, although there may have been one, and *sigl* 'buckle' seems entirely appropriate.

The only problem with this interpretation is that both these words (*sigil*, *sigl* 'buckle, gem' and *sigle* 'collar') are grammatically neuter in Old English: in the accusative singular either should, strictly speaking, be preceded by *þis*, the neuter form of the demonstrative, not by the grammatically masculine *þisne*. However an inscription in runes on a strap-end is not necessarily to be expected to use perfect literary Old English, as indeed is obvious from the discussion of the rest of the text, both by Hines and myself above. I therefore read the (normalised) text as the following:

Æþelmær wrohte þisne sigl
'Æþelmær made this strap-end'

One or two other points made by Hines are worth discussing. For example, he says, "Contextually, the exceptional nature of the object and the fact that it carries only this inscription where the overwhelming majority of contemporary strap-ends in this cultural zone typically have decoration on one face, and a very few are inscribed on the back, imply that this unusual product was made as some sort of badge or display of Hemele's craftsmanship." The PAS database lists almost 2,000 Anglo-Saxon strap-ends, of which three, including the object under discussion, contain runic texts, two contain non-runic texts, and one is doubtfully inscribed at all. It is therefore hard to be sure how to interpret "exceptional nature" in this context. Moreover, I am unaware of any Anglo-Saxon inscribed object used as a badge, although some may well be silently advertising the artisan's craftsmanship. A further point about artisans in general is that they were probably unlikely to be literate; they thus would have been copying an exemplar without necessarily

understanding its meaning or even knowing that its text contained their own given name.

A final comment is on the secondary works consulted: Hines does not mention two important sources of personal names used in Anglo-Saxon England, those in *Domesday Book* and those of moneyers on coins. Two useful books in these fields, respectively those by von Feilitzen and Smart, are given below. Although, as Hines notes, Gabor Thomas never published his PhD thesis on strap-ends, a very full account of them is contained in at least two of Thomas' published works: Thomas 2001 and Thomas 2004 (see below).

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Editor's note

Alfred Bammesberger's comment on John Hines's analysis and interpretation has meanwhile been published (Bammesberger 2022). Therefore, only a short summary of Bammesberger's argument will be given here in order for the reader to be able to follow the further discussion.

Hines (Hines & Okasha 2023) offers the following transliteration:

Side A: **h e *m* e l e *w* o r o**

                  1/2 3 4 5 6 7 8 9 10 11

Side B: **o g t æ þ i s g æ s i l**

                  1 2 3 4 5 6 7 8 9 10 11 12

This may be read as *Hemele worogtæ þis gæsil*. For the reading *gæsil,* Bammesberger offers the following explanation:

On the assumption that the vowel *æ* in **gæsil** is long (= *gǣsil*), we can surmise that in a starting-point (Pre-Old English) **gaisil > *gāsil* the vowel *ā* underwent *i*-umlaut, yielding *ǣ*. For a starting-point Gmc. **gaisil-* conceivable cognates are available: OHG *geisila/geisla* 'whip' and ON *geisl* 'staff, stick.' The suffixal morpheme *-il-* in **gās-il- > gǣsil* can be recognized in a number of further lexical items, e.g., OE *cēcil* 'little cake.' If Gmc. **gaisa-* referred to a weapon, then **gaisila-* may have represented a diminutive. From an etymological viewpoint, the form *gǣsil* may be compared with OHG (feminine) *geisla/geisila* 'whip.' It is probable that neuter *gǣsil*, meaning 'strap,' represents a noun so far unattested in the Old English lexicon.

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In response to Hines & Okasha,
"On the interpretation of a challenging inscription from King's Somborne, Hampshire"

GABY WAXENBERGER

I would like to offer some (graphemic) comments on John Hines's and Elisabeth Okasha's interpretations of the runic inscription on the strap-end found at King's Somborne, Hampshire (Hines & Okasha 2023).

1. Comments on John Hines's transliteration, interpretation, and translation of the runic inscription

1.1 Rune A:1

From a graphemic point of view, this sign could be the rune **A** *æsċ*, as there are at least two cases in the Old English Runes Corpus (OERC) where the side-twigs of this rune do not start exactly at the top. These two inscriptions are on the Gandersheim Casket and the Mortain Casket.

1.2 Rune A:1/2

If runes A:1/2 are an **h**, the personal name *Hemele* is attested in OE, thus this interpretation is also possible.

1.2 Rune B:2

The rune <**g**> instead of <**h**> for [ξ] is found on the Left Panel of the Franks Casket (***unneg*** 'far') and also in the non-runic manuscript tradition (see Waxenberger 2021).

1.3 Runes B:7 and B:10

The two sinistrograde **s**-runes, **ᛋ**, are optically not in line with the dextrograde inscription, but this is not unique: the **s**-runes on the Great Urswick Stone show dextrograde and sinistrograde forms in the same text: **setæ setæ**; **his hi ᛋ**.

1.4 Rune B:8

A short part of the lower left stave can be seen in Hines's photos of the strap-end (Hines & Okasha 2023, Fig. 1): so the rune **g** is absolutely convincing and would fit into the space.

1.5 Summary

Judging from Hines's photos (Hines & Okasha 2023, Fig. 1), his transliteration of the text is possible, although A:1/2, **h**, is uncertain and should be marked as such: *h*. As B:2 is not obvious to the naked eye, but partially reconstructed, the forthcoming *Edition of the Old English Runic Inscriptions* will represent it as [+]**[g]**. Thus the inscription in the edition will appear as follows:

Side A: *h* e *m* e l e *w* o r o

Side B: o g t æ þ I s [+]**[g]** æ s *I l*

2. Comment on Elisabeth Okasha's transliteration, interpretation, and translation

Elisabeth Okasha comments on the word *sigil*: "[…] and the spelling *sil* for *sigl* is recorded" (Hines & Okasha 2023).

A spelling <sil> is possible. -**æ**(-) as a root and final vowel suggests a fairly early date (8th or possibly early 9th cent.; see also Hines in Hines & Okasha 2023) for the inscription: this means that the sound change *-ig- > ī* must then have already been

carried through at this time. According to Campbell (1959, §266), there was already a tendency in early OE for this sound change, and according to Luick (1921, §252), it came into existence at an early time in WS and probably also in Kent. Hogg (1992, §7.70) considers this sound change as common in early and late WS, "but in other dialects occurrences are infrequent."

3. Conclusion

John Hines's and Elisabeth Okasha's discussion shows the individual steps and analyses they have taken to arrive at their individual interpretations and translations. Although the results are not fundamentally different (see below), they clearly demonstrate the challenges a researcher has to face. It starts with graphemics inasmuch as the identification of runes and their interpretations is concerned (cf. Hines in Hines & Okasha 2023). One of the pivotal points is the identification of A:1 and A:2 or A:1/2: is it one or two runes, that is *h* or *æi*. In both cases, the runes are somewhat different from the regular runes in the Old English Runes Corpus. If **A æ** is assumed, the side-twigs do not start at the top, and in the case of *h*, the bars do not touch the right stave. From a graphemic point of view, both interpretations, *h* and *æi*, are justified.

Additionally, etymology and semantics play an important role for the sequence B:8 – B:12. Is the Old English word for 'strap-end' *gæsil* or is it *sil*? Moreover, are these interpretations compatible with the sound changes, i.e., the assumption of a vocalized *g* in *sīl* (cf. Okasha in Hines & Okasha 2023)? Do the names follow the principles of Germanic (compound) names? However, both interpretations reveal the same text-type, namely the formula 'X made Y.'

As both analyses and interpretations have their pros and cons, both interpretations will be included in the forthcoming *Edition of the Old English Runic Inscriptions* as follows:

John Hines's interpretation: Elisabeth Okasha's interpretation:

Hemele worohtæ þis gæsil   *Æþelmær wrohte þisne sigl*
'Hemele made this strap-end'   'Æþelmær made this strap-end'

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Afterword

JOHN HINES

As the first contributor to this discussion, whose suggestions have been reflected upon with care and authority by my colleagues here, I am grateful for the opportunity to offer my own short *Afterword*—not in the spirit (I hope) of having the final say, but rather as my further reflections. One thing we can all agree upon in respect of this find is that the craftsman who made the strap-end and apparently inscribed it (although of course he/she might have had it inscribed by someone else) with a standard '*N* made this object' formula did not, runographically, make a perfect job of the latter. We are not, as a result, sure what his or her name was. That we also cannot be sure what word he or she employed to denote the item is due both to deterioration in the condition of the metal and the fact that the noun used is either lexically or grammatically a *hapax legomenon*.

Gaby Waxenberger shows that there is extensive, relevant, variance in runic orthography and phonemic representation in Old English inscriptions, so that at best one may argue that a particular graphic form, like that at the start of line A, is unusual or even abnormal, yet it remains difficult categorically to identify an inscribed rune as 'this or that, and not-this and not-that.' There are indeed several possibilities for the name of the signatory. One might appeal to an adaptation of Occam's Razor, and ask which suggested solution involves the least conjectural emendation. But even if one could weight alternative conjectures appropriately, there can be no guarantee that such a principle will lead to the correct answer. Occam's Razor is designed to identify the 'best' solution to a philosophical problem, not to read inscriptions.

I welcome Alfred Bammesberger's (see Bammesberger 2022) alternative proposal of **gǣsil* in the sense of 'a small pointed object,' which accepts the cautious if confident reading **g** in the obscured area of line B: I had not been aware of the OHG cognate *gaisila*. The *-s-* root variant of the lexeme familiar as OE *gār*, OHG *gēr*, ON *geirr*, 'spear,' is widely although not copiously attested: in the Celtic languages as the root of what appears as a loanword in Latin, *gaesum*, and with regular loss of *-s-* plus a relational prefix **g^wo-* in Welsh *gwawy*, both of which are

also words for 'spear.'[1] In Germanic it appears too in the Gothic and Vandal kings' names recorded as *Radagaisus* and *Gaisericus*, and in ON *geisl*, 'staff,' and its more figurative derivative *geisli*, 'beam, ray'; a Langobardic *gīsil* is argued to have the sense 'arrow' (*Edictum Rothari* §224; Kaufmann 1968, 147–8, sn. GĪS-; cf. Nedoma 2004, 304–6, sn. GISALI). One question which remains is whether we can explain in any regular way why this noun should have become neuter in OE when it is feminine in OHG and masculine in ON—although Latin *gaesum*, tantalizingly, is neuter. I stress that I do not in any way see that question as a conclusive counter-argument to the proposition. A term that means 'little point' will obviously fit this object very well. I would, if anything, be happy to rest for now on the position that both **gǣsil* and **gæsīl* offer thoroughly plausible solutions.

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[1]Celtic philology does not require this word to have been borrowed from Germanic rather than inherited direct as an Indo-European lexeme. The lexeme is also attested in early Irish, Cornish, and Breton.

Haplography in the runic inscription on the Overchurch stone

ALFRED BAMMESBERGER

The Overchurch Stone,[1] found in 1887 at Upton (Wirral) and now on permanent loan in the Williamson Art Gallery & Museum (Birkenhead, Nr Liverpool, GB), bears an Old English runic inscription in two lines.[2] In spite of some damage to the stone, at least 32 runes can be reliably identified and transliterated in two lines:[3]

> **folcæraærdonbec**
> **biddaþfoteæþelmun**

On the basis of what we know from other memorial inscriptions, the following individual Old English word units may be distinguished:

> *folcæ aræardon bec // biddaþ fote æþelmun*

The first line probably ended in *becun*, *becon* or *becn* 'sign, monument.' The incomplete name at the end of the second line is likely to have been *Æþelmund*, and *biddaþ* in the beginning of the line was probably preceded by a prefix *gi-*. The sequence *fote*[4] in the second line is assumed to have been cut erroneously for *fore*.[5] The two lines have been edited as two separate clauses:

> *folcæ aræardon becun // gibiddaþ fore æþelmundæ.*

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[1]   Page notes that the stone was "presumably designed for a grave." The inscription, in two lines, is on one side of the stone. The stone is not undamaged: "Workmen re-using the stone cut away one edge and with it the ends of both lines of text" (Page 1999, 142). A detailed description of the stone and its inscription is given in Page 1959, 285-89.

[2]   A plate of the inscription is available in Bammesberger 1991, Plate 2.

[3]   The date of the inscription cannot be established with any precision. Dahl indicated it by "(?) c 900" (1938, 6); see also Page 1959, 289.

[4]   With regard to *fote*, Page noted "there is no doubt that this is an error for the preposition *fore*" (1995, 332).

[5]   The formula 'pray for X' is found in the inscription of the Lancaster Cross: *gibidæþ foræ cynibalþ cuþbere* 'pray for cynibalth, cuthbereht' (Page 1999, 143).

Elliott translated as follows: 'the people erected this monument; pray for Æthelmund' (1989, 95).[6] Page's translation differs in details: 'the people (host?) raised a monument. Pray for Æþelmun<d>' (1999, 142).[7]

A major problem for the linguistic analysis is presented by the fifth rune in the first line. The final -**æ** in **folcæ** is very hard to account for if *folcæ* functioned as the subject of the clause.[8] In order to solve this difficulty I suggested more than thirty years ago that *folcæ* represents the dative singular of *folc* (Bammesberger 1991, 130). Page assigned 'a prize of ingenuity' to the suggestion (1999, 142 n. 8). Nevertheless a considerable difficulty remains that I could not solve then, but for which I would like to submit a possible solution now. While I do believe that the sequence *folcæ* is to be parsed as dative singular of *folc* and means 'for the people,' syntactically the problem remains that the clause seems to lack a subject. That the subject could be 'unexpressed' or perhaps silently understood as 'we' or 'they' are at best doubtful proposals. When the runic inscription was commissioned we definitely assume that a grammatically correct sequence was intended. But what ended up on the stone may be due to an error in transmission consisting in haplography, also called 'eye-skip.'[9] The following points can be submitted in this context.

The subject of the clause has been recognised in the word representing 'people.' If we assume that *folcæ* means 'for the people' then it follows that the underlying version could have consisted of *folc* (nominative plural)[10] followed by *folcæ* (dative singular). For the first line we can consequently assume the following original wording: *folc folcæ arærdon becun*. In the sequence (without spaces between words) *folcfolcæarærdonbecun*, the eye 'skipped' from the first <f> to the second, and the four letters <olcf> were omitted. The emended text for the first line of the inscription may be restored as follows:

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[6]   For a detailed account of the Overchurch stone and its inscription, see Elliott 1959, 140-47.

[7]   The parenthesis in Page's translation '(host?)' at 142 is evidently meant as a precision, as at 55 he simply offered 'people.'

[8]   Dickins notes that *æ* in *folcæ* "is perhaps a blundered or damaged character abandoned by the carver" (1932, 19).

[9]   Haplography (eye-skip) and other types of errors occurring in Old English manuscripts are discussed in Orchard 2003 at 44-46.

[10]   OE *folc* is a neuter *a*-stem like *word* 'word,' and the nominative and accusative plural are unchanged. The word is frequently attested in Old English: *folc* in plural function is found at *Beowulf*, lines 1422 and 2948.

f[olcf]olcæararærdonbecun. The line means that the tribe members (of Æthelmund), namely his surviving family,[11] raised the monument for the people (in general), i.e. for the public to see. The second line contains the invitation for prayer: *gibiddaþ fore æþelmundæ* (imperative) 'pray for Æthelmund.' It is conceivable that *arærdon becun // gibiddaþ fore æþelmundæ* represents an alliterating line traditionally used for commemorating important persons. The initial two words *folc folcæ* can be interpreted as a kind of *titulus* meaning that Æþelmund's followers had this monument erected for the people in general who passed by.[12]

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[11]   This may be intended by Page's translation '(host?)' (1999, 142).

[12]   Elliot considers the possibility that Æthelmund was "a brave thane who may have fallen fighting against Scandinavian invaders at the end of the ninth century and who was honoured by his followers with this runic request for prayer" (1959, 147).

Report on OG(H)AM:
Harnessing digital technologies to transform understanding of ogham writing, from the 4th century to the 21st

MEGAN KASTEN AND KATHERINE FORSYTH

Abstract

This is an overview of a major new collaborative project (2021-2024) by the University of Glasgow, Scotland, and Maynooth University, Ireland, which will harness digital tools from different fields to transform scholarly and popular understanding of ogham—an ancient script unique to Ireland and Britain. All pre-1850 examples of ogham will be recorded in a comprehensive, multidisciplinary database; this will facilitate the application of innovative approaches that would be otherwise unattainable, including 3D analysis, corpus-linguistic methods, and ogham palaeography. Through the interdisciplinarity of the OG(H)AM project, we will develop a better understanding of ogham's changing historical contexts and contemporary social value.

Key Words

ogham; 3D analysis; historical linguistics; epigraphy; palaeography; multidisciplinary; digital humanities; Early Irish; early medieval; grapholinguistics; inscriptions.

1. Overview

The Irish Research Council and the UK Arts and Humanities Research Council have jointly awarded major funding to a new collaborative project by researchers at the University of Glasgow, Scotland, and Maynooth University, Ireland, which will harness digital tools from different disciplines to transform scholarly and popular understanding of ogham—an ancient script unique to Ireland and Britain. Ogham is highly unusual among world writing systems. (For overviews see: Stifter 2022 and McManus 1991.) It entirely lacks iconicity: like a barcode, it consists

solely of a succession of straight lines. It is read vertically and is usually written in three dimensions across the edge of a solid object, using letters which consist of bundles of one to five short parallel lines, their value depending on their position relative to a baseline. Its heyday was the first millenium CE, but knowledge of it never died out. Texts written in this ingenious script are of international significance to historical linguists as the earliest evidence for the Gaelic languages. The project will digitally document all ca. 640 examples of ogham writing in all media, from its origin in the fourth century CE until the dawn of the modern revival in ca. 1850.

The project, entitled *OG(H)AM: Harnessing digital technologies to transform understanding of ogham writing, from the 4th century to the 21st*, runs from August 2021 till July 2024, and it is one of 11 projects funded under a new scheme, the UK–Ireland Collaboration in Digital Humanities Research. The Principal Investigators are Katherine Forsyth (Professor of Celtic Studies, University of Glasgow) and David Stifter (Professor of Old and Middle Irish, Maynooth University); the Co-Investigator is Dr. Deborah Hayden (Maynooth); and the post-doctoral researchers are Dr. Nora White (Maynooth) and Dr. Megan Kasten (Glasgow). The short title of the project, OG(H)AM, reflects the fact that the script is known both as *ogam* (the Old Irish form, pronounced [ˈoɣəm]) and *ogham* (the Modern Irish form, pronounced [ˈoːm]), with the former being more common among linguists, the latter, among archaeologists (Stifter 2020; see project blog).[1]

The OG(H)AM project provides the long-awaited opportunity to complete and extend the corpus of ogham-inscribed Irish stones begun by the Dublin Institute for Advanced Studies as part of the *Ogham in 3D* (O3D) project (2012-15, 2016-17), led by team member Nora White with our partner organisations the Discovery Programme and the Irish Government's National Monuments Service. The O3D database (*Ogham in 3D* database online) currently covers ca. 25% of surviving ogham inscriptions and provides detailed supporting information, photographs, and 3D models. The OG(H)AM project will upgrade and update the database's data and metadata, enhance its searchability, and greatly expand its thematic, chronological, and geographical scope by including oghams from the whole island of Ireland (i.e., including Northern Ireland) and from outside Ireland. The latter—from Scotland,

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[1]   Both forms are also widely (mis)pronounced as [ˈogəm].

Wales, Man, and England—comprise almost a third of the total surviving corpus of texts. The project will also move beyond stone monuments to include portable objects (in a range of materials including bone, wood, bronze, and silver), graffiti on structures and caves, and medieval and post-medieval manuscripts in Irish, British, and Continental libraries.

The present project aims to document in 3D all ogham inscriptions in the collections of the national museums that are our project partners—the British Museum; the National Museums of Scotland, Ireland, Northern Ireland, and Wales; and the Manx Museum—with the support of state heritage agencies in the four jurisdictions (Historic Environment Scotland, Cadw [Wales], Manx Heritage, and the National Monuments Service of Ireland). Additional joint fieldwork will allow us to more than treble the number of 3D models available to nearly 80% of the corpus. Megan Kasten and Nora White will work with the Discovery Programme to evaluate the effectiveness of different methods of 3D recording and visualization. Kasten hopes to build on the work of Laila Kitzler Åhfeldt of Riksantikvarieämbetet (Swedish National Heritage Board) by refining new methods of digital groove analysis to identify the work of individual carvers, establish the contemporaneity of different carvings (cf. Kitzler Åhfeldt 2002), and digitally reconstruct worn details (see Fig. 1). We will conduct analysis based on the new documentation, using analogue and new digital techniques, including computational corpus linguistics by David Stifter.

Figure 1: Digital scanning of ogham stone, Lugnagappul, Co. Kerry (Image: Nora White, with permission).

The enduring social value of *ogham* is reflected in its increasing popularity for decorative, symbolic, and creative functions. The project will support this use of ogham in contemporary culture by responding to the need for authoritative guidance on writing accurate and authentic ogham, and by inspiring new and innovative applications and artistic responses.

2. Background

The ogham record is dominated by a body of nearly 400 inscribed stone pillars set up across Ireland from the 5th-7th centuries CE to mark the burials and boundaries of the island's emerging elites. About 60 such pillars are also found in western Britain (Wales, Devon, Cornwall, Hampshire, Argyll) and Man where they are understood as the primary evidence for communities of Irish settlers (Charles-Edwards 2012, 174-177). The existence of early ogham on portable objects and stones in the far east of Britain suggests that there are also other, as yet unknown, mechanisms of cultural exchange at play in the spread of ogham. The establishment of literate Christian culture brought about the rapid dominance of Latin script written across a flat page. Despite this, ogham was never entirely abandoned.

The post-7th century phases of the script have been little studied, but their geographical and functional diversity indicates the script retained its use-value and appeal, particularly among lay-people. Although ogham originated among the Irish,

it nonetheless took root in northern Britain by the sixth century, if not earlier, and it continued to flourish there among both Gaels and Picts long after it had ceased to be used monumentally in Ireland (Forsyth 1996). It was in Scotland that ogham came to the attention of rune-writing Norse settlers. Here and in Man, ogham enjoyed a late flowering within a culturally mixed Norse/Celtic-speaking milieu. Several sites in Scotland have produced both runic and ogham inscriptions, while in Man and Ireland there are examples of single stones with both scripts side-by-side. Palaeographic innovations in this era appear to indicate direct influence between the two writing systems. The interface between runes and ogham is something we hope to explore further in the project.

Texts in the ogham script tend to be short. The majority, monumental inscriptions dating to the 5th-7th century, are highly formulaic, and consist mostly of personal names and kin-group affiliations, with only occasional additional information: e.g. CATTUVVIRR MAQI RITUVVECAS MUCOI ALLATO 'of Cathair son of Rethach from the kin-group of Allaid' (Corkaboy, Co. Kerry, CIIC 250), LUGUTTI VELITAS 'of Luchtae? the poet' (Crag, Co. Kerry CIIC 251). Inscriptions on *instrumenta* are more diverse and often challenging to interpret but appear also to consist mostly of personal names. Ogham marginalia in manuscripts are typically laconic: e.g. A CHOCART INSO 'this is its correction,' and LAITHEIRT 'hangover.' The ogham script is used almost exclusively to represent Goidelic languages, although there are single medieval instances of its use for Old High German (a gloss) and Latin (a proverb). The linguistic identity of ogham inscriptions in eastern Scotland remains to be determined but in some cases there are hints that it is being used to render a form of Brittonic, i.e. Pictish.

Ogham remained, sometimes in fantastical forms, in the curriculum of formal bardic education in both Ireland and Scotland up till the later Middle Ages (McManus 1991). The alphabet's formal properties uniquely suit it to cryptography, a feature which is most fully exploited in its final phases (Purser 2019). Previous assumptions that practical knowledge of the script had entirely withered by the early modern period have been overturned by recent discoveries, by Hayden and others, in medical manuscripts and other sources, including, astonishingly, a newly discovered 66-page Irish manuscript from 1849 containing medical charms written

entirely in ogham (Edinburgh, NLS Adv. MS 50.3.11, 'the Minchin MS' [Purser 2019]).

3. Research Aims

The OG(H)AM project will draw on a wide range of disciplines and fields: primarily epigraphy, archaeology, linguistics, onomastics, palaeography, textual studies, 3D recording and visualization, heritage management, and grapholinguistics (the study of writing systems), with secondary use of methodologies from history of art, memory studies, women's studies, history, and anthropology. The database will be key to uniting the multidisciplinary information about each ogham inscription, through which team members will address the following overarching research questions:

- – How can we harness digital technologies to transform understanding of the ogham tradition in its entirety?
- – How can we advance 3D digital methods for analysis as well as documentation of carved stone?
- – How can we ensure sustainability and interoperability of complex, multi-disciplinary data sets?

Through these approaches, the OG(H)AM project team will aim to build a more holistic understanding of the ogham script.

3.1 Database

We will produce a comprehensive online database of all pre-1850 examples of the ogham script in all media (approximately 640 items). This open-access, multi-lingual online edition will address researchers and the lay public. The data will be human- and machine-readable, and viewable on the website or downloadable for further manipulation. The digital edition will use EpiDoc standards, a set of guidelines, schema and related tools for the encoding of epigraphic and other ancient text editions in TEI (Text Encoding Initiative) XML (Extensible Markup Language) which addresses not only the transcription and editorial treatment of texts themselves, but also the history and materiality of the objects on which the

texts appear. EpiDoc is widely used for digitally representing and publishing ancient textual editions in XML. This will maximize consistency and interoperability between project outputs and other publications and online corpora. The database will contain illustrated multi-disciplinary descriptions of every item (find contexts, object biography, chronology, linguistic analysis, ornamentation, interpretations, references), together with an interactive 3D model of the majority (80%) of items. Multidisciplinary tagging of variables in the epigraphic data provides powerful tools for electronic searching which permit types of research which would otherwise be unthinkable. The project seeks to harness all of these digital techniques and affordances to transform understanding of this unique and internationally significant body of material.

The database is envisaged as an enhanced and greatly expanded version of O3D, which it will eventually replace. The material currently in O3D covers 160 (42%) of the total surviving ogham stones from Ireland. Data and metadata already in O3D will be updated and transferred to the new database. Using published and unpublished sources and new fieldwork, the remaining 215 stones from the Republic of Ireland will be documented. To this will be added those stones from Northern Ireland, Britain, and Man; ogham-inscribed portable artefacts in a variety of media; and ogham graffiti. More than a dozen medieval manuscripts which contain texts in ogham have already been digitized and are available online, allowing us to link to existing high resolution digital images and present manuscript ogham alongside epigraphic ogham for the first time. The only manuscript written entirely in the ogham script, the newly discovered 19th-century 'Minchin manuscript,' will be specially digitized for the project by the National Library of Scotland and incorporated into the *Irish Script on Screen* (ISOS) digital resource (ISOS database online). By achieving this comprehensive documentation, we will quadruple the number of ogham items available for study online. Following Linked Open Data (LOD) and FAIR principles of information sharing (*FAIR*), we will explore the potential to enhance the accessibility of the data by improving the encoding of computational semantics and semantic relations between pieces of epigraphic data through the use of Ontology Web Language (OWL). This will allow sharing as linked data in RDF format via de-referenceable URIs that can be used to

build advanced search, visualization and analysis systems, greatly extending the reach of our data. In addition to the digital corpus, we will publish two traditional corpora in book form covering subsets of this data: the ca. 60 stones and 10 portable objects in the National Museum of Ireland, and the 8 ogham stones in the Isle of Man. These volumes will draw on the data and images contained in the digital corpus but will also feature interdisciplinary introductory chapters on various aspects of the material as a whole.

In addition to documenting all extant oghams using established analogue methods, the project will greatly increase the number of 3D models (and 2.5D images) available through

- incorporating existing models created by partner heritage organisations (ca. 25 stones),
- processing existing raw scan data provided by partner heritage organisations (ca. 70 stones), and
- recording new models (ca. 90).

This will more than treble the number of 3D models available to 505, leaving only 118 in Wales and Southwest Ireland for future completion. In so doing, we will work with the Discovery Programme to evaluate different 3D digital recording/documentation approaches in terms of ease, usability of outputs, and affordances for research anlysis. We will prioritize fieldwork to maximize progress towards the ultimate goal of a fully comprehensive set of 3D models of all surviving epigraphic oghams, employing photogrammetry (3D) and Reflectance Transformation Imaging (RTI) (2.5D) as appropriate.

About 16% of the total number of ogham-inscribed monuments have been gathered into the national museums, but the great majority remain locally, either in churches, heritage centres, or, as in most cases, in remote rural locations on private land where they are exposed to the elements. This extreme dispersal of inscriptions and the logistical challenges of visiting them means few researchers have seen more than a small subset in person. Instead, scholars must rely on the readings of others. It is hard to overstate the transformative possibilities of digital methods in ogham studies. The comprehensive online edition proposed here will give immediate access to the entire corpus, allowing for prolonged and repeated study and direct

comparisons that are otherwise impossible in the field. Researchers will no longer be at the mercy of weather and natural lighting conditions; they can use digital tools to manipulate 3D models to ensure optimal lighting conditions tailored to their specific needs. The database will thus enhance inclusive access to dispersed and physically remote material.

3.2 3D Analysis

Not only will the production of three-dimensional records allow for immediate visual access to the corpus, but it also allows for innovative analyses based on the 3D geometry of the stone and inscription. 'Removing' the colour of a 3D model improves an inscription's legibility by presenting the inscription as pure topology. As Kasten's doctoral work has shown (2019), carefully controlled manipulation of scan data can permit the reconstruction of worn detail, and sub-millimetre measurement and complex statistical analysis of the micro-topography of incisions via 3D models (Groove Analysis) can be used to identify the habitual motor performance of individual carvers, building on pioneering work on Swedish runestones by Kitzler Åhfeldt (2002).

Building on her doctoral work, Kasten will develop new digital methods for reconstructing worn detail and identifying the work of individual carvers (Groove Analysis). The latter constitutes a significant analytical advance in providing a means to establish the contemporaneity (or not) of ogham inscriptions with non-ogham carving on the same stone (e.g. Christian crosses, Pictish symbols, or inscriptions in the Latin alphabet).

3.3 New Discipline of ogham Palaeography

The simplicity of the script has encouraged the view that no meaningful 'palaeography' of ogham is possible; there have been no previous attempts to categorize the manifest variations in the size, proportion, and spacing of letters. Forsyth will build on her doctoral analysis (1996) to establish the new discipline of ogham palaeography, classifying different forms of the script, and the various innovations introduced over the centuries to enhance legibility and more accurately

represent the evolving pronunciation of Irish. White will work with a sculptor to explore the interaction of material, carving technique, and script. This new classification will allow us to use the database to map and date the introduction and spread of new forms and features.

3.4 Linguistic Analysis

Once definitive readings have been established, Stifter will conduct linguistic analysis of the data. The entire textual corpus will be incorporated into the openly accessible Early Irish lexicographic database *Corpus PalaeoHibernicum* (CorPH) online, created in Stifter's ERC-funded *Chronologicon Hibernicum* (ChronHib) project. This will allow for the application of innovative corpus-linguistic methods. The data will be tagged for morphological analysis (PoS-tagging) as well as for diachronic linguistic variation, a novel method developed for CorPH, permitting very detailed statistical analysis of the variation (either traditional frequentative statistics or *ChronHib*'s Bayesian Language Variation Analysis; see Stifter et al. forthcoming). This approach allows the precise tracking of linguistic variation and change across the corpus, either of changes in isolation (e.g. sound changes, variation in lexical usage, etc.), or of several changes in combination. It will permit more fine-grained chronological distinctions than currently possible, allowing progress in the linguistic dating of the ogham inscriptions and a fuller understanding of this archaic stage of the Irish language as well as of the periodization of the Gaelic languages (Irish, Scottish Gaelic, Manx). It is also hoped that by combining linguistic and palaeographic analysis, purchase can be gained on the vexed question of the linguistic character of the hitherto undeciphered ogham inscriptions of eastern Scotland, which would be a potentially important contribution to the controversial question of the nature of the Pictish language.

3.5 Changing Historical Contexts

We will deploy a multi-disciplinary approach to gain a better understanding of the origin, spread, and development of ogham writing in typological comparison with the invention and spread of other writing systems in the ancient, medieval, and modern world. Our central questions are the following: Why was the ogham script

used? What practical value and/or symbolic significance did ogham have to justify its invention and continued use over many centuries, when the Latin alphabet was always readily available? Hayden will explore the relationship between medical and grammatical knowledge in two medieval texts about ogham: *In Lebor Ogaim*, and *Auraicept na nÉces*. She will also conduct preliminary analysis of the Minchin MS, laying groundwork for the future goal of a critical edition. We will situate our work through an international research workshop on ogham in the context of world writing systems.

3.6 Contemporary Use

The ogham script's contemporary social value is reflected in the explosion of popular interest in it in past decades. Ogham is increasingly used in visual branding, public art, as a source of inspiration for innovative artworks by Irish and Welsh artists, musical compositions, and as body decoration in the form of jewellery and tattoos. Forsyth and White are regularly approached by individuals and businesses looking for advice on using ogham: there is a clear need for accurate and authentic information about the script which is accessible to a non-specialist audience and empowers them to adapt ogham to contemporary needs in a way which does not do violence to the tradition.

　　To this end, the OG(H)AM project will engage with an array of creative practitioners in support of contemporary adaptations and responses to this indigenous writing system. We will address the need for broadly applicable guidance on writing accurate and aesthetically pleasing ogham by providing a range of ogham resources for diverse audiences, both academic and public. The project will pursue four strands of engagement with creative practitioners to inspire new work which keeps ogham relevant for the 21st century / digital age:

- Contemporary digital art. White will collaborate with a young Irish digital artist to develop a new body of work for two solo exhibitions.
- Commercial art. The team will work with an award-winning artist-calligrapher to create innovative modern ogham writing rooted in genuine tradition.

- Body art. In order to reach younger adult and non-traditional audiences, we will take advantage of diasporic, 'New Age' and 'Celtic' interest in ogham tattoos. Forsyth will work with tattoo artists to produce an *Ogham Tattoo Handbook* for a popular "think before you ink" series ([Bradan Press,](#) Nova Scotia).

- Fonts and digital design. In order to open up ogham for a wider range of academic and popular uses, we will create within the website a 'one-stop-shop' for a range of existing ogham fonts and advice on their use. In addition, we will collaborate with a graphic designer to co-produce a new ogham font which moves away from the purely typographic, towards a more handwritten aesthetic, and grapples with the difficulties of using a standard keyboard to render a vertical script.

4. Conclusion

The OG(H)AM project views ogham-inscribed objects as multi-media phenomena and will apply multi-media approaches to their documentation and study. The project is innovative in so thoroughly integrating different disciplinary approaches to ogham (epigraphy, linguistics, archaeology, digital humanities) and by applying innovative 3D digital techniques of groove and wear analysis to ogham. Another key advance will be the move away from a narrow focus on Irish lapidary examples, instead encompassing the entirety of the ogham tradition geographically and chronologically, and in all media (including portabilia and manuscripts). Through this comprehensive approach to ogham, we will promote understanding of the complexity and time-depth of migration and multi-cultural exchange between Britain, Ireland, and Man, and greater awareness of the three islands' common cultural inheritance and interconnectedness.

The OG(H)AM project website is https://ogham.glasgow.ac.uk/

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Report on a new digital epigraphy project: EMILI

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Abstract

A report on a new Digital Epigraphy project based in the Department of Early Irish at Maynooth University. This initial phase of the *Early Medieval Irish Latinate Inscriptions* (EMILI) project focuses on a selection of important but relatively neglected inscribed stones and other objects from Ireland. The inscriptions are primarily in the early Irish language using the Latin script. The aim of the project is to bring together information from various sources and disciplines (including epigraphy, linguistics, onomastics, archaeology, and history) in a single searchable, digital resource. The digital corpus is open,[1] interoperable, and sustainable, and forms the basis for future expansion and research into the many aspects of early Irish epigraphy.

Key Words

Early Irish; inscriptions; personal names; digital editions; digital humanities; multidisciplinary; early medieval archaeology; early Christian; historical linguistics; epigraphy; palaeography.

1. Project and Team

The initial phase of the *Early Medieval Irish Latinate Inscriptions* (EMILI) project, which began in June 2021, was based in the Department of Early Irish at Maynooth University and funded by a Nowlan Digitisation Grant from the Royal Irish Academy, Dublin. The project website (https://emili.celt.dias.ie, launched in November 2022) is hosted by the Dublin Institute for Advanced Studies (DIAS), and the data is also being deposited with the Digital Repository of Ireland for long-

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[1] Some images of objects from museum collections are subject to restrictions in use under Creative Commons licence (https://creativecommons.org/about/cclicenses/).

term preservation. The project Principal Investigator is Prof. David Stifter, Professor for Old and Middle Irish at Maynooth University. The Co-Investigator, Dr. Nora White, who has extensive experience in the application of digital humanities to Early Irish, carried out the practical work in the project in collaboration with Jef Bucas (IT Department at DIAS) on the technical aspects. A similar digitisation project on ogham-inscribed stones in Ireland, *Ogham in 3D* (O3D), was undertaken by White at the Dublin Institute for Advanced Studies (2012-2017), during which the digital corpus of ogham inscriptions (https://ogham.celt.dias.ie/) was developed. This provided the chief conceptual model for the EMILI project, as well as the basis for another new project, OG(H)AM, also reported on in this issue and including the same researchers (along with Dr Deborah Hayden) from Maynooth University in collaboration with colleagues at the University of Glasgow.

2. Early Medieval Irish Inscriptions

The Early Irish corpus of inscriptions consists of c. 400 inscriptions in the ogham (or ogam, see Stifter 2022, 3)[2] script (chiefly 5th–7th centuries AD) and over 600 'Latinate' inscriptions, i.e. in the Latin (or Roman) script (c. 7th–12th centuries AD), mainly in a form of insular script generally described as 'half-uncial.' There is also a small number of Latin (also bilingual Latin and Irish) language inscriptions, as well as one in Greek (in Greek script). The majority of Latinate inscriptions are found on stone monuments, often accompanied by carved cross designs, which mostly functioned as Christian grave slabs (generally classified as cross slabs). Most of these inscriptions are set horizontally (as opposed to ogham, which is mainly vertical on stone monuments) and word separation is rare. Texts generally contain a personal name and many take the form of a request for prayer for the individual named. A typical text is the form *óroit do X* ('a prayer for X'), with the word *óroit* abbreviated (see Fig. 1). Inscriptions of this type also occur on a smaller number of portable objects (see Fig. 2), most of which also have an ecclesiastical context, such as reliquaries and hand-bells (Johnson 2020, 155).

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[2]   A script created for an early form of the Irish language.

Figure 1: Moybologue cross slab, Co. Cavan (https://emili.celt.dias.ie/CAV-001). Screenshot from 3D model by Gary Dempsey. © Public Domain.

While ogham has seen a number of relatively recent corpus studies (e.g. McManus 1991, Ziegler 1994, Sims-Williams 2004, White 2013), the inscriptions in the Latin script in Ireland, in contrast, have seldom received the scholarly attention they deserve as a unique linguistic, historical and art-historic source.[3] The main exceptions to this are publications by Okasha and Forsyth (2001) focused on the province of Munster (approximately 120 inscriptions on stone monuments) and Ó Cróinín (2013) on the inscribed cross slabs (approximately 300 inscriptions published online in PDF format) from the important monastic site of Clonmacnoise, which has by far the greatest collection of early Christian grave slabs anywhere in Britain and Ireland (Swift 1998, 105). The relative neglect of the remaining Latinate inscriptions is partially due to the comparatively difficult access to them as a corpus. No modern comprehensive collection appears to have been attempted, nor do the Latinate inscriptions have a separate category in the Archaeological Survey of

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[3] Publications on aspects of particular groups or individual inscriptions will be included in a comprehensive online bibliography as part of the EMILI project.

Ireland,[4] but come under various monument categories (e.g. cross slabs, cross-inscribed pillars, inscribed stones), and their complete, up-to-date geographical distribution has not been mapped. Preliminary work has shown that their number across Ireland may exceed 600.

Figure 2: Terryhoogan inscribed bell, Co. Armagh (https://emili.celt.dias.ie/ARM-001). © National Museum of Ireland.

Cataloguing of early Irish inscriptions began in earnest in the early 20th century. In 1903, W. Stokes and J. Strachan printed the text of 96 inscriptions for the entire island. Macalister published his *Studies in Irish Epigraphy* in three volumes around the turn of the century. He followed this with his *Corpus Inscriptionum Insularum Celticarum* in two volumes (covering inscriptions from Ireland, England, The Isle of Man and Scotland; ogham inscriptions in 1945; and

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4   The Archaeological Survey of Ireland is a unit of the National Monuments Service (NMS). The ASI was established to compile an inventory of the known archaeological monuments in the state. The information is stored in a database and in a series of paper files that collectively form the ASI Sites and Monuments Record (SMR). See https://www.archaeology.ie/archaeo-logical-survey-ireland

"Half-Uncial" inscriptions in 1949, with 452 from Ireland), which remains an invaluable resource even today,[5] though many previously unknown inscriptions have since come to light (e.g. Fig. 1, Moybologue cross slab, discovered in 2017). These important but now outdated print sources also form the core of the Irish Latinate components of the *Celtic Inscribed Stones Project* (CISP) online database (https://www.ucl.ac.uk/archaeology/cisp/database/), which otherwise has a geographically and epigraphically much wider outlook, including "every non-runic inscription raised on a stone monument within Celtic-speaking areas (Ireland, Scotland, Wales, Dumnonia, Brittany and the Isle of Man) in the early middle ages (AD 400-1000)" (CISP online database).

3. Aims and Objectives

Digitising the 600+ inscriptions is a long-term undertaking that will ultimately make freely available the entire early Irish Latinate corpus, primarily stone monuments, but also a dozen or so portable objects of various materials, mainly bronze and silver. The first phase of the EMILI project involved setting up the digital infrastructure and starting to fill it with data and metadata by drawing on original accounts and previous recordings, such as photographs and drawings. In future phases, we will build on this foundation by (re-)inspecting and recording the inscriptions in context using non-contact 3D recording techniques, primarily structure from motion (SfM) photogrammetry (https://en.wikipedia.org/wiki/Structure_from_motion). Descriptions from early accounts, such as Macalister's (1949), have been augmented and enhanced with data from other sources (e.g. Archaeological Survey of Ireland and multidisciplinary information from recent journal articles on individual inscriptions and regional groups). In this first phase, we focused on a preliminary subgroup of inscriptions that has not seen a comprehensive study so far: the approximately one hundred inscriptions outside of Munster and Clonmacnoise, i.e. the texts from the rest of the provinces of Leinster, Connacht and Ulster. Three non-lapidary, portable

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[5]   Some of the recorded inscribed stones and fragments have since been lost and these early accounts and drawings are all that we have left.

objects (Johnson 2020), housed in the National Museum of Ireland (NMI) collection and with inscriptions from the same period, were also included.

The project aim was to create a searchable online resource on the O3D model. Like O3D, the website of EMILI is hosted and maintained by the School of Celtic Studies at DIAS, the main centre for early Irish research. Although the amount of funding available for this phase did not allow us to conduct fieldwork for photographing or recording in 3D the individual inscriptions around the country, 3D models already available online (e.g. by Digital Heritage Age and the Discovery Programme) have been embedded into the website. Permission has also been obtained from the National Monuments Service and the National Museum of Ireland to use any appropriate photographs in their possession. New data (including 2D and 3D images) can easily be added in future iterations and further projects.

From the point of view of the history of the Irish language, Latinate inscriptions, just like ogham inscriptions, have the unique advantage of functioning as a proxy for the local language at the time of their creation, since the places where they are found can usually be assumed to correspond to the places where they were originally set up. In the case of great monastic centres like Clonmacnoise, it is usually known from historical sources when they flourished, and occasionally individuals named in the inscriptions are historically identifiable. In this way, these texts potentially add valuable chronological and dialectal information about the development of the Irish language. Therefore, linguistic analysis will be undertaken and the EMILI data will be integrated into the database Corpus PalaeoHibernicum (CorPH), chief output of the *ChronHib* project (https://chronhib.maynoothuni-versity.ie/chronhibWebsite/), and subjected to the same kind of linguistic annotation, variational tagging, and statistical analysis as the manuscript texts in CorPH. Statistical and linguistic analyses of the data may reveal patterns that are connected with the geographic distribution of the stones and that allow insights into the history and chronology of the inscriptions.

4. Methodology

The methodological approach for this project was to combine traditional historical/linguistic research and epigraphic methods (fieldwork, in later phases) for

data collection with digital methods of recording (digital photography, 3D photogrammetry), documenting (XML and RDF encoding), visualising (high resolution photographs, 3D models, interactive maps), and analysing the data (internal XPath querying of XML and external SPARQL querying of RDF). Following the digitisation methods specifically employed by the O3D project, EpiDoc XML guidelines (based on TEI) were again applied to the collected data as these guidelines represent

> the most incisive innovation in the field of Epigraphy after the Leiden conventions were defined in 1932, and are considered the *de facto* standard in digital epigraphy. EpiDoc enables a holistic digital description of an inscription and the semantic mark-up of its text, all of this in a flexible, machine-readable and exchangeable format, satisfying many aspects of the requirements currently set by the Epigraphic community (Orlandi et al. 2014).

The project included encoding editions and descriptions of the inscriptions (covering epigraphy, palaeography, linguistics) as well as their material context, object type, and the broader archaeological and historical context. Geographical data is also included, facilitating visualisation on an interactive map. Links were made with other related digital projects and resources, primarily *Electronic Dictionary of the Irish Language* (eDIL, http://www.dil.ie/); *NMS Historic Environment Viewer* (https://maps.archaeology.ie/HistoricEnvironment/); *Logainm: Placenames Database of Ireland* (https://www.logainm.ie/) and the *Monasticon Hibernicum* database of early Irish ecclesiastical settlement (https://monasticon.celt.dias.ie/). We are endeavouring to communicate and work together with these projects to define controlled vocabularies and ontologies for Linked Open Data with the aim of making all of our resources more interoperable and sustainable.

Figure 3: Entry on the Terryhoogan inscribed bell (https://emili.celt.dias.ie/ARM-001).

The primary indices are: Places (by townland name), Objects, and Personal Names. This appropriately represents our intention of linking text, object, and landscape in an interdisciplinary approach. Other current indices include: Lemmata, Words, Symbols, Abbreviations, and Numerals. In future phases with additional records, advanced search functions will also be programmed from the marked up data, the results of which can then be displayed as both a list of linked records and on an interactive distribution map. The following are some of the planned filter options:

– personal names in the inscriptions
– inscription/formula type (e.g. prayer)
– date of inscription
– language
– abbreviations
– half-uncial script or other
– object type (cross slab, hand-bell, etc.)
– object material (stone, metal, bone, etc.)
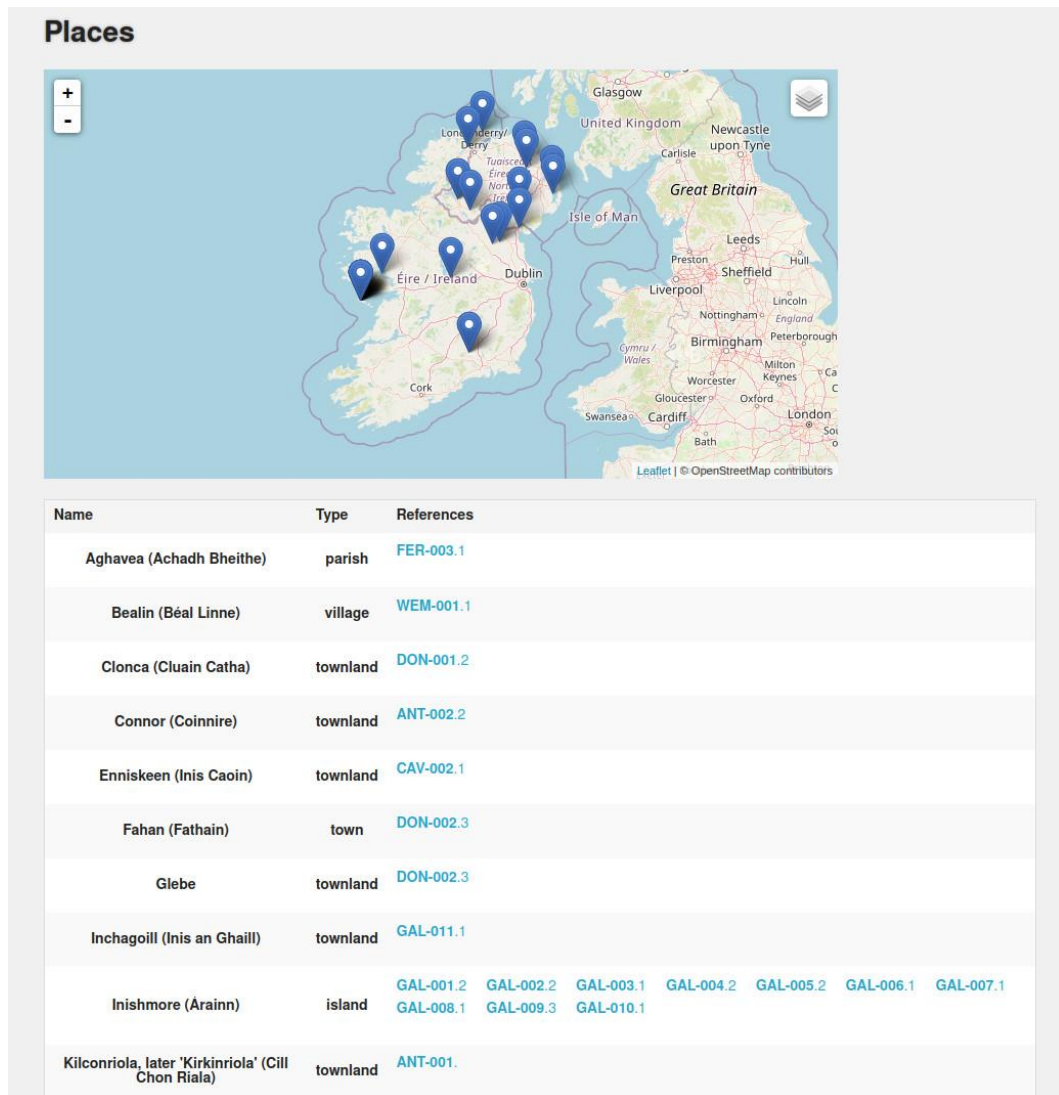– decoration (Latin cross such as in Fig. 1, etc.)

Places

Name	Type	References
Aghavea (Achadh Bheithe)	parish	FER-003.1
Bealin (Béal Linne)	village	WEM-001.1
Clonca (Cluain Catha)	townland	DON-001.2
Connor (Coinnire)	townland	ANT-002.2
Enniskeen (Inis Caoin)	townland	CAV-002.1
Fahan (Fathain)	town	DON-002.3
Glebe	townland	DON-002.3
Inchagoill (Inis an Ghaill)	townland	GAL-011.1
Inishmore (Árainn)	island	GAL-001.2 GAL-002.2 GAL-003.1 GAL-004.2 GAL-005.2 GAL-006.1 GAL-007.1 GAL-008.1 GAL-009.3 GAL-010.1
Kilconriola, later 'Kirkinriola' (Cill Chon Riala)	townland	ANT-001.

Figure 4: Places index (https://emili.celt.dias.ie/en/indices/epidoc/placename.html).

In the past there was a tendency to treat the content of inscriptions in isolation, without reference to the material context (usually stone monuments) on which they were carved. There was also a tendency to neglect the broader archaeological landscape context and to perceive inscribed stones as single monuments. In Wales, this imbalance has been rectified by the publication in recent years of *A Corpus of Early Medieval Inscribed Stones and Stone Sculpture in Wales* (Redknap and Lewis 2007, Edwards 2007, and Edwards 2013), which encompasses a more holistic approach to researching inscribed stones. In Ireland, Fionnbarr Moore's work on the

distribution, citing and context of ogham stones in Munster (unpub. MA thesis 1981; 1998, 23-32) has paved the way for further archaeological research. The aim of the EMILI project with regard to the landscapes of inscribed stones in Ireland is to contribute to bringing the research in line with what has been achieved in Wales and elsewhere by documenting and encoding geographical and archaeological information for the Irish material in collaboration with archaeologists working in this area (in particular Tomás Ó Carragáin, University College Cork and Kate Colbert, University of Galway).

5. Conclusion

At the end of the first phase of the EMILI project , a digital corpus of 30 early Irish Latinate inscriptions was made accessible online according to the FAIR principles[6] with indexed data from the various related disciplines. The digital record for each inscription has a citable persistent URL and is downloadable in XML (in the future also RDF) format. We have included high quality 2D and 3D images where available, as well as direct links to other relevant digital resources. EMILI also contributes to the EpiDoc community and the broader field of Digital Epigraphy with a template for encoding early Irish material. The Digital Corpus will be expanded in future phases to include inscriptions from other geographical areas, particularly Munster and Clonmacnoise, and will, we hope, become a useful tool for research into the diverse aspects of early Irish epigraphy and early Irish more generally.

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Report on the SELECT Project

SIMONA MARCHESINI

Abstract

The Erasmus Plus project SELECT (*Self-Learning Atlas of Ancient European CulTures*, http://www.selecteplus.eu KA201, 2020-2023), was aimed to bring the history, archaeology, and epigraphy of the ancient world, especially the peoples before Rome (in Italy, Spain, France and Eastern Europe), into schools as an informal way of learning about ancient peoples. Reconstructing and identifying a people is always a complex process, with various cultural aspects changing over time. That is why we thought of creating a multi-layered, interactive *Atlas* where everyone can compile their map according to their curiosity and educational goals. The Map Generator tool offered by the project was designed to provide access to navigation by calling up different cultural aspects—marked with different colours and signs—such as archaeological facies, inscriptions, alphabets, languages, mints, and sanctuaries. Teachers and students can use the tool for teaching purposes. Furthermore, the *Atlas* is intended to provide all citizens with informal and entertaining access to knowledge about the ancient world and to question the processes of identifying ancient peoples: a process that consists of various elements changing over time. The temporal dimension, which is usually neglected in current historical cartography, will be a key element, allowing the user to observe how the history of early Europe changed in its characteristics and cultural aspects over the centuries.

Keywords

1. Introduction

The SELECT project (an Erasmus+ KA2 Strategic Partnership for School Education project) was conceived during the COVID-19 pandemic to provide European education systems with a self-learning tool for studying the ancient world while strengthening their digital literacy.

The partnership includes two technological and five scientific partners from five countries: Italy, Spain, France, Sweden and Poland.

Figure 1: SELECT project partners.

The tool created within the Select project for learning the history of Europe's ancient past is a digital, interactive, and multi-layered *Atlas*, which allows high school students and citizens to discover ancient civilisations in a fun digital environment. Users can create and print maps as they fit in an informal mode but can also incorporate the *Atlas* into school programs and use it as a support tool for teaching.

The project ran for three years: 2020-2023. The pilot project and the multiplier event we held May 2023 in 24 schools in three European countries to test it have shown that the idea was successful.

2. Methodology

The interactive tool designed by the SELECT partnership (the *Atlas*) is based on a solid scientific foundation and meets the demands of an increasingly digitalised and information-dispersed world. Since it seems that almost 80% of our knowledge is estimated to be acquired informally in our lifetime (Cross 2007, Clardy 2018), everything contributes to its construction: the internet; information from friends and parents; the school environment as a place to meet and exchange ideas and information; and advertising or the media. However, we receive thousands of pieces of information daily in a background noise that threatens to cloud important information and sound knowledge. In this environment, it is crucial to equip citizens—especially students—with up-to-date tools that are relevant to our times and their educational needs.

3. Creating the content of the *Atlas*

The *Atlas* displays the ancient peoples who lived in Europe before the Romans until Romanisation. Etruscans, Messapians, Venetians in Italy, or Gauls in France, Iberians, Lusitanians and Celtiberians in Spain experienced the rise of their civilisations, as their written traces show, in the 8th century BC and perished—with different modalities—with the rise of Roman culture and the progressive Romanisation of Europe.

Mapping these populations on the *Atlas* had several advantages: 1. It was a feasible goal within the three years of the project and the framework of an Erasmus+ project. The history of these populations was often limited in space and sometimes in time when compared to the Greco-Roman world, so it was easier to follow their development. 2. Pre-Roman history is usually neglected in school programmes, so there is a risk of losing awareness of local history and cultural heritage. (A case in point: the Etruscans bequeathed the alphabet, the technology of metals, and the

various forms of divination to the Romans.) 3. Working with these populations can be instructive in defining the term *ethnos*. Students can understand that classifying a population means adding several elements that are often neither geographically nor chronologically consistent. The cultural boundaries of people are inevitably vanishing lines over the centuries and cannot be represented on a map. By providing different types of information about these populations, we wanted to raise public awareness of the difficulty of defining a people once and for all and to raise more questions than answers when researching civilisations, whether ancient or modern (Sörlin 2020).

4. How to use the *Atlas*

Users can access the *Atlas* from the SELECT home page by clicking "Atlas" in the menu (www.selecteplus.eu). They will find the *Atlas* Portal, where the most important information about browsing with the tool is briefly presented. As the *Atlas* is an intuitive and self-learning tool, the portal does not offer tutorials or long explanations on using the *Atlas*. As explained in the "How to" button, it consists of two parts: the Map Library (examples of print-ready tables) and the Map Manager, the tool for creating maps on demand.
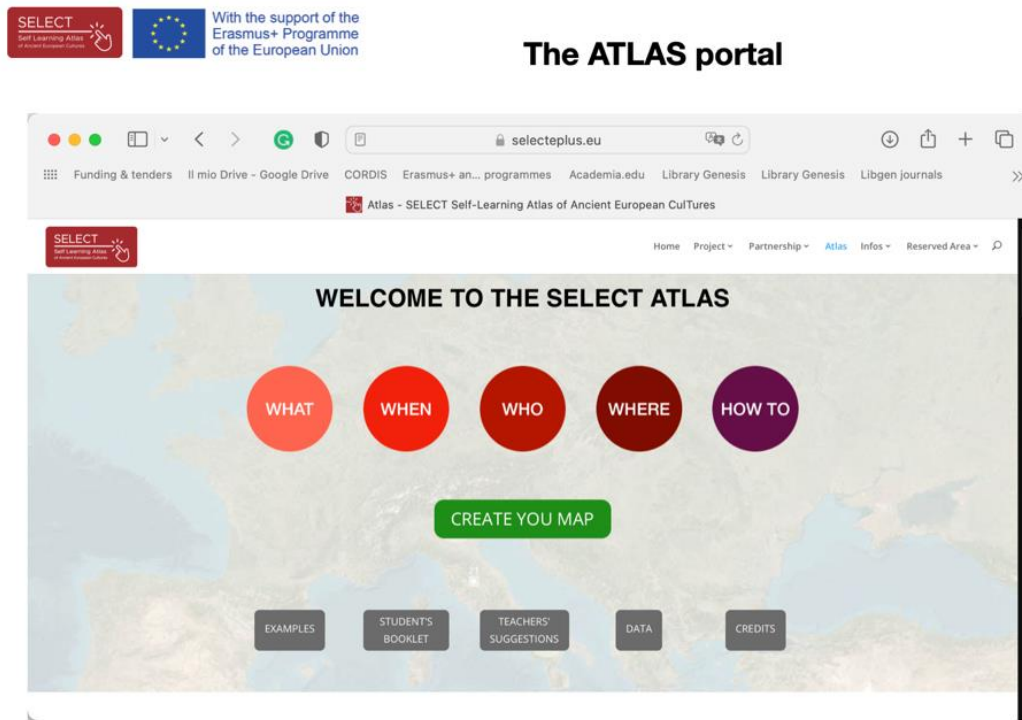
Figure 2: The *Atlas* Portal.

The Map Manager offers the option of 1. the Wizard (searching with a keyword), 2. the advanced search with the option to select epigraphy, archaeology, or both, and 3. the geographical search, which lists modern countries. In each option, we can select modern or ancient cartography (with ancient coastlines). The chronological frame can also be determined using the chronological cursor at the bottom. The archaeological query displays the sites' typology: settlements, necropolises, cult places, harbours, or multiple functions. The user can visualise and compare epigraphic cultures. Once they have obtained the results of a query, users can click on the dots representing ancient sites to obtain more information on the records attested at a site. The pop-up window lists all the records of a site with details of the site typology and archaeological/epigraphical aspects. Clicking on "Infographic" displays a table with the main examples of epigraphic or archaeological culture in two languages (English and the partner's language).

Epigrafia osca in alfabeto nazionale 400-100 a.C.

Oscan Epigraphy in National Alphabet 400-100 BCE

1. Alfabeto nazionale osco. *Oscan national alphabet.*

2. Stele (*iovila*) di terracotta che segnala l'istituzione di un rito sacro, dall'antica Capua (Caserta). ST Cp 10. 350-300 a.C. *Terracotta stele (iovila) indicating the establishment of a sacred rite from ancient Capua (Caserta). ST Cp 10. 350-300 BCE.*

Credits
1. Wallace 2007
2. Italia Omnium Terrarum Parens
3. Italia Omnium Terrarum Parens; ImIt CAPVA 9

3. Tavola di bronzo con legge sacra dalla Fonte del Romito (Capracotta, Isernia), detta 'tavola di Agnone'. 300-200 a.C. *Bronze tablet with sacred law from the Fonte del Romito (Capracotta, Isernia), known as the 'table of Agnone'. 300-200 BCE.*

a) kluva[tium] diuvia[is] damu[senias]
b) kluva[tium] damuse[nias] diuvia[is]
'Dei Clovati (possesso). Alle Damusennie giovie. *Of the Covates. To the Iovian Damusennie.*

Figure 3: Example of an infographic: The Oscan epigraphy in National Oscan alphabet.

5. The data selection

As mentioned, the simple and user-friendly *Atlas* interface is fed by a database of 39,542 records collected and processed over three years: 17,231 epigraphical records from 1,208 sites and 4,680 archaeological records from 1,751 sites. Making the study of ancient peoples, which is complex and often impenetrable work, simple and accessible was the project's greatest challenge.

The first step was the analysis of the sources and the collection of data in a Scouting & Data Survey to define the different cultures that needed to be standardised. A considerable amount of information was identified by reviewing the existing bibliography (publications, reports of excavations, monographic and non-monographic works, museum catalogues) to locate all the data useful for reconstructing the cultures of the different peoples who lived in Europe in pre-Roman times. Only people who left written sources were considered.

After an inventory of the available data, we developed a collection and review process that allowed us to import them into a database, visualise them in QGIS, and transfer them to the project's geographic server. The data included online databases (*Hesperia, Recueil informatisée des inscriptions gauloises* [RIIG]*, or *Lexicon Leponticum* [*LexLep*]), computerised (but not online) databases (*Monumenta Linguae Messapicae* [MLM], *Monumenta Linguae Raeticae* [MLR]), books (Rix 1991, Morandi 2004, Crawford 2011), articles (such as publications on single inscriptions in the *Rivista di Epigrafia Italica* [REI], *Rivista di Epigrafia Etrusca* [REE], and *Corpus Inscriptionum Etruscarum* [CIE]), and data from associated partners, such as records on Phoenician-Punic culture (University of Tor Vergata, Rome) or Venetic inscriptions from Slovenia (University of Ljubljana). The database was also revised thanks to the collaboration of specialists in both the epigraphic-linguistic and archaeological fields.

The epigraphic-linguistic and the archaeological databases were combined in a general FileMaker dataset, which consists of 200 fields for each record. Only a selection of the data (74 lots) is displayed on the *Atlas*. Although SELECT is the most comprehensive database ever created on the populations that lived in Europe between the 8th century B.C. and the 1st centuries A.D., only part of the data is displayed in the *Atlas*. The SELECT project database is available for future development and use.

6. Results

In May 2023, the SELECT Pilot to test the beta version of the *Atlas* was organised as a one-day hackathon with students from four partner schools in Italy, Spain, and Poland. Subsequently, the *Atlas* was tested by 20 schools during the Multiplier event and by 337 students in Italy. They worked in groups and alone after a short introduction by the project team in cooperation with the school teachers. After looking for errors/problems in the Map Manager, they answered a questionnaire, which was later evaluated by the project team. The students solved some of the tasks suggested by the SELECT team, such as comparing cultures, tracking the diachronic development of a culture, and finding out the literacy level of a people.

All results have been collected in a Students' booklet and the Teachers' Guidelines to the *Atlas* (https://www.selecteplus.eu/atlas/).

The results are the following:

– All students appreciated the intelligent interface of the SELECT *Atlas*.

– They suggested implementation, especially about the languages displayed in the infographic and the need for more clarity about the content of the *Atlas*: they were looking for extra EU data or were interested in the Greco-Roman cultures that were not included in the project. Many of their comments were taken into account, and the content of the *Atlas* was clearly explained in the portal under the "What" or "When" buttons. The user interface was simplified in some parts and enriched in others.

– They considered the information provided by the *Atlas* useful for the study topics, especially history and geography.

– They appreciated the discovery of local heritage through knowledge of the peoples who inhabited their area in ancient times and could focus on a geographic area of interest.

– They considered the *Atlas* relatively easy to use and, especially for students ages > 15, enjoyable.

– Last but not least, students with learning disabilities (ADHD, dyslexia or dysgraphia, autism spectrum disorders) were taken with the tool and continued surfing on the *Atlas* even beyond the time set for the hackathon or multiplier event.

Teachers also appreciated the value of the *Atlas* and the possibility of integrating it into regular (formal) lessons. They identified the following potentials in the use of the *Atlas*:

– Personal learning process based on data analysis;
– Access to primary sources otherwise unavailable;
– Use of technology;
– Different perspectives;
– Fostering students' curiosity;
– Rediscovering the historical local minorities.

Bringing the science of Antiquity to the public, starting with high school students is an arduous but necessary task if we do not want the cultural heritage inherited over millennia of ancient European history to be lost. The contribution made by the SELECT project goes in this direction and will invite citizens to increase their awareness of the ancient world and keep alive a "warm" memory of their origins (Assmann 1997). The project also wants to draw attention to an integrated and informal way of learning history, based on a cartographic basis, which is immediate and easy to memorise in our world exposed to visual culture as never before.

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PhD dissertation report:
A comparative study of portable inscribed objects from Britain and Ireland, c. 400-1100 AD

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University of Glasgow, Department of Archaeology, 2020

This paper introduces the main objectives and findings behind my doctoral thesis in Archaeology at the University of Glasgow. The degree was awarded by completion of a two volume thesis, which was based on the study of inscriptions on portable objects from early medieval Britain and Ireland (ca. 400-1100 AD). Volume one consists of the analysis of the material, in which 270 inscribed objects are categorised and discussed by purpose and function. Volume two displays each object in a comprehensive catalogue, allowing the reader to view each object and its inscription(s) alongside Volume one. Rather than a linguistic examination, the thesis focuses on the objects themselves, with the following questions in mind: What objects were inscribed with text, and why? How did people express themselves and claim relationships with objects (i.e. ownership) by the addition of text? What patterns emerge regarding the use of text on material culture between the different ethno-linguistic cultures of early medieval Britain and Ireland? Are there patterns regarding the types of objects and types of inscriptions? These questions are addressed here in this paper along with a broad overview of the more significant findings and trends surrounding the epigraphic traditions of early medieval peoples in Britain and Ireland. Furthermore, with the application of theories such as object biography, gift and social exchange, and object agency, the

objects are examined in their social, personal, and political contexts in which they were handled, used, and inscribed.

1. Object Types

The study of early medieval portable inscribed objects is based on the analysis of 270 inscribed artefacts found in a variety of contexts in England, Scotland, Wales, Northern Ireland, and Ireland. The 270 objects were established from resources including excavation reports, museum collections, and academic journals as well as published and digital databases such as the Portable Antiquities Scheme (finds.org.uk) and the *RuneS* Database (runesdb.eu). The inscribed objects are placed in the following categories regarding their social and practical purposes: personal adornments and dress accessories, household and personal tools, weaponry and armour, ecclesiastical objects and church equipment, objects related to the practice of writing and reading, funerary and memorial objects, and unidentified objects such as fragments of bone, wood, or stone (Johnson 2020, 28-29, 52-53). The primary identification of these objects as 'portable' relates to their 'loose' quality and ability or intention to be physically moved, whether via their owner/handler,i.e., being worn or carried in a purse, or transported within their relative environment, i.e., a cooking pot within the household (Barnes 2012, 106; Foster et al, no date). Alternatively, a non-portable object either cannot be easily moved (too heavy or large) or is not supposed to be moved; for instance, its importance is tied into a particular location (Foster et al, no date; Johnson 2020, 28). The line between portable and non-portable is oftentimes blurred; however, for the sake of this research, the two definitions are kept separate by the fundamental ability of moveable objects to be passed between hands, carried on the body, and transported long and short distances with relative ease. With this moveability, objects gain social and personal significance through exchange, circulation, and the physical environments in which they gather meaning and stories (Johnson 2020, 29). Although portable, coins and manuscripts are not included in this study due to the standardised nature of their texts and mass production.

Across all ethno-linguistic traditions, the type of objects most inscribed with text are domestic and personal items, the majority classified as adornments and dress accessories (Johnson, 2020, 52). Inscribed personal adornment and dress

accessories are largely Anglo-Saxon in inscription, construction, and origin, with Pre-Old English and Old English runes and Roman letters (Johnson 2020, 66). Old Norse runes are more commonly found on household and personal tools than objects that were worn on the body, and only three objects inscribed with ogham are a part of this category. As objects that were worn, personal adornments and dress accessories include finger-rings, brooches, arm-rings, strap-ends and buckles, bracteates and pendants, and clothing pins. Personal adornments and dress accessories range from the large and attention-grabbing brooches to the diminutive belt fittings and clothing clasps. Their inscriptions are the most diverse in the study of portable epigraphy, primarily containing personal names either alone or within ownership, maker, or commissioner texts such as 'X owns me' or 'X made this.' People also wore objects inscribed with religious passages, object-descriptive statements, single runes, alphabetical sequences, and cryptic/amuletic texts. Some people outwardly displayed their texts on the front face of the items, whilst others kept them private and hidden on the reverse. Some texts were carved as secondary additions to their objects, and others were carefully and masterfully engraved into the primary design.

Finger-rings make up the bulk of this category, with twenty-nine rings inscribed with Pre- and Old English runes and Roman letters. They are Anglo-Saxon in composition and text, suggesting that adding text to finger-rings was exclusively a western Germanic, or more specifically Anglo-Saxon, practice (Johnson 2020, 69). Brooches are the second-most inscribed object in this category, with eighteen examples inscribed with primarily Pre- and Old English runes or Roman letters, but brooch inscriptions also include Scandinavian runes and ogham (Johnson 2020, 77). The brooches are Merovingian, Anglo-Saxon, Scandinavian, and Irish in style and include disc, penannular, swastika, cruciform, square-headed, radiate-headed, and coin-brooch forms. No Pictish-style brooches are inscribed with text, which may be due to different epigraphic traditions, archaeological preservation, or the lack of furnished Pictish burials (Ritchie 1989, 51), or it may come down to differences in metal detecting activity in Scotland. Both finger-rings and brooches are inscribed with personal inscriptions involving personal names, owner, maker, writer, and commissioner statements, religious sentiment, alphabetical sequences, and descriptive texts. As opposed to finger-rings, which

primarily show their inscriptions boldly on the front (with some exceptions), the inscriptions on the brooches are mostly on the reverse, which would therefore be hidden when worn. At first glance, this may be a matter of using available space; however, whilst text could be included into the main design of a finger-ring, why couldn't brooches be designed with text from the beginning as well?

2. Scripts, Languages, and Inscriptions

The scripts involved are all major Insular scripts (runes, Roman, ogham) and languages (Pre-Old English, Old English, Old Norse, Latin, Irish/Early Gaelic) that appeared and evolved in Britain and Ireland during the period of 400 to 1100 AD (Johnson 2020, 30). Sub-types of the three major scripts include the early runic *fuþark* from the Continent (c. 150-750 AD), the Anglo-Frisian *fuþorc* (c. 500- 900 AD), and the Scandinavian Younger *fuþark* (c. 750-1100 AD) (Barnes 2012, 17-28, 37-41; Barnes & Page 2006, 51; Page 1999, 13-48). Roman letters are also many times coined as 'Latin letters,' although here 'Roman' is used as an overall term for all forms of the alphabet used in Ireland and Britain, including Insular majuscule and minuscule and Anglo-Saxon capitals (Avrin 2010, 182-186; Brown 1993, 48; Okasha 1968). The types of inscriptions are broad, largely consisting of personal names in all scripts and languages as either names by themselves or in sequences declaring ownership, maker, writer, or commissioner (Johnson 2020, 245-258). Religious texts are also common, as are descriptive inscriptions pertaining to the object itself, single runes, and alphabetical sequences in runes, Roman letters, and ogham (Johnson 2020, 262-272). Also numerous are texts that are unreadable in that they are purposely written in a cryptic or gibberish manner, possibly for amuletic purposes (Johnson 2020, 272-278).

Geographically, the inscriptions on portable objects follow a pattern that is expected regarding ethno-linguistic studies, with the south-west of England dominated with Pre-Old English and Old English runic inscriptions; Roman letters and Latin language predominantly in England and Ireland; Ogham in Ireland; and Old Norse runes primarily in Scotland AND northern England (Johnson 2020, 59). Inscriptions in Pre-Old English runes are carved on objects of bone, on brooches,

on bracteates, on weaponry, on cremation urns, and on household vessels.[1] Relative to the later runic inscriptions, and with the exception of bracteates, these early texts are generally secondary and carved as additional features. Portable Old English and Latin inscriptions mostly appear as primary texts, a dominant feature of the object, on a wide variety of object types including ornate jewellery and ecclesiastic objects of precious metal and dress-accessories, fittings and mounts, and personal tools of non-ferrous metal, such as tweezers (Johnson 2020, 282). Around the 8th century, inscriptions start to become intrinsic and essential components of portable objects. Texts start to be skillfully engraved as part of the main element or as part of the dominant design of objects, such as the Alfred Jewel (Hinton 2008) and the gold ring from Laverstock inscribed with the name of the 9th century King Æthelwulf (Okasha 1971, 91-92; The British Museum no. 1822, 1214.1). The inscriptions become highly personal, creating a link between people and objects through declarations of ownership, craftsmanship, and commissioner, and many of the inscriptions are prosopopoeic, in that inanimate objects are given personhood through first-person pronouns (Bitterli 2009; Ramey 2013).

As opposed to the Old English and Latin texts, Old Norse inscriptions are largely on unworked and worked bone and antler, and mostly appear as secondary texts, carved onto the reverse of an object or on an area that does not immediately draw attention (Johnson 2020, 283). These include brooches, personal and household tools such as combs and spindle-whorls, and objects identified as amulets such as the steatite disc from Stackrue and the Brough of Birsay bear tooth from Orkney (Barnes & Page 2006, 153-156, 187-191). The large number of Old Norse runes carved on whole and fragmentary sections of bone and antler suggests an impermanent and disposable attitude towards text, wherein text was written on degradable material (Johnson 2020, 283). These inscriptions are descriptive, amuletic, communicative, and oftentimes humorous, such as the crude message written on a rib bone from Dublin (Barnes et al 1997, 20-21, IR 5). Found in urban settlement sites and midden deposits, they reflect a communal and relatively casual use of writing in Scandinavian populations (Johnson 2020, 107, 217). Of course, Anglo-Saxon texts also appear on bone and antler objects; however, the number of

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[1]   There is only one such household vessel with a Pre-OE inscription, the Cleatham Hanging Bowl.

Old English and Latin texts compared to Old Norse is highly suggestive that inscribing bones and antlers was predominantly a Scandinavian practice (Johnson 2020, 208).

Ogham is not as commonly found on portable objects as the other scripts are, but ogham appears on at least seventeen objects, primarily from Ireland but also from the west coast of Scotland, from Orkney, and on periodic finds from England (Johnson 2020, 59). After the completion of this research, another portable ogham inscription was found on a small stone from Coventry (PAS Ref, WMID-634A9A). The ogham inscriptions are carved on stone, bone, antler, and metal, with the majority on bone, including a comb, four knife handles, a die, as well as unidentified objects such as an incomplete plaque and an unworked bone with incised patterns. The difficulty in translating ogham texts has created challenges surrounding most of the portable ogham texts, and often these inscriptions have no proposed translation, such as the bone from Cahercommaun, Co. Clare (Hencken 1938, 66) and the brooch fragment from the Vale of York (PAS Ref, SWYOR-AECB53). Some of these challenging inscriptions may be the result of writing practice, wherein their lack of lexical meaning is due to the illiteracy of the writer. Other reasons may include cryptic and amuletic purposes, which may be the case of the Cahercommaun bone (Hencken 1938). Because many of these inscriptions are difficult to decipher, the ones that are translatable are read in early Gaelic or Old Irish languages, although there is the possibility that the name on the comb from Dublin may in fact be Old Norse (Barnes & Haglund 2010, 14).

3. Primary Research Outcomes

The most significant outcomes of this study are centred around patterns and theories surrounding the progression of portable epigraphy and how writing was perceived and used across cultures. The evolution of Post-Roman epigraphy in Britain and Ireland is best demonstrated by the use of text on brooches during the earliest period of runic writing in Britain in the 5th century. Beginning with short runic sequences of the Older *fuþark* that are relatively difficult to translate but feature descriptive and cryptic messages, brooches then begin to show the transition from Pre-Old English to Old English runes in the 7th century, as seen on the brooch from Harford Farm, as well as beginning to show the addition of Roman letters (Barnes 2012, 11;

Hines 2000, 82; Johnson 2020, 81). The form of the brooches also changes from Continental styles into a more distinctive English design, particularly the ornate Kentish disc-brooches (Geake 1995, 250; Owen-Crocker 2004, 138). Into the 8th century, Old Norse runes appear on brooches along with ogham and the Latin language. The inscriptions become longer, more personal, and more complex. Furthermore, as previously mentioned, text becomes an essential part of the objects, with letters being skillfully engraved into the surface as part of the main design (Johnson 2020, 304). Christian phrases appear along with the formulaic owner and maker statements of 'X owns me/this,' 'X made this.' English styles combine with Irish and Scandinavian styles to create Anglo-Scandinavian and Hiberno-Scandinavian hybrid forms, such as the bossed penannular and pseudo-penannular brooches from Hunterston, from Penrith, and from Ballyspellan (Barnes & Page 2006, 217-221, 331-333; Holder 1990, 14-18). The Ædwen brooch from Sutton exemplifies the height of early medieval epigraphy in the 11th century, with a lengthy and complex inscription masterfully engraved around the perimeter of the reverse combining an ownership statement along with a Christian text for protection from theft (Okasha 1971, 116-117).

This progression of scripts and languages is visible on all portable objects between the 5th and 12th centuries. The short and cryptic Pre-Old English runes carved onto sword-pommels and the backs of brooches in the 5th to 7th centuries gave way to more lengthy, personal, and grammatically diverse runes and Roman letters, and eventually grew into complete religious passages and formulaic handling of text, a change that is generally attributed to the influence of Christianity (Johnson 2020, 302-306). Ogham is also seen on portable objects as early as the 4th century, on a bronze plaque from Newgrange, Co. Meath (Katherine Forsyth pers comm August 2019); however, in this study the earliest datable ogham text appears on the knife-handle from Gurness, Orkney, radiocarbon dated to the 4th or 5th century (Redknap 1991, 59; Noble et al. 2018, 1344). Whilst the use of Roman letters seems to disappear from the epigraphic landscape of Post-Roman Britain until the 7th century (with the exception of bracteates), ogham certainly was not lost. Although primarily seen on stone monuments, this writing system may have been developed as early as the 2nd or 3rd centuries in Ireland, possibly on small pieces of wood (Katherine Forsyth pers comm 22 August 2019; Redknap 1991, 59). The bone

die from Ballinderry might in fact date to this early period, as its archaeological context suggests a date from as early as the 2nd century to no later than AD 700 (Holder 1994, 16-19). Regardless, ogham certainly was in use in Britain and Ireland hundreds of years prior to runes and seemed to endure after Roman Britain and well into the early medieval period.

Some of the major patterns and discrepancies that emerged from this study were between the use of texts in Old English and Old Norse. Whilst Old English could be written in runes or in Roman letters, Old Norse is only written in Scandinavian runes, and is largely carved on objects of bone from sites with a significant Scandinavian archaeological presence, for example from Orphir in Orkney and from Dublin (Barnes et al 1997; Barnes & Page 2006, 200-203). This pattern is also visible in Scandinavia, evidenced by the large number of whole and fragmentary objects of bone, wood, and antler from Bryggen, from Bergen in Norway, and from Ribe in Denmark (Barnes et al 1997; Spurkland 2005, 144-148). Following this trend, one would expect there to be a noticeable number of inscriptions from Anglo-Scandinavian York; however, as of yet, only two objects have been identified as bearing text from this period. These two objects include a runic spoon made of wood (Page 1999, 170) and the helmet from Coppergate (Tweddle 1992, no. 4418). Similarly, whereas Roman letters in Old English are present in Dublin (Okasha 1982, 89, 90; 2004, 237), there has yet to be found portable Old English runes in the thriving early medieval city as well as all of Ireland. While it is clear that Old English was a known language in Viking-age Dublin, it is curious that Old English runes have not been identified alongside the use of Roman letters. Perhaps this is a matter of preservation, although one would think that the considerable number of epigraphic texts that have been discovered within Viking-age Dublin should reveal at least some evidence for the Anglo-Saxon *futhorc* if the script had been known.

The physical act of inscribing is another discrepancy between the two cultures, including what was inscribed and how. Finger-rings are exclusively inscribed in Anglo-Saxon societies, with Old English and Latin, and are predominantly dated between the 8th and late 10th centuries (Johnson 2020, 69-70). There are no early medieval finger-rings in Britain and Ireland, either Anglo-Saxon or Scandinavian in style, that are inscribed with Old Norse runes. Additionally, evidence for

inscribed finger-rings does not appear in Scandinavia until the mid-11th century, including the Revninge ring from Odense, Denmark, and the 'Absalon's Ring' also from Denmark (Nationalmuseet Danmark no. DXLIV and no. 8537). Scandinavian style finger-rings in Britain and Ireland were not void of decoration; however, it is only the Anglo-Saxon rings that were given texts (Johnson 2014, 46-50), which begs the question of why some objects were inscribed and why some were not, and how material possessions, as well as the use of text, were viewed by different cultures.

The inscriptions on Anglo-Saxon metalwork, especially finger-rings, are oftentimes engraved with a level of skill not mirrored in contemporary Scandinavian metalwork. Scandinavian texts are usually carved as secondary additions, or at least not carved as part of a primary design. Many Anglo-Saxon inscriptions show a particular level of artistry when it comes to the addition of text, as if done by trained artisans, with clean and equal spacing of letters, letters sequestered into specific cells of the design, and oftentimes interspersed with decorative motifs; examples of such high-quality work include the Frank's Casket, the Greymoor Hill finger-ring, and the *seax* from Battersea, where the texts are one of the, if not the only, main focal points (MacLeod & Mees 2006, 140-41; Okasha 1971, 50-51; Wilson 1964, 144-146). The treatment of text on Scandinavian material culture is not to the same level, suggesting that, at the very least, writing and text were viewed in different lights in different communities, and perhaps it was not as important to people in Scandinavian societies to add text to their physical possessions.

There is a strong trend to create direct relationships between people and things seen on all types of objects, cultures, scripts, and languages. These relationships manifest in different ways across the ethno-linguistic landscape of early medieval Britain and Ireland, most noticeably between Viking and Anglo-Saxon inscribing practices. The power that writing held lies in the perceptions of objects and texts. One of the most common features of Anglo-Saxon epigraphy is the practice of adding voice and personhood to inanimate things through the pronouns 'I' and 'me.' Anglo-Saxon inscriptions frequently use these pronouns to claim ownership of objects or to identify individuals responsible for the creation of the objects, for example, 'Wulfstan owns me' on a strap-end from Somerset (Thomas et al 2008,

173-181). Scandinavian inscriptions do not do this; instead they bring attention to the individuals who wrote the texts, in sequences such as 'Gautr carved the runes' on a spindle-whorl from Stromness, Orkney (Barnes & Page 2006, 157-160; Johnson 2020, 293-294). Importance, therefore, is given to the text and the process of creating the text, rather than the physical object. This personification does not appear in Scandinavian inscriptions until after 1100 AD (*RuneS*-Database N291; Spurkland 2005, 123).

The reason behind this difference may lie in references to objects and texts in contemporary tales and literature. Objects are described as 'speaking' through the addition of text in the Old English Exeter Book (Bitterli 2009; Okasha 1993, 62; Ramey 2013), and the innate power of runes is described as creating a link between man and the divine in Old Norse sagas and poems (Clarke 2011, 35, 42; Page 1964, 107-108). Therefore, in Anglo-Saxon culture, the objects have the power, which is brought out through the addition of text. In Scandinavian belief, the runes themselves have the power, and they create the power and personhood of the objects they are carved upon. Text becomes its own entity with agency and influence, able to both manifest and construct life through human action. Whether it is allowing an inanimate object to finally 'speak' or transferring their power to tangible things, writing was a tool through which people in early medieval Britain and Ireland controlled, and were controlled by, material goods.

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PhD dissertation report:
The Ruthwell Cross and its texts: A new reconstruction and an edition of *The Ruthwell Crucifixion Poem*

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The Ruthwell Cross is one of the best-known and most important Anglo-Saxon Christian high crosses that have come down to us. It is named after its present location in Ruthwell (Parish Church, Dumfries and Galloway, Scotland). The monument has been dated to ca. 750. It is 5.2 metres (17 feet) high; its four sides are adorned with sculptures and inscriptions, revealing a complex iconographic programme. During the English Reformation in the 16th century, the cross was declared idolatrous and was destroyed. In the 19th century, when it was re-built and re-erected, it was moved from the manse garden into the church and was lowered into a pit in the apse where it still stands today.

This dissertation takes a fresh look at the Ruthwell Cross and its texts. It consists of two parts, namely an analysis, discussion, and reconstruction of the texts (Part I: Chapters 1–7), placing the Ruthwell Cross in its historical and cultural context, and a scholarly edition of *The Ruthwell Crucifixion Poem* (Part II) with explanatory notes and a glossary that contains all words attested in the poem.

One major aim of the study was to highlight the linguistic and literary qualities of *The Ruthwell Crucifixion Poem*. The main runic inscription on the Ruthwell Cross is the longest epigraphic text in the Old English Runic Corpus. It is written in the Early (West) Northumbrian dialect. The inscription is a witness of the extended Old English rune-row, consisting of 31 characters and distinguishing, for example, two allophones of /g/ and three allophones of /k/ by using distinct runic

graphemes. The employment of certain runes makes the Ruthwell Cross an important runological and dialectal monument. *The Ruthwell Crucifixion Poem* is furthermore interesting from a literary and metrical point of view: in 14 alliterative verses which combine single half-lines, normal lines, and hypermetrical lines, the Cross narrates the crucifixion episode from its own perspective.

Parts of the runic inscription are, however, irrevocably lost. *The Ruthwell Crucifixion Poem*'s linguistic, literary, and runological idiosyncrasies are united in this study to present a new reconstruction of the lost runes. The reconstruction relies on two autopsies (2012 and 2019) in which the space of the lost runes was measured. The obtained results as well as the linguistic, literary, and metrical properties of the text were then compared with earlier reconstructions.

It has long been recognised that the verses of *The Ruthwell Crucifixion Poem* match closely with some lines of *The Dream of the Rood* in the Vercelli Book. Yet, the detailed comparison of the texts has shown that the runic inscription should be taken as an independent text. *The Ruthwell Crucifixion Poem* may thus be regarded as one of the earliest religious poems of Anglo-Saxon England.

The dissertation was published in 2022 with the title *The Ruthwell Cross and its Texts: A New Reconstruction and an Edition of* The Ruthwell Crucifixion Poem, which is volume 132 of Ergänzungsbände zum Reallexikon der Germanischen Altertumskunde (eds. Sebastian Brather, Wilhelm Heizmann and Steffen Patzold) and volume 3 of Runische Schriftlichkeit in den germanischen Sprachen (ed. Edith Marold on behalf of the Akademie der Wissenschaften zu Göttingen), Berlin, De Gruyter.